

# REMEMBERING

**Abram Hoffer, PhD, MD**

by Reviewing his Books about Psychiatry:  
Biochemistry, Research And Clinical Practice

Robert Sealey, BSc, CA  
Author of Finding Care for Depression

**www.orthomed.org**

*Information about restorative care — Archives of the Journal of Orthomolecular Medicine*

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*Conference details — Orthomolecular Medicine Today*

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*Free Excerpts from books*

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*How Orthomolecular Medicine Can Help*

*Remembering Abram Hoffer by Reviewing His Books*

*15 ways to Help Orthomolecular Public Education*

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# Preface

## **Abram Hoffer, PhD, MD, FRCP(C)—Co-Founded Orthomolecular Medicine, Wrote, Networked and Educated the Public about Orthomolecular Medicine**

Dr. Abram Hoffer passed away on May 27, 2009 in Victoria, BC. At age 91½ he concluded his adventures in psychiatry. Starting in the 1950s, he researched restorative programs—optimum doses of vitamins, minerals and other nutrients—for his patients. Taking vitamins as a self-experiment helped Dr. Hoffer feel better and live longer.

Mainstream psychiatry did not understand or accept the healing benefits of Hoffer's regimens so Hoffer wrote books, articles, papers and editorials in which he shared his adventures in psychiatry with patients, families, caregivers and health professionals. Decade after decade, for more than 50 years, the prolific Abram Hoffer wrote about psychiatry: biochemistry, research and clinical practice. He carefully explained the scientific research, development, progress and success of restorative treatments.

Hoffer's books still read fresh and clear today. They educate readers about:

(1) the biochemistry of psychosis, anxiety and depression, (2) the reasons for using nutritional supplements as restorative treatments (vitamins, minerals, amino acids etc.), (3) the research on orthomolecular regimens which used double-blind placebo-controlled experiments and proved vitamin treatments safe and effective and (4) the case reports of patients who recovered taking optimum doses of vitamins, minerals and other nutrients.

Anyone interested in the possibilities for adding a restorative dimension of care to the labels, talks and shocks offered by conventional psychiatrists can learn from Abram Hoffer's books, articles and editorials. They share a rich legacy of information, help and hope. This booklet reviews several books written by Abram Hoffer during his long and distinguished career as a biochemist, researcher, physician, psychiatrist and author.

Thank you Abram Hoffer for researching and developing orthomolecular medicine. Thank you for healing thousands of patients. Thank you for writing many superb books, articles and editorials. Thank you for starting the International Schizophrenia Foundation and setting up a worldwide network of friends: patients, families, caregivers and health professionals who know that orthomolecular medicine can restore mental health, safely and effectively.

We will never forget Abram Hoffer for co-founding orthomolecular medicine,

researching and developing restorative treatments, healing patients, writing, networking and educating the public from 1950 to 2009! Abram Hoffer's Public Education Project continues—You can Help! Friends, families, patients, caregivers and health professionals can Help Orthomolecular Public Education. Many more patients can recover if friends of orthomolecular medicine share the facts: scientific research, progress reports, medical books, published articles, JOM archives, the book list and film at [www.orthomed.org](http://www.orthomed.org) and the conference Orthomolecular Medicine Today. Please tell your families and friends about Dr. Hoffer's books, research and orthomolecular practices. You can help by reading, networking and sharing information.

[www.searpubl.ca](http://www.searpubl.ca) offers 15 suggestions for volunteers. You can Help Orthomolecular Public Education by offering support, networking and sharing this book and reviews of Abram Hoffer's books: *Adventures in Psychiatry: The Scientific Memoirs of Dr. Abram Hoffer*, *Mental Health Regained* (with 18 recovery stories) and Dr. Hoffer's essay which explains *How Orthomolecular Medicine Can Help*.

### **Compiled by Robert Sealey**

Abram Hoffer's books saved my life. After living with a bipolar II mood disorder for 28 years, by 1995 I was depressed, suicidal and desperate for help. I read many books about psychiatry but found nothing restorative. Misdiagnosed and mistreated, I got worse. Another depressed person suggested the *Journal of Orthomolecular Medicine* (JOM) in Toronto, only two miles from my home-office.

Editor Steven Carter recommended several books. I read that Abram Hoffer, PhD (biochemist), MD, (psychiatrist) researched the biochemistry of mental illness and developed restorative treatments. After considering what can cause psychosis, Hoffer and his team tested vitamins B3 and C (niacin and ascorbic acid). They discovered that optimum doses of vitamins, trace minerals, amino acids, antioxidants, energy and enzyme co-factors can help patients with schizophrenia, psychosis, anxiety or depression recover and live well.

Abram Hoffer co-founded orthomolecular medicine. His important work, with colleagues, added a restorative dimension to psychiatry. Dr. Hoffer treated his patients with kindness, care, courtesy and respect. He offered guideline-quality care starting with medical tests and patient histories. He made differential diagnoses before complementing other treatments with *restorative* regimens of vitamins and nutritional supplements.

Dr. Hoffer's orthomolecular approach sounded much different to my experience of shortcuts, misdiagnoses and mistreatments so I started a restorative program. Restorative care helped me recover, just as orthomolecular authors predict in their books. After appearing in the 1998 orthomolecular documentary film *Masks of Madness: Science of Healing*, I visited Abram Hoffer in Victoria, BC. Dr. Hoffer offered respect, approval, interest and support. Year after year, he encouraged me to pay forward my recovery. I read, learned, attended conferences, wrote books and articles, reviewed books for *Open Minds Quarterly*, *Nutrition & Mental Health* and the *Journal of Orthomolecular Medicine*, published a website called [www.searpubl.ca](http://www.searpubl.ca) and spoke (as a recovered patient) at meetings and medical conferences in Toronto and Vancouver.

If I could read Abram Hoffer's books and learn how to recover and live well with a bipolar II mood disorder, other patients can too. If your doctor does not offer

restorative treatments, you can read and learn for yourself about guideline-quality care, orthomolecular psychiatry: biochemistry, research and clinical practice. You can even learn how optimum treatments can restore your mental health. Yes you can!

I wrote this booklet to honour Abram Hoffer, PhD, MD, FRCP(C), a biochemist, researcher, physician, psychiatrist, author and educator. Before he died, Abram read some of my reviews. He said the reviews were very good. Maybe he was just being kind but I believe he found the reviews clear, well-written and accurate. He encouraged me to read, review books and help the public learn about orthomolecular medicine.

Abram Hoffer's research, discoveries and books contributed insight, information, help and hope to the fields of medicine and psychiatry but his approach remains little-known, even after more than fifty years of clinical success and thousands of recovered patients. If we don't remember Abram Hoffer's principles and practices of restorative orthomolecular medicine, then many of us won't easily recover when we get sick again. Abram wrote more than 35 books—I reviewed 11 in this book. If you read my reviews, you can expect to get interested in Hoffer's restorative approach to psychiatry. If you want to learn more about his healing programs, you can buy Abram Hoffer's excellent books at **[www.orthomed.org](http://www.orthomed.org)** or **[www.abebooks.com](http://www.abebooks.com)** or **[www.amazon.com](http://www.amazon.com)**. You can also consider other books written by Abram Hoffer (not reviewed in this book)–

*Orthomolecular Psychiatry*, ed by Pauling and Hawkins (1973)  
*Nutrients to Age without Senility* (1980), *Smart Nutrients* (1994)  
*Orthomolecular Medicine for Physicians* [and general readers] (1989)  
*Orthomolecular Treatment of Schizophrenia* (1999)  
*Healing Schizophrenia* (2005), *Healing Cancer* (2006)

Patients, families, caregivers and health professionals can read Hoffer's books, articles, papers and editorials. Please consider the reviews in this booklet as examples of the many books which Abram Hoffer's wrote to educate the public about psychiatry: biochemistry, research and clinical practice. I hope this book of reviews will whet your appetite for learning about the restorative dimension of care. After you read my reviews, you can purchase Dr. Hoffer's fascinating books so you can learn for yourself:

- 1) how Abram Hoffer researched and developed orthomolecular medicine,
- 2) how Dr. Hoffer's restorative regimens healed mental patients, and
- 3) what Hoffer and his colleagues wrote about so carefully, decade after decade.

By reading books, you can become an educated patient. What you learn may save your life or help you recover from chronic health problems. Whatever you learn, please tell your families, friends and health professionals about orthomolecular medicine, Dr. Abram Hoffer and his 35 exceptional books about psychiatry, biochemical factors, research, clinical practice—progress developing restorative care and success treating patients with schizophrenia, psychosis, anxiety, depression and other conditions.

# Part I

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# Abram Hoffer, PhD, MD, FRCP(C) — Doctor Niacin

## Medical Pioneer and Prolific Author

### Orthomolecular Psychiatry: The Restorative Dimension of Care

In the 1950s, Dr. Abram Hoffer and Dr. Humphrey Osmond researched schizophrenia in Saskatchewan, Canada. They studied the causes of psychosis and restored normal brain function in patients with pellagra II (now called schizophrenia). Their work started decades after Dr. Joseph Goldberger observed that a healthy diet could heal pellagra, a non-infective condition which sent thousands to mental asylums in the southern US.

With a PhD in biochemistry, Abram Hoffer knew that brain metabolism involves both oxidation and reduction. Hoffer and Osmond discovered that in some patients, the irreversible oxidation of adrenalin can yield indole byproducts which interfere with brain function, distort perception, deplete energy and trigger psychosis. They tested patients' urine and found a marker of oxidative stress. They dosed patients with two vital amines: niacin—a methyl acceptor and ascorbic acid—an antioxidant, (vitamins B-3 and C).

75% of their acute patients recovered from schizophrenia, hallucinations, anxiety and depression. After conducting double-blind placebo-controlled studies, the first in psychiatry, Hoffer and Osmond published their findings in medical journals. Linus Pauling, PhD coined the word 'orthomolecular' to describe the restorative approach.

Even after more than 50 years of orthomolecular research, clinical progress and success, the majority of psychiatrists still dismiss the healing capabilities of vitamins and only treat patients with pills, talks and shocks. After all, could mere vitamins possibly help? How indeed?

For decades, Abram Hoffer wrote more than 600 articles for medical journals, authored more than 35 books, edited the *Journal of Orthomolecular Medicine*, founded the International Society of Orthomolecular Medicine and encouraged conferences. By writing to share orthomolecular research, clinical findings, restorative regimens and recovery stories, Hoffer taught thousands of patients, families and health professionals that orthomolecular care can help patients restore and maintain their health. His books teach us that vitamin therapy can help.

Dr. Hoffer's books still read fresh and clear today. Decade after decade, Abram Hoffer wrote books to share orthomolecular medical information, help and hope.

### Note to readers:

Dr. Hoffer had several degrees. First he obtained a PhD in biochemistry; then he became a medical doctor, so he added the degree MD. When he specialized in psychiatry, he became an FRCP(C). After decades of practicing psychiatry, he retired as a psychiatrist but obtained another degree—RNCP as a Registered Nutritional Consulting Practitioner.

In his published work, depending on the stage of his career, and on his personal choice Abram Hoffer described himself variously as PhD, MD or as MD, PhD or as PhD, MD, FRCP(C), or as PhD, MD, RNCP. Readers of this book may notice these variations. The title of this book uses PhD, MD. The list of his books reflects his choices for each book.



# In the 1960s, Hoffer Wrote

## **Chemical Basis of Psychiatry**

**17**

Hoffer, A and Osmond H, C Thomas Publisher, Springfield, 1960

## **Niacin Therapy in Psychiatry**

**21**

A Hoffer, PhD, MD, intro. by H Osmond, MD,  
C Thomas Publisher, Springfield, Illinois, 1962

Nicotinic Acid [*now called niacin*] as a Vitamin

Nicotinic Acid and Niacinamide—Toxicology and Effects

Nicotinic Acid in Treatment of Schizophrenia—double-blind study, follow-up

Nicotinic Acid in Confusional and Drug-induced Psychoses

Appendix—64 case histories

## **How to Live With Schizophrenia**

**25**

Abram Hoffer, PhD, MD & Humphry Osmond, MRCS, DPM,  
Carol Publishing, New York, 1966, 1992

Intro. by Nolen D.C. Lewis, MD

What is Schizophrenia?

Causes of Schizophrenia

Comprehensive Theory of Schizophrenia

Treatment of Schizophrenia

Preventing Schizophrenia

## **The Hallucinogens**

**31**

Hoffer, A and Osmond, H, Academic Press, New York, 1967

Plant b-Phenethylamines; and d-Lysergic Acid Diethylamide

Adrenochrome and Some of its Derivatives

Indole Hallucinogens Derived from Tryptophan

Hallucinogens Related to Parasympathetic Biochemistry

Animal Studies of Hallucinogenic Drugs

## **New Hope for Alcoholics**

Abram Hoffer, PhD, MD & Humphry Osmond, MRCS, DPM,  
University Books, New York, 1968

Alcoholism—A Grave Social Problem

Malvarian and Schizophrenic Alcoholics

LSD Studies

Nicotinic Acid and Alcoholism

Welcome Father (stories written by recovered patients)

An Ideal Program for Treating Alcoholics

# in the 1970s

## **Orthomolecular Psychiatry Treatment of Schizophrenia**

ed by David Hawkins, MD & Linus Pauling, PhD, Freeman & Co, San Francisco, 1973

### **Theoretical and Experimental Background**

Mechanism of Action of Nicotinic Acid and Niacinamide in the Treatment of Schizophrenia by Abram Hoffer, MD, PhD

### **Clinical Diagnosis**

Dyschronia: Disorders of Time Perception in Schizophrenia by Alan Cott, MD

Metabolic Dysperception by Bella Kowalsen, MD

Blood Histamine, Basophil Counts and Trace Elements in the Schizophrenias by Carl Pfeiffer, MD, et al

### **Treatment**

High-Dosage Levels of Certain Vitamins in the Treatment of Children with Severe Mental Disorders by Bernard Rimland, PhD

Perenteral Vitamins in the Treatment of Schizophrenia by Alan Cott, MD

### **A Practical Clinical Model**

The Orthomolecular approach to the Diagnosis of Schizophrenia; and

Orthomolecular Psychiatry: Treatment of Schizophrenia by D. Hawkins, MD

## **Clinical and Other Uses of the Hoffer-Osmond Diagnostic Test**

Editors Abram Hoffer, Harold Kelm & Humphry Osmond, Krieger Publishing, New York, 1975

Intro. by Hoffer and Osmond

Description of the HOD Test

Reliability and Validity of the HOD Test

HOD Scores and Clinical Descriptions of Patients

Subclinical Pellagra

The HOD Test in a Busy Psychiatric Outpatient Clinic

The HOD in General Practice

The HOD in Social Work Programs

The HOD in School Counselling

## **Orthomolecular Nutrition**

### **New Lifestyle for Super Good Health**

Abram Hoffer, PhD, MD & Morton Walker, DPM, Keats Publishing, New Canaan, 1978

What is Orthomolecular Medicine?

How Orthomolecular Therapy Works

Orthomolecular Psychiatry

Poor Nutrition and Mental Disease

Part I—The Optimum Diet;

Part II—Protein, Fat & Carbohydrate;

Part III—Vitamin Supplementation;

Part IV—Mineral Nutrients

Benefits of Orthomolecular Nutritional Therapy

## in the 1980s

### **Nutrients to Age Without Senility**

Abram Hoffer, MD, PhD, and Morton Walker, DPM,  
Keats Publishing, New Canaan, 1980

- Normal Aging, Premature Aging and Pseudosenility
- Degenerative Diseases Caused by Consuming Food Artifacts
- Stress, Obesity and Other Risk Factors of Senility
- The Antisenility Vitamins
- Dietary Minerals and Other Aspects of Good Nutrition

### **Everybody's Favorite (Orthomolecular) Muffin Book**

Rose Hoffer and Abram Hoffer, MD, Keats Publishing, New Canaan, 1980

- What is an Orthomolecular Muffin?
- Introduction—Food and Food Artifacts,—by Abram Hoffer
- Muffin recipes—A to Z—by Rose Hoffer

### **Common Questions on Schizophrenia and Their Answers**

29

Abram Hoffer, MD, PhD, Keats Publishing, New Canaan, 1987

- What is Schizophrenia?
- The Treatment Program and Its Background
- The Role of Nutrition; Optimum Treatment
- Optimum Treatment
- How Patients and Their Families Deal with Schizophrenia
- Suggested Reading

### **Orthomolecular Medicine for Physicians** [and the general public]

Abram Hoffer, MD, PhD, Keats Publishing, New Canaan, 1989

- Nutrition
- Food and Mineral Supplements
- Gastrointestinal and Cardiology Disorders
- Neurological Disorders
- Metabolic Stress
- Orthomolecular Psychiatry
- Cancer and Orthomolecular Treatment

## in the 1990s

### **Smart Nutrients**

#### **A Guide to Nutrients that can Prevent and Reverse Senility**

Abram Hoffer, MD and Morton Walker, DPM, Avery Publishing, New York, 1994

- Aging is Inevitable but Senility Isn't
- Hypotheses of Senile Pathology
- Senility from Subtle, Chronic Malnutrition
- The Role of Food Artifacts
- Risk Factors of Senility
- The Antisenility Vitamins
- Dietary Minerals and Other Aspects of good Nutrition
- Niacin, Coronary Disease and Longevity
- Turn Back the Years With Exercise

### **Orthomolecular Treatment for Schizophrenia**

#### **Megavitamin Supplements and Nutritional Strategies for Healing and Recovery**

A Hoffer, MD, PhD, Keats Publishing, Los Angeles, 1999

- The Evolution of "Orthomolecular"
- Paradigm conflict: "Vitamins-as-prevention; vs. "Vitamins-as-treatment"
- What is Schizophrenia?—Symptoms, History, How Diagnosis affects Treatment
- Approach to Diagnosis and Treatment—Tests, Syndromes, Therapeutic Regimen
- Nutritional History, Vitamins, Minerals, Medications
- Results of Orthomolecular Treatment—Acute vs. Chronic Patients

### **Vitamin B-3 & Schizophrenia:**

#### **Discovery, Recovery, Controversy**

Dr. Abram Hoffer, Quarry Health Books, Kingston, ON, 1998

- Discovery—Hypothesis, Double-Blind Studies
- Recovery—Diagnosis, HOD test, Schizophrenic Syndromes,
- Treatment—diet, vitamins, minerals, amino acids, fatty acids, drugs
- Controversy—Politics of Ideas, The New Medical Paradigm

### **Dr. Hoffer's ABC of Natural Nutrition for Children**

#### **with Learning Disabilities, Behavioral Disorders, and Mental State Dysfunctions**

Abram Hoffer, MD, PhD, FRCP(C), Quarry Health Books, 1999

- Diagnosis
- Treatment
- Corroboration

## in the 2000s

### **Healing Schizophrenia**

#### **Complementary Vitamin & Drug Treatments**

Dr. Abram Hoffer, CCNM Press, Toronto, 2004

Symptoms and Causes of Schizophrenia

Treatment and Prevention of Schizophrenia

HOD—Hoffer-Osmond Diagnostic Test for Schizophrenia

### **Adventures in Psychiatry:**

**55**

#### **The Scientific Memoirs of Dr. Abram Hoffer**

Abram Hoffer, PhD, MD, FRCP(C), KOS Publishing, Toronto, 2005

Chemistry Studies and Purity Flour Mills

Medical School and City Hospital Internship

Pilot Trials of Vitamins for the Mentally Ill

Double-Blind Therapeutic Trials of Niacin

Pure Adrenochrome: Its Synthesis and Hallucinogenic Properties

LSD, Niacin and Alcoholism

Niacin and Cholesterol

The Book: *How to Live With Schizophrenia*

CMHA and Schizophrenics Anonymous

Private Practice

The Huxley Institute and the Cdn Schizophrenia Foundation

Hoffer-Vickar chair in Psychiatry

Opposing Mandatory Retirement

Closing Reflections

### **Mental Health Regained**

**35**

#### **18 Patients' Recovery Stories** [written by patients!]

compiled by Abram Hoffer, PhD, MD, ISF, Toronto, 2006

### **Feel Better & Live Longer With Vitamin B-3**

**39**

#### **Nutrient Deficiency and Dependency**

Dr. Abram Hoffer, MD, FRCP, PhD & Dr. Harold Foster, PhD,

CCNM Press, Toronto, 2007

Niacin Deficiency Pandemic

Vitamin B-3 Responsive Diseases and Conditions

Pellagra

Schizophrenia Syndrome

Pyroluria

Addictions

Other—Huntingtons, Parkinsons, Alzheimers & Senility, Arthritis, Anxiety, Cancer

<b>Orthomolecular Medicine for Everyone</b>	<b>43</b>
<b>Megavitamin Therapeutics for Families and Physicians</b>	
Abram Hoffer, PhD, MD, FRCP(C) and Andrew Saul, PhD, 2008, Basic Health Publications Inc., CA, <a href="http://www.basichealthpub.com">www.basichealthpub.com</a>	
<b>The Vitamin Cure for Alcoholism</b>	<b>47</b>
<b>Orthomolecular Treatment of Addictions</b>	
Abram Hoffer, PhD, MD, FRCP(C) and Andrew Saul, PhD 2009, Basic Health, CA <a href="http://www.basichealthpub.com">www.basichealthpub.com</a>	
<b>Psychiatry: Yesterday (1950) and Today (2007)</b>	<b>51</b>
<b>From Despair to Hope with Orthomolecular Psychiatry</b>	
Abram Hoffer, PhD, MD, FRCP(C) 2008, Trafford Publishing, Victoria, BC, <a href="http://www.trafford.com">www.trafford.com</a>	

**\*\* Note**—*Jnl of Orthomolecular Medicine*—free book list at [www.orthomed.org](http://www.orthomed.org)

# Historical Notes—Books written before Dr. Hoffer used vitamins

## **Research in Dementia Praecox**

Nolan Ryan, PhD, MD,  
1936, Scottish Rite Masons, New York

Twenty years before Abram Hoffer started to research schizophrenia and develop restorative treatments, Dr. Ryan wrote about the need for new ideas, new hypotheses and new research to identify the causes and develop effective treatments for schizophrenia (then called dementia praecox). Ryan provided an extensive bibliography of scientific and medical research from the 1920s and 1930s. In the 1950s, Nolan Ryan recognized the potential of Hoffer and Osmond's research and supported their request for research funds.

## **Vitamins in Theory & Practice**

Leslie Harris, DSc,  
1937, The University Press, Cambridge

Written for the general public, this concise book reviews the history of vitamins and presents the work of vitamin researchers including Sir Frederick Hopkins, PRS, OM (who was awarded a Nobel Prize in 1929) and Dr. Casimir Funk, (whose 1912 vitamin hypothesis proposed four vitamins—anti-beri-beri, anti-scurvy, anti-pellagra and anti-rickets). In 1930, 7,000 people died from pellagra in the US. This book reviews the research of Dr. Joseph Goldberger and notes “the unfortunate [pellagra] victim has mental troubles in the last stage of his affliction.”

## **Vitamin Therapy in General Practice**

E Gordon, MD, MA & E Sevringhaus, MD, FACP,  
1940, The Year Book Publishers, Chicago

Foreward by E. Elvehjem

What is a Vitamin?

Vitamin A

The Vitamin B Complex

Ascorbic Acid [Vitamin C]

Vitamin D

Vitamin E

Minerals, Protein

Fuel Foods, Fat

The Economic Side of Clinical Nutrition

Years before Dr. Abram Hoffer gave vitamins and other nutrients to his patients, other doctors had given vitamins and observed that certain patients recovered. One vitamin at a time, this book reviews the healing benefits of supplements and reports by other doctors who found vitamin therapy safe and effective.

## **The Biochemistry of B Vitamins**

Roger Williams, R. Eakin, E. Beerstecher, W. Shive,  
1950, Reinhold Publishing Corp., New York

- Sec. A: Characterization, Distribution, Assay and Biogenesis
- Sec. b: The Catalytic Functions of the B Vitamins
- Sec. C: The Role of the B Vitamins in Animal and Plant Organisms
- Sec. D: The Comparative Biological Activities of the B Vitamins
  - Ch. 1: Introduction and Theoretical Considerations
  - Ch. II: Utilization of Competitive Analogue-Metabolite Inhibition in the Elucidation of Biochemical Processes Involving Vitamins
  - Ch. III: p-Aminobenzoic Acid
  - Ch. IV: Biotin
  - Ch. V: The Folic Acid Group
  - Ch. VI: The Nicotinic Acid Group
  - Ch. VII: The Pantothenic Acid Group
  - Ch. VIII: The Vitamin B6 Group
  - Ch. IX: Riboflavin
  - Ch. X: Thiamin
  - Ch. XI: Biological Activities of Other Nutritional Factors of Doubtful Status

## **Alcoholism: The Nutritional Approach**

Roger Williams, PhD,  
1959, Univ. of Texas Press, Austin

- What is Alcoholism?
- Why Do We Drink Alcohol?
- What our Bodies Need
- Biochemical Individuality, An Inescapable Factor
- What We Recommend for Alcoholics

(from the back cover) *“Roger J. Williams, who has devoted years to studying the problem of alcoholism, believes that alcoholism is a physical and usually a curable disease. While recognizing that psychiatry, medicine, and religion, as well as nutrition must all play a part in the rehabilitation of the alcoholic, he asserts that unless the body chemistry is so adjusted that the appetite mechanisms function properly, nothing can bring success. The best hope in the fight against alcoholism, then, continues to be its prevention through dietary controls. In this valuable book he presents his views in layman’s language.”*

Rogers Williams, who also wrote *Biochemical Individuality*, published in 1956, researched biochemistry and discovered several vitamins. His alcoholism book reminds us that in the 1950s, Eli Lilly pharmaceuticals marketed a multivitamin supplement called Tycopan. Williams recommended Tycopan to alcoholic patients as a restorative treatment. He noticed that an appropriate daily dose of Tycopan multivitamins helped alcoholics to reduce their appetites for alcohol and regain their health.

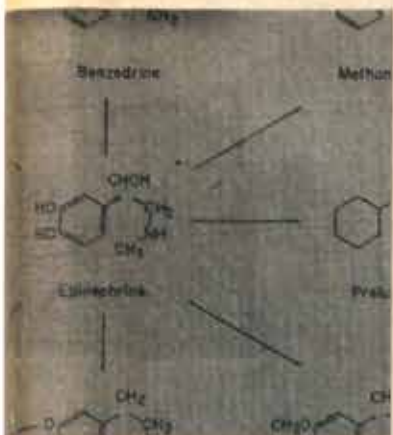


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Saskatchewan Hospital  
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# The Chemical Basis of Clinical Psychiatry

It is strange indeed that THERE HAS BEEN NO BIOLOGICAL HYPOTHESIS OF ANXIETY AND OF DEPRESSION UNTIL THIS ONE. Doctors Hoffer and Osmond create the hypothesis that THE FEELING AND PRESENCE OF ANXIETY DEPEND UPON THE RATIO OF ADRENALINE TO

*American Lecture Series®*



LEUCO ADRENOCHROME, ONE OF ITS DERIVATIVES. They examine critically the evidence from which this conclusion is drawn.

# The Chemical Basis of Clinical Psychiatry

**Abram Hoffer, MD and Humphry Osmond, MD,  
C. Thomas, Springfield, Illinois, 1960**

In the early 1950s, Abram Hoffer was a keen young MD with a PhD in biochemistry. He found work in psychiatric research in Saskatchewan, Canada. Shortly thereafter, Dr. Humphry Osmond came to Canada from England, hoping to continue his research on psychosis. In those years, thousands of mental patients lived in dreary asylums after getting a diagnosis of psychosis or schizophrenia. Psychiatry then (1950's) had no restorative treatments. Very few psychotic patients recovered after receiving electric shocks, insulin comas, restraints or lobotomies. Their prognosis for recovering and living well was bleak.

Hoffer and Osmond got along well. They wanted to help psychotic patients recover—a seemingly impossible goal. Who could predict that their research would lead to restorative treatments for schizophrenia and help patients live well after episodes of psychosis, anxiety, depression, alcoholism and even manic depressive mood swings? Who would predict that they would co-found a new medical specialty?

In their first decade of research, Hoffer and Osmond wrote this book to explain that their research used the scientific approach. Hoffer and Osmond asked—“Why should psychiatry require anything different from the rest of science?” especially when, “Psychiatrists seem to use either speculative systems which are hard to test or empirical systems which are devoid of hypotheses. One wonders why this should be so [in 1960].” But, no matter, Hoffer and Osmond were pragmatic scientists as well as physicians—they used the scientific method to conduct their research.

In order to address the problem of psychosis, Hoffer and Osmond had to think outside-the-box. They needed to formulate ideas about possible cause(s) of schizophrenia. New ideas would lead to hypotheses which could be tested. Osmond had an idea about psychosis. As Hanson noted in 1958, “The way in which ideas develop is mysterious”—“the paradigm observer is not the man who sees and reports what normal observers see and report, but *the man who sees in familiar objects what no one else has seen before.*”

Hoffer and Osmond's 1960 book starts with an outline of the scientific method. This topic might sound dry, but Hoffer and Osmond explain that “Several disciplines converge in psychiatric research ... cooperative action ... only becomes fertile when there is ... an hypothesis upon which attention and interest can be focused.”... “An hypothesis is the means by which an idea is made suitable for testing. A hypothesis must accomplish three things:

1. account inclusively and economically for all that is known [about a topic]
2. do this better than any previous hypothesis, and
3. be testable in a way which will lead to its refutation should it be false, using methods available to the science under scrutiny.”

In *The Chemical Basis of Clinical Psychiatry*, Hoffer and Osmond “review some of the hypotheses which are ... used to account for anxiety, depression, the characteristic picture of schizophrenia and the model psychoses ... discuss the evidence of these hypotheses and the relationship between chemical, psychological and social changes ... [and] then discuss the way in which ... [research in psychiatry] might develop.”

Hoffer and Osmond provide theoretical, historical and chemical bases for what turned into decades of scientific and medical research in psychiatry. They propose hypotheses for testing and they apply the scientific method when they research and test patients with disorders such as anxiety, depression and schizophrenia.

What did they notice that no one else had observed before? Starting 50 years ago, they studied adrenalin metabolism, hypothesized anomalies in some patients, tested the biochemistry involved and discovered restorative treatments. Their treatments helped thousands of patients recover.

Should we ask modern psychiatrists to use the scientific method?

Why did the majority of psychiatrists fail to notice that Hoffer and Osmond rigorously applied the scientific method in their research? Why did most psychiatrists discount their theories, dismiss their findings and ignore their healing regimens? Shunning by the majority of psychiatrists produced the unfortunate outcome that Hoffer and Osmond’s ground-breaking research, discoveries, progress and success have yet to qualify as standards of care today. This sad situation leaves millions of sick patients to suffer and deteriorate.

Paradigm change eventually comes to medicine, but the process takes decades. Fortunately Hoffer and Osmond wrote this book so clearly that anyone can learn how they used the scientific method to research the biochemistry of psychosis and develop restorative treatments. Maybe we can ask ‘modern’ psychiatrists to read this book and repeat the experiments done by Hoffer and Osmond in the 1950’s; apply the scientific method and observe that restorative treatments can help patients recover; maybe ‘modern’ psychiatrists will rediscover Abram Hoffer’s restorative approach to psychiatry. Maybe trusting patients will get the chance to benefit from complementary and restorative treatment programs.





**A. HOFFER, Ph.D., M.D.**

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# **NIACIN THERAPY in PSYCHIATRY**

"This is work in the great therapeutic tradition, in which the author combines imaginative flair, persistence, and dogged skill. I hope it will stimulate many others to turn their attention to niacin, a very curious and important simple chemical substance." — From the Preface by HUMPHRY OSMOND, M.R.C.S., D.P.M., The Saskatchewan Hospital, Weyburn.

*American Lecture Series*



# Niacin Therapy in Psychiatry

**A Hoffer, PhD, MD, intro. by H Osmond, DPM,  
C Thomas Publisher, Springfield, Illinois, 1962**

## **Contents:**

Introduction [by Dr. Osmond]

Nicotinic Acid [niacin] as a Vitamin

Nicotinic Acid and Nicotinamide Toxicology

Nicotinic Acid and Nicotinamide as Sedatives

Nicotinic Acid as a Vasodilator

Nicotinic Acid and Nicotinamide in Treatment of Schizophrenia

Nicotinic Acid in Confusional and Drug-Induced Psychoses

Appendix [has 64 cases of patients who benefited taking nicotinic acid—i.e. niacin]

In his introduction, Dr. Humphry Osmond recalled ...

*"... our interest in the use of nicotinic acid [also called niacin or vitamin B-3] as a treatment for schizophrenia arose at the end of 1951 during my first winter in Saskatchewan. At this time, Dr. Abram Hoffer and I were starting to explore the ideas which Dr. John Smythies and I had initiated in England. ... [ideas about whether] schizophrenia might be caused by the production of a metabolite of adrenaline whose ... effect would resemble mescaline or LSD-25 [i.e., by producing hallucinations].*

*These ideas seemed promising because there are certain resemblances between the chemical formula of adrenaline and mescaline and [also between] the psychological effects of mescaline and some of the symptoms of schizophrenia. These ideas later became known as the adrenaline metabolite theory of schizophrenia. The adrenochrome hypothesis ... is an example of the theory.*

*One evening we asked ourselves what might be an ideal treatment supposing our ideas were correct. A treatment should be safe, easy to administer, continuous, cheap and ... it should be aimed at some psycho-physiological process. If our adrenaline metabolite theory was correct, then anything which reduced the production of adrenaline might help. Nicotinic acid was mentioned as something which might compete for methyl groups. At that time, nicotinic acid had been used [as a medical treatment] ... for deliria and ... for depressions ... As much as 1,000 mg was given. [In 1952 Hoffer and Osmond gave niacin or niacinamide to two patients with acute schizophrenia. The patients recovered.]*

*As in much clinical work, it is the single case which is the stimulus for further*



*enquiry. Shortly after this, Dr. Hoffer began his first blind clinical trial of massive doses of niacin, its amide and placebo. The results of that trial and subsequent ones ... are described in this book. The early clinical observations have been repeatedly confirmed.*

*In schizophrenia, attention to [the beneficial] effects [of niacin] have been diverted by a host of tranquilizers which Mayer-Gross has suggested are psychotomimetic in their own right. It is the fate of this cheap, effective and very interesting substance to be shouldered out by others whose main claim to fame often lies in the size of their advertising budgets. I am particularly glad to see that this work which Dr. Hoffer and I started together nearly a decade ago, and which he has pursued so diligently and carefully, at last presented in book form. This is work in the great therapeutic tradition in which the author combines imaginative flair, persistence, and dogged skill. I hope it will stimulate many others to turn their attention to niacin, a very curious and important simple chemical substance."*

### **Nicotinic Acid as a Vitamin**

As a prudent researcher, before prescribing nicotinic acid to sick patients, Abram Hoffer read the medical literature and learned its history and previous therapeutic applications. He learned that:

*"Nicotinic acid was discovered to be a vitamin many years after it had been synthesized by Huber (1867)."*

*"The concept of essential metabolic factors or vitamins was originated in 1911 by Funk. Many years were required before this idea was generally accepted."*

*"Nicotinic acid is required by all living cells. Both the acid and amide are essential components of coenzyme I and II... diphosphopyridine and triphosphopyridine nucleotide ... DPN and TPN form essential links in the oxidation-reduction systems of the respiring cell. They accept hydrogen ions from substrates and transfer them to acceptors such as the flavins... the DPN and TPN system is essential for many metabolic reactions. These include systems involved in the synthesis of high energy bonds, in glycolysis, in pyruvate metabolism and in lipid metabolism as well as in many other systems."*

*"Elvehjem, Madden, Strong and Woolley (1937) reported that both nicotinic acid and its amide cured black tongue in dogs (the canine version of pellagra). Soon after that finding, niacin was successfully used to treat pellagra. The dramatic cure of pellagra by nicotinic acid was soon corroborated by many investigators who also discovered one of the few specific etiological treatments in psychiatry, i.e., nicotinic acid for the pellagra psychosis."*

Fifteen years before Hoffer and Osmond gave nicotinic acid, niacin or niacinamide to patients, therapeutic doses of vitamin B-3 had already been used to heal thousands of patients who suffered with pellagra, a nutritional deficiency disease which filled asylums in the southern US in the early 1900s and caused thousands of untimely deaths.

Niacin was considered so safe and so essential, that beginning in the early 1940s, small quantities of nicotinic acid were routinely added to white flour. That supplementation ended the epidemic of pellagra which had arisen after poor diets produced a health-depleting and life-threatening deficiency of that essential metabolic factor. Research by Dr. Joseph Goldberger linked pellagra with malnutrition; Goldberger noticed that a balanced diet healed his pellagra patients but he did not

identify nicotinic acid as the specific pellagra preventative factor.

Hoffer reminds readers of the symptoms of pellagra; notice how similar these sound to mental disorders common today including: depression, anxiety and schizophrenia.

*"The course of pellagra has been described by many ... early changes include fatigue, nervousness accompanied by anxiety and depression ... weeks later gastrointestinal symptoms develop including indigestion, anorexia and constipation ... loss of weight, weakness and vertigo ... symptoms are aggravated by acute stress such as severe exercise, surgery or infections... [progressing to] ... inflammatory state [with] glossitis ... atrophy of the gastric mucosa and achlorhydria... infections and diarrhea ... mental changes are severe and may be of psychotic proportions. Perceptual changes (hallucinations, disturbances of body image), changes in thought (blocking, delusions, confusion, disorientation) and changes in mood are common ... in the past these were diagnosed as toxic psychoses, if the disorientation and confusion were predominant, or, if these were lacking, schizophrenia. "*

Patients who suffer the above symptoms today might wonder whether pellagra has recurred; surely the modern diet does not involve deficiencies of essential nutrients to the point where vulnerable people risk malnutrition and yet, a century ago, hundreds of thousands of sick and suffering patients deteriorated eating subsistence-level diets during an economic depression. Nearly a century ago, pellagra reached epidemic levels. What is happening today—has pellagra returned or has another, somewhat less severe but related metabolic disorder developed? Does this suggest malnutrition? Can we call it pellagra II?

## **Appendix [includes 64 case summaries]**

Before double-blind placebo-controlled studies or double-dummy studies, (as Dr. Hoffer sometimes called them),

*"most medical men [were] raised on the case method and find that accounts of individual patients are both more interesting and more vivid than tables, however imposing. To illustrate the kind of patients we have defined here as schizophrenia and their response to nicotinic acid [now called niacin], we have summarized about sixty-four cases (Hoffer and Callbeck)."*

As you read these concise cases, it becomes apparent that in the 1950s, many of the first 64 orthomolecular patients recovered taking vitamins. Many patients restored normal brain function so they could live well.





**Completely New Revised Edition**

**HOW  
TO  
LIVE  
WITH  
SCHIZOPHRENIA  
SCHIZOPHRENIA**

**by Abram Hoffer, M. D., Ph. D.  
& Humphry Osmond, M.R.C.S., D. P. M.**

**This book is addressed to the broad public,  
to report an important breakthrough  
in medicine and psychiatry**

# How to Live with Schizophrenia

**Abram Hoffer, PhD, MD, FRCP(C) and Humphry Osmond, MRCS, DPM**

**1966, 1992, Citadel Press, New York, 222 pages**

**With a foreward by Nolan D.C. Lewis, MD**

From the foreward by Dr. Lewis—“This is a unique book in two ways. It is the first book written for the schizophrenic and schizoid patients, instructing them in what attitude they should take to live with the disorder. Secondly, the authors have accomplished the difficult task of presenting a longitudinal picture of the whole problem in perspective, utilizing only those terms that can be readily understood by the general reader ...

In the section on therapy, one finds detailed instructions for a total attack on the disorder, directed throughout to the patient and his relatives, with a comprehensive discussion of the pharmacological approaches, including an informative presentation of the nicotinic acid [also called niacin or vitamin B-3] therapy as originated and applied by the authors in their research and practice.”

## **Contents:**

Author's Preface

Ch. I. So You Have Schizophrenia

Ch. II. What is Schizophrenia?

Ch. III. Causes of Schizophrenia

Biochemical hypotheses

Psychological Factors

Contributing Causes

Ch. IV. Comprehensive Theory of Schizophrenia

Biochemical, Psychological, Perceptual Changes

Mood, Fatigue, Social Factors

Ch. V. Treatment of Schizophrenia

Treatment Program

Chronic Schizophrenia

Nicotinic Acid [vitamin B-3, also called niacin]

Other Treatments

The Treatment Team

This book explains schizophrenia clearly so patients, family members and caregivers will understand it as a disorder of metabolism. First written in 1966 and updated in 1992, this book presents the research, development, progress and success of the

Hoffer-Osmond team beginning in the 1950s in Saskatchewan, Canada. They worked with thousands of patients and learned that some patients with schizophrenia have a problem with adrenalin metabolism; then they developed a restorative treatment that proved safe and effective enough to help 75% of their patients recover and live well.

Other books by Hoffer and Osmond detail the biochemistry involved with adrenalin metabolism and explain how certain nutrients can have healing properties, if given for the right reasons and in optimum doses. For instance, since both methylation and oxidation can become overactive in schizophrenia, the Hoffer-Osmond treatment program combines a methyl-accepting supplement called vitamin B-3 (also called niacin or nicotinic acid) with an oxidation-slowing supplement called vitamin C (also called ascorbic acid). Skeptical naysayers deny the value of this approach, but patients who took the Hoffer-Osmond treatments and recovered from schizophrenia report that the treatments worked slowly and steadily, safely, effectively and restoratively.

Conventional psychiatrists offer labels and prescription medications, sometimes with talks or shock therapies—typically this approach calms the patient but sedates them into a tranquilized state which means that they are too sleepy to function normally. Busy psychiatrists don't have time to learn biochemistry or try the slower-acting restorative treatments, easier for them to deny the healing capabilities of vitamins and renew prescriptions—knowing that schizophrenic patients don't recover very often. Patients of Dr. Hoffer and Dr. Osmond recovered 75% of the time unfortunately conventional psychiatrists assumed that this result could not possibly connect with mere nutrients.

As the years passed, Hoffer and Osmond shared their findings by writing books, submitting papers to scientific and medical journals, speaking at meetings and conferences—but hundreds of thousands of patients never heard about the restorative treatments so Hoffer and Osmond wrote this book to share their important work directly with patients, families, caregivers and the few health professionals who cared to learn.

The public quickly responded to Hoffer and Osmond's direct-to-patient communication about restorative treatments by buying copies of their book—thousands of copies have been sold since 1966! This book still reads fresh and clear today, interesting, encouraging, thoroughly well supported by serious scientific research and sound medical practices. If you have schizophrenia or a sick family member or friend with psychosis, you will find this book informative, helpful and hopeful.





For Patients And Their Families—

# **COMMON QUESTIONS ON SCHIZOPHRENIA AND THEIR ANSWERS**

Abram Hoffer, M.D., Ph.D.

The vital information you need to help you—  
or someone close to you—deal with a most  
widespread and misunderstood family of diseases



# Common Questions on Schizophrenia and Their Answers

**Abram Hoffer, PhD, MD, 1987, Keats Publishing, USA.**

Continuing his direct-to-patient style of writing, Abram Hoffer wrote this book as if he was “having a long conversation with an intelligent person who had recovered from schizophrenia”. Dr. Hoffer learned about schizophrenia by healing thousands of patients—he knew the questions patients often ask and he knew how to answer their questions, quickly, clearly and directly so the patients and their families can learn that schizophrenia is a metabolic disorder which responds to a restorative treatment program which includes nutritional supplements such as niacin (vitamin B-3) and ascorbic acid (vitamin C), given in optimum divided daily doses. Patients with acute schizophrenia could recover fairly quickly; but patients who had been ill with schizophrenia for years took longer to recover.

Abram Hoffer and his colleagues researched schizophrenia, co-pioneered an orthomolecular approach, developed restorative treatments and healed thousands of patients. As you read this concise yet comprehensive book, you soon learn that Dr. Hoffer treated his patients—with respect, concern, support, compassion and competence.

## **Contents (excerpts).**

Preface

What is Schizophrenia?

*“Schizophrenia is a disease affecting the whole body, but most evident in its effects on the patient’s attitudes and perceptions. What is observed or heard is misunderstood or misperceived, thought processes are disordered, and there may be hallucinations or delusions.”*

Why Does It Strike?

The Impact

The Treatment Program and Its Background

*“This program is what I call orthomolecular psychiatry. ‘Orthomolecular’ is a term devised by Linus Pauling in 1968, referring to restoring a ‘right molecule balance to the body by supplying it with appropriate amounts of nutrients—vitamins, minerals and so on. Theory indicates, and experience has borne out, that this very often results in righting the chemical imbalance in the brain which produces the schizophrenic symptoms.”*



# THE HALLUCINOGENS

*A. Hoffer*

FORMERLY,  
DEPARTMENT OF PUBLIC HEALTH  
PSYCHIATRIC RESEARCH  
UNIVERSITY HOSPITAL,  
SASKATOON, CANADA

*H. Osmond*

NEUROPSYCHIATRIC INSTITUTE  
PRINCETON, NEW JERSEY

WITH A CONTRIBUTION BY

*T. Weckowicz*

Department of Psychiatry  
College of Medicine  
University of Alberta  
Edmonton, Canada

1967



ACADEMIC PRESS New York and London

# The Hallucinogens

**Abram Hoffer, PhD, MD, FRCP(C) and Humphry Osmond, MD**

**1967, Academic Press, New York, 626 pages**

From the preface—

*"In 1967, we (Hoffer and Osmond) defined hallucinogens as chemicals which, in nontoxic doses, produce changes in perception, in thought, and in mood, but which seldom produce mental confusion, memory loss, or disorientation for person, place and time." In 1954 [Hoffer and Osmond] "designated mescaline, [LSD] lysergic acid diethylamide, and adrenochrome as hallucinogens. The only other substances which we classed as hallucinogens were the active principals from marijuana, harmala alkaloids, and ibogaine, not identified chemically for certain at that time. In the [next] decade, many additional hallucinogens [were] discovered, studied and described and so many publications appeared that this may be the last time it will be possible to give a detailed description of the hallucinogens in a single volume."*

Thus began Hoffer and Osmond's astonishing book in which they systematically reviewed the biochemistry, effects, research and published findings involving a selection of hallucinogenic compounds which all had indole chemical structures.

## **Contents:**

Chapter I. Plant Beta-Phenethylamide

Including Mescaline, Amphetamines, Kava Kava, Safrole

Chapter II. A. d-Lysergic Acid Diethylamide [LSD]

Sources, chemistry, pharmacology, biochemistry, neurophysiological effects, dose and psychological activity, effect on subjects, psychotomimetic reaction to LSD, the psychedelic experience

Chapter II. B. Ololiuqui: The Ancient Aztec Narcotic

Chapter III. Adrenochrome and Derivatives

Chemistry, Biochemical properties, Formation and Metabolism,  
Psychological properties, Adrenolutin, Prolonged reactions

Chapter IV. Indole Hallucinogens Derived from Tryptophan

Chapter V. Hallucinogens Related to Parasympathetic Biochemistry

Chapter VI. Taraxein

Chapter VII. Animal Studies of Hallucinogenic Drugs

Why would Hoffer and Osmond write this book when they were so busy caring for thousands of patients, sick with schizophrenia and other mental disorders?

They explain in Chapter 1:

*"The final determination of the structure of adrenaline aroused great interest in a large series of amines with similar structure. Many of these were*



*examined by Barger and Dale (1910) ... two members of this class of chemicals, mescaline and adrenaline, typify the main properties of these compounds. Both were known over 60 years ago but **only in the last few years have they been studied as psycho[active]chemicals which might lead into some of the causes of schizophrenia.** It is surprising that the idea was so slow in arriving in psychiatric research. It is not surprising they are chemically close for they are biogenically related to the amino acids phenylalanine, tyrosine and 3, 4-dihydroxyphenylalanine."*

Bernadino de Sahagun described the use of peyote (mescaline) by the Mexican Indians in 1560 when he wrote "it produces in those who eat or drink it, terrible or ludicrous visions; the inebriation lasts for two or three days and then disappears." The effects of mescaline were researched in the 1800s and early 1900s so Hoffer and Osmond had no difficulty reviewing the previously published work and outlining the visual patterns produced by mescaline, changes in other senses, biochemistry, physiology, toxicology, tolerance and various other aspects of this long-known hallucinogen.

Why would this interest Hoffer and Osmond when they knew that the human body does not produce mescaline, a compound with an indole chemical structure? Osmond and Smythies had theorized that the human body might produce an internal hallucinogen and if so, that might explain the hallucinations and other signs and symptoms involved with schizophrenia. Hoffer knew that adrenalin, the commonly-produced fight or flight hormone, can be metabolized into adrenochrome, an indole compound. Excessive levels can cause episodes in patients vulnerable to schizophrenia, anxiety and depression.

In the early 1950s, Hoffer and Osmond researched schizophrenia. They studied the biochemistry and developed treatments to reduce the levels of indoles which the human body can produce internally.

*"Adrenochrome, adrenolutin and 5,6-dihydroxy-N-methylindole are derivatives of adrenaline ... resemble several other hallucinogens, including LSD. But, in contrast to LSD, these adrenaline derivatives have a special relationship to pharmacology, medicine, and psychiatry because they [can] be formed in vivo ... The presence in the human body of substances which are hallucinogenic when present in excessive concentration, is of vital importance because they play a part in many of the psychiatric conditions in many. For this reason, substances like adrenochrome and its derivatives, noradrenochrome, dopachrome and their derivatives, and the indoles from tryptophan, are inherently more important than hallucinogens such as LSD which are less likely to be formed in the mammalian organism."*

*In the years which followed its first crystallization in 1937, adrenochrome has been embroiled in major controversies. Passions were so high that ... careers [were] altered ... . The first controversy concerned adrenochrome's role as a metabolite of adrenaline. There were two schools of thought—one led by Bacq (1949) who suggested that adrenochrome was a derivative of adrenaline and had an important biological role; the other believed adrenochrome was not an important derivative of adrenaline. This controversy was fought in the field of pharmacology. The adjective "important" here referred to the amount which was formed in the body and the physiological effects of the adrenochrome ...*

*The second controversy arose from the adrenochrome hypothesis of schizophrenia which we first discussed in 1952 at a meeting of the Dementia Praecox Committee of the Scottish Rite Masons, at the Waldorf Astoria Hotel in New York. ... A curious situation resulted in which many who had worked with adrenochrome provided data*

*that showed it was hallucinogenic while several who had not studied adrenochrome insisted it was not.*

*The third controversy centered on whether adrenochrome was a major or minor metabolite of adrenaline. The terms “major” or “minor” were never clearly defined and while pharmacologists used a quantitative definition, that is, whether a large or small portion of the adrenaline was converted into adrenochrome, psychiatrists misinterpreted their meaning and supposed that if a small amount of adrenaline were converted into adrenochrome, this must mean that it could only play a minor part. The evidence available does suggest that if adrenochrome is formed from adrenaline in the body; usually only a small fraction of the adrenaline is used. However even a small but continuous conversion of adrenaline into adrenochrome could, over time, create a very serious problem by overloading the biochemical mechanisms available for its disposition. Indeed, the body would most probably be less equipped to dispose of minor toxic metabolites which became too abundant than to deal with more common substances ...*

*The fourth controversy ... developed as the adherents of a variety of psychodynamic and psychosocial schools of psychiatry marshal their arguments in support of their numerous hypotheses. The point at issue is whether adrenochrome metabolism has much to do with the disease, schizophrenia. In order to establish schizophrenia as an adrenochrome disease, it is necessary to prove that (a) adrenochrome is an hallucinogen, (b) adrenochrome is formed in vivo from adrenaline or from some other substrate and (c) the production of adrenochrome and its toxic derivatives wax and wane as the disease schizophrenia waxes and wanes. It follows that treatments which normalize the abnormal metabolism of adrenochrome could be curative for schizophrenia.”*

Given the potential significance of internally-produced hallucinogenic indoles and the reality of in-vivo metabolism of adrenaline and adrenochrome, Hoffer and Osmond's book meticulously detailed the chemistry, biochemical properties, formation and metabolism of adrenochrome, evidence, effects including case reports of Hoffer and Osmond who reported their experiences after taking adrenochrome themselves, analysis of adrenolutin (a metabolite of adrenochrome), chemistry, physiological changes, prolonged reactions, reversal of the adrenochrome reaction, anxiety and another metabolite—5,6-dihydroxy-n-methylindole along with ten pages of references from scientific and medical journals from the 1930s, 1940s, 1950s and 1960s.

Anyone who wonders about Abram Hoffer's aminochrome hypothesis of schizophrenia will find this book fascinating. Few psychiatrists have a PhD in biochemistry. Few patients, families or caregivers have sufficient background to understand biochemistry. Even so, readers will soon realize that the metabolism of adrenalin can lead to the formation of adrenochrome and adrenolutin. Hoffer and Osmond's book explains that these indole metabolites can trigger psychosis. This little-known quirk of biochemistry might explain why the Hoffer-Osmond adrenochrome hypothesis was not accepted by mainstream psychiatrists who disputed and denied that there could be alternative pathways of neurotransmitter metabolism. Open-minded readers of this important book will learn a great deal about hallucinogens, psychosis and schizophrenia.





# Mental Health Regained

18 Personal Stories of Recovery



Compiled and with an Introduction by  
**Abram Hoffer, M.D., Ph.D.**

# Mental Health Regained

**18 Personal Stories of Recovery**

**compiled by Abram Hoffer, M.D., Ph.D.**

**2007, ISF, Toronto [www.orthomed.org](http://www.orthomed.org)**

*Mental Health Regained* has 18 stories about recoveries from schizophrenia and bipolar disorder—exceedingly rare for any book to have such articulate accounts of so many recoveries *written by patients*. Maybe you wonder how any patient can recover from a serious mental illness. Most psychiatrists are quick to assign DSM diagnostic labels and prescribe powerful pills but few patients actually recover that way. If any patient tells of struggling with a mental disorder and coping with painful symptoms until regaining his mental health by using a restorative regimen to complement his pills, that person's story gets called an 'anecdote'.

Many physicians dismiss anecdotes because they prefer to read reports about evidence-based medicine and double-blind placebo-controlled experiments. In those trials, a number of patients receive either a dose of medication or an inactive pill. Statistical analyses indicate the percentages of patients who report changes in their symptoms. When reports are sponsored by drug company manufacturers, research seems to encourage psychiatrists to prescribe pills for mental illnesses without considering the causes of symptoms or resolving the side attacks which many patients suffer while taking synthetic drugs. What sort of psychiatrist would push drugs for symptom modification when the practice guidelines of psychiatry recommend taking patient histories and testing to diagnose medical conditions before recommending safe and effective treatments?

After three decades of migraines, anxiety and bipolar episodes, I started to question shortcuts, nihilism and pills which made me worse. As a victim of substandard psychiatry, I needed restorative care. Relief came soon after I learned about orthomolecular medicine. Now stable for over ten years, I enjoy asking other patients how they recovered. Until this book was published, I could not meet eighteen at once.

I verified three of these recoveries by interviewing three people about their stories. One chap heard me speak at an ISOM conference, Nutritional Medicine Today. An orthomolecular regimen helped him recover from a bipolar disorder. Unfortunately he relapsed two years later but his mother told me about his re-recovery after resuming his regimen. Dr. Hoffer has seen "patients suffer two or three relapses before they finally accepted the fact that they had to follow the [orthomolecular] program always."

What is the orthomolecular program? How do patients find restorative care? Dr. Abram Hoffer compiled this anthology so we can learn from 18 patients. The patients describe their symptoms of schizophrenia or bipolar disorder, their medications as prescribed by conventional psychiatrists, their search for care and their progress taking vitamins, trace minerals and amino acids as nutritional supplements. Their stories teach us how the restorative treatment regimens can help patients to regain their mental health. Several of these patients recovered after they consulted Dr. Hoffer. Others recovered after they read one of his 35+ books and 600+ articles and editorials (published in medical journals since the 1950's) and found doctors who knew about restorative care. Over his 60-year career as a researcher, psychiatrist, author and educator, Dr. Hoffer helped thousands of patients and co-founded the fascinating medical specialty which Nobel-prize winning chemist Linus Pauling, PhD, named "orthomolecular medicine".

I understand that one person's story is considered an anecdote. The eighteen patients in *Mental Health Regained* offer compelling evidence that restorative orthomolecular medicine helped them to renew their hope and recover from serious mental illnesses. If you know anyone with schizophrenia, psychosis, depression or a bipolar disorder, I recommend this heartwarming anthology of recovery stories. After you enjoy this book, please buy copies for your friends, families and health professionals.



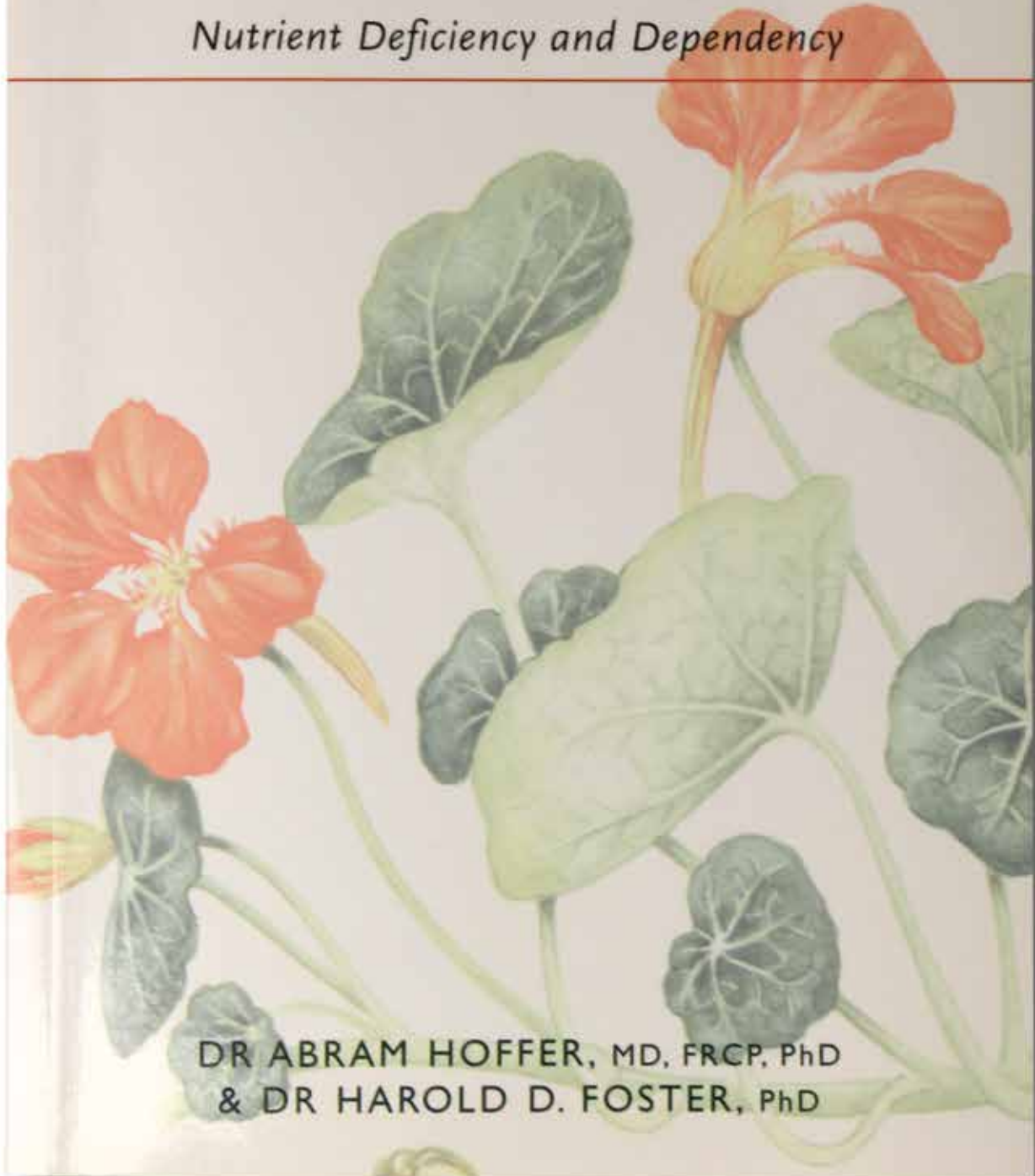




# FEEL BETTER, LIVE LONGER WITH VITAMIN B-3

*Nutrient Deficiency and Dependency*

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DR ABRAM HOFFER, MD, FRCP, PhD  
& DR HAROLD D. FOSTER, PhD

# Feel Better, Live Longer With Vitamin B-3

**by Abram Hoffer, PhD, MD, FRCP(C) with Harold Foster, PhD,  
2007, CCNM Press, Toronto**

When two such highly qualified professionals as Abram Hoffer, PhD, MD, FRCP(C) (biochemist, physician and psychiatrist-retired) and Harold Foster, PhD (medical geographer) explain how we can feel better and live longer by taking vitamin B-3, we would do well to consider their wise words. In this book, Dr. Hoffer and Harold Foster, PhD teach us why certain nutrients are so important to human health that deficiencies can cause serious health problems; some individuals require extra nutrients to the point that they depend on high levels to maintain good health and, as if that wasn't enough to remember, some nutrients have medicinal properties. After introducing the concepts of nutritional deficiencies and dependencies, this book focuses on the practical aspects of vital amine B-3, an essential nutrient which has three names, in its various forms—nicotinic acid, niacin, niacinamide. The authors explain how B-3 can help us to maintain good health. They survey 15 health problems which respond to vitamin supplements:

(1) pellagra (a nutritional deficiency which leads to psychosis but resolves taking niacin), (2) schizophrenia (which responds to niacin or niacinamide or no-flush niacin, but requires higher doses of vitamin B-3 with ascorbic acid and other supplements), (3) pyroluria, (4) alcoholism, (5) anxiety, (6) cardiovascular, (7) stroke, (8) senility, (9) Huntington's, (10) Parkinson's and several others, even cancer.

Abram Hoffer obtained his PhD in biochemistry before he became a physician and a psychiatrist. Over his long and distinguished career, he researched the healing properties of vital amines, trace minerals, amino acids, energy and enzyme cofactors, precursors and substrates—these biochemical names may seem complicated but, these molecules are nutrients. It turns out that human beings need the right mix of the right nutrients to maintain normal health. That makes certain nutrients essential. Day to day, most of us don't think about nutrition as we rush through our busy days, gulping down our food, the faster the better. Might our eating choices affect our health? Most doctors don't bother with nutrition; exceptionally, Abram Hoffer studied biochemical and nutritional problems which affect some patients to the point that they develop metabolic disorders. Most psychiatrists avoid the complications of biochemistry; Abram Hoffer connects essential nutrients to health and illness and teaches us, in layman's terms, that our bodies and our brains need optimum 'fuels', the right amounts of the right molecules, to restore and maintain good health.



In the 1950s, Hoffer applied his PhD in biochemistry to research whether vitamins, B-3 and C, nicotinic acid and ascorbic acid, could help patients who suffered episodes of psychosis. Many of his acute schizophrenic patients recovered taking medicinal doses of niacin or niacinamide (a methyl acceptor) along with ascorbic acid (an antioxidant). Dr. Hoffer's regimens worked safely and effectively and he became fascinated by the healing properties of essential nutrients. His research continued, for more than fifty years.

Dr. Hoffer networked with open-minded health professionals and together they researched, and developed a complementary restorative dimension of healthcare. Linus Pauling, PhD conceptualized 'molecular medicine' but by chance he read about Dr. Hoffer's early work using medicinal doses of vitamins to heal patients with psychosis. In his 1968 article for Science magazine, Pauling named it "orthomolecular" psychiatry. Dr. Hoffer explains, "The practice of orthomolecular medicine recognizes that diseases are due to a metabolic fault that is correctable in most patients by good nutrition, including the use of vitamins and mineral supplements." Unfortunately, few physicians studied Hoffer's research and few doctors offer orthomolecular care. Believing that many people could benefit if they learned about restorative care, Hoffer became an author and an educator. In his many books, articles and editorials, published over the past fifty years, Abram presented his findings to patients, families and health professionals. This book is a classic example of Abram Hoffer's style of painstaking research and clear reporting.

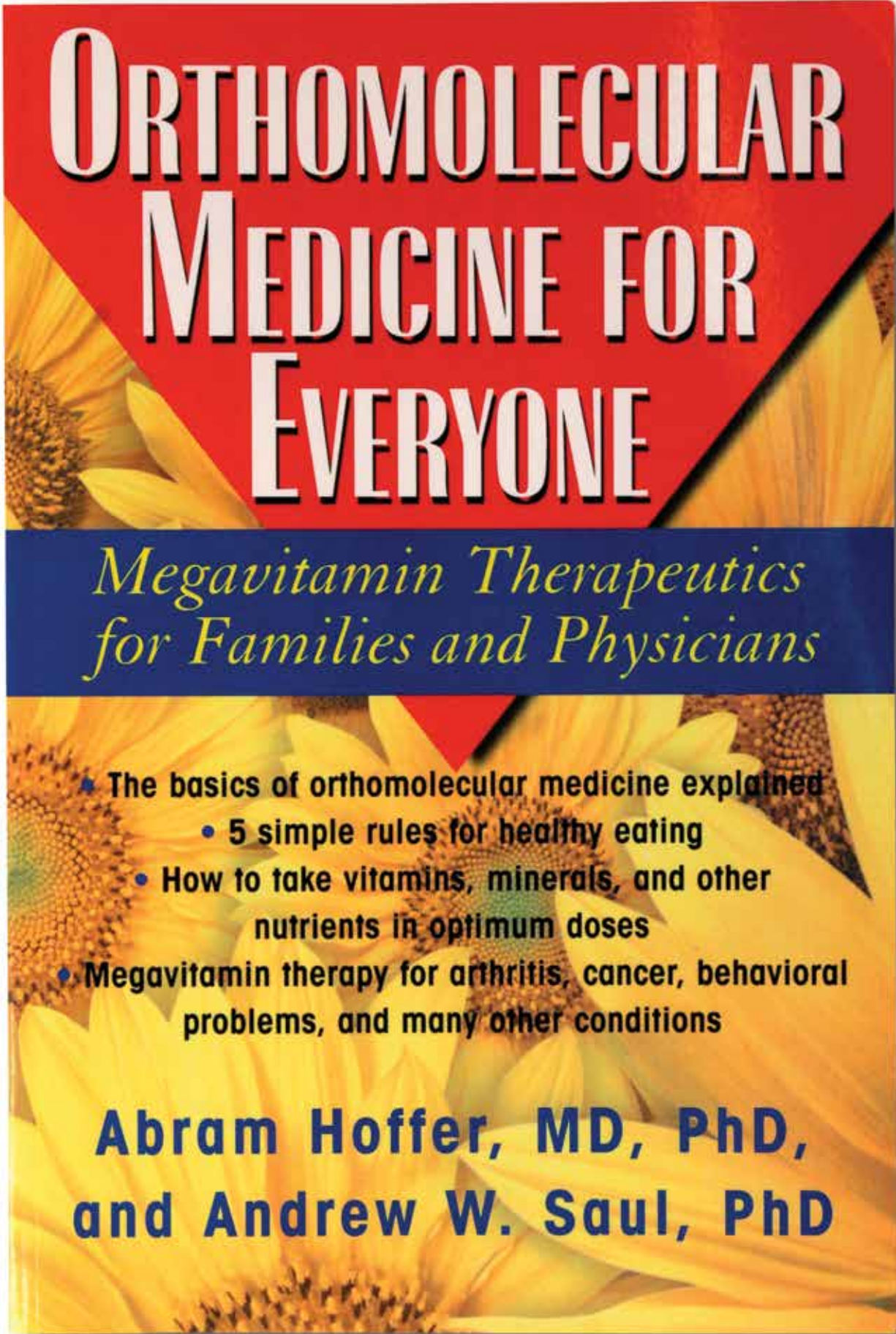
Co-author Harold Foster, PhD, a geography professor, applies his perspective to medical matters. Ordinarily, we expect a geographer to focus on the outdoors—landscapes, boundaries, features and maps. Professor Foster's books include *What Really Causes Schizophrenia*, *What Really Causes AIDS* and *What Really Causes Alzheimer's*. He considers the history of medical discoveries, identifies where diseases occur, suggests factors which can contribute to the frequency of an illness and guides us toward healing.

For decades while researching and developing regimens for patients, Hoffer took a daily dose of niacin. He experienced the niacin flush with two brief side effects: 1. warmth and 2. redness. How many physicians self-test their treatments? Will you live as long as Abram Hoffer if you take an optimal daily dose of vitamins, including B-3, i.e. niacin? If your doctor says that vitamin B-3 cannot possibly help you, remember that Dr. Hoffer wrote this book in his 90th year. During his outstanding career, while helping thousands of patients recover and live well, Abram Hoffer learned that niacin really can help people feel better and live longer. Few doctors have dedicated themselves as diligently as Abram Hoffer to helping mankind understand the health-maintaining and health-restoring qualities of essential nutrients.

Hoffer and Foster wrote this clear, concise, insightful, helpful and hopeful book about vitamin B-3 so the general public can learn why human beings need niacin to live well. If it turns out that we suffer from B-3 deficiencies or dependencies, we can ask our health professionals to recommend B-3 supplements. The authors explain the research and provide the references. Consider their message: optimum daily doses of niacin, an essential nutrient, can help people feel better and live longer. We can all use this inspiring book to help ourselves and our families to restore and maintain our health by eating a balanced diet and taking nutritional supplements.







# ORTHOMOLECULAR MEDICINE FOR EVERYONE

*Megavitamin Therapeutics  
for Families and Physicians*

- The basics of orthomolecular medicine explained
  - 5 simple rules for healthy eating
  - How to take vitamins, minerals, and other nutrients in optimum doses
- Megavitamin therapy for arthritis, cancer, behavioral problems, and many other conditions

**Abram Hoffer, MD, PhD,  
and Andrew W. Saul, PhD**

# Orthomolecular Medicine for Everyone

**Megavitamin Therapeutics for Families and Physicians**

**by Abram Hoffer, PhD, MD, FRCP(C) and Andrew Saul, PhD,**

**2008, Basic Health Publications Inc., CA, 375 pages [www.basichealthpub.com](http://www.basichealthpub.com)**

Megavitamin therapeutics? Whazzat? Do vital amines have health-restoring capabilities? In this book, two highly-qualified authors, Abram Hoffer, PhD, MD and Andrew Saul, PhD explain how orthomolecular medicine can help people feel better and live longer. In Part One, Dr. Hoffer (biochemist, physician and psychiatrist-retired) and Dr. Saul (health educator) teach us that:

- (1) vitamins and minerals are important to human health;
- (2) nutritional deficiencies can cause health problems;
- (3) many patients can restore their health by taking supplements; and
- (4) healing with nutrients only happens if each patient receives optimal doses (much higher than anti-starvation levels).

After introducing the concepts of nutritional deficiencies and dependencies and biochemical individuality, the authors outline the healing capabilities of vitamins, starting with B-3, an essential nutrient which has three names: nicotinic acid, niacin and niacinamide. Then Hoffer and Saul explain how orthomolecular doctors treat chronic illnesses and maintain health by prescribing regimens of vitamins A, B, C, D and E with trace minerals and other nutrients.

Part Two details safe, effective and restorative orthomolecular treatments for nine health problems:

- (1) gastrointestinal disorders, (2) cardiovascular disease, (3) arthritis,
- (4) cancer, (5) the aging brain, (6) psychiatric and behavioral disorders,
- (7) epilepsy and Huntington's disease, (8) allergies, infections, toxic reactions, trauma, lupus and multiple sclerosis and (9) skin conditions.

Will a poor diet drain our vitality? If we get sick, can nutrients restore our health? Consider mental illness. Most psychiatrists quickly label patients, prescribe combinations of meds (antidepressants, antipsychotics and anticonvulsants, etc.) and talk to their psychoses. Non-responsive patients get electric shocks. Early in his career, Dr. Hoffer saw very few recoveries after patients got labels, meds, talks or shocks. He wondered whether psychotic patients might have metabolic disorders rather than neuroleptic deficiencies. Most doctors don't pay any mind if patients eat junk food or self-medicate with alcohol, oblivious to the reality that brain cells need decent food. Certain nutrients are essential. Psychiatrists don't often consider nutrition but Abram Hoffer was taught to assess root causes and contributing factors before making

a differential diagnosis. As Hoffer evaluated biochemical and nutritional factors underlying psychosis, he discovered that foods and nutrients can affect mental health. Over his long and distinguished career, Dr. Hoffer fine-tuned patients' diets and prescribed regimens of vitamins, trace minerals, amino acids, antioxidants, energy and enzyme cofactors. These treatments helped many of his patients to stop hallucinating, rejoin their communities, work, pay taxes and live well. Impossible, you say?

Initially, Dr. Hoffer networked with a small team of scientists and health professionals who cooperated to research and develop restorative treatments for schizophrenia. Linus Pauling, PhD, read *How to Live with Schizophrenia* in which Hoffer explained how patients can recover by taking optimum doses of niacin and ascorbic acid for acute schizophrenia. Pauling named it "orthomolecular psychiatry" (*Science*, 1968). Dr. Hoffer explains the restorative dimension of care: "The practice of orthomolecular medicine recognizes that diseases are due to a metabolic fault that is correctable in most patients by good nutrition, including the use of vitamins and mineral supplements."

Megavitamin therapeutics proved safe and effective. Many of Hoffer's acute schizophrenia patients recovered taking optimum doses of a methyl acceptor (B-3, niacin or niacinamide) with an antioxidant (C, ascorbic acid). For more than 50 years, while researching and developing regimens of nutrients to heal psychosis and other mental disorders, Hoffer reported clinical progress and success by improving diets and giving medicinal doses of vitamins B-3, B-6, C, zinc and sometimes even low doses of manganese. Thousands of patients recovered.

Most psychiatrists ignored Hoffer's double-blind placebo-controlled gold-standard research. Without studying his ideas, experiments, data or findings, 'modern' psychiatrists dismissed Hoffer's reports of a 75% recovery rate for acute schizophrenia. They did not interview his recovered patients. Believing that thousands of patients and their trusting families could benefit from complementary vitamins and minerals, Abram Hoffer somehow found the time to write more than 35 books and 600 medical journal articles and editorials. For decades, he wrote about the biochemistry of schizophrenia, described the healing capabilities of vitamins and other nutrients, recommended healthy diets and introduced orthomolecular medicine to patients, families, caregivers and health professionals. Hoffer's books include *The Chemical Basis of Clinical Psychiatry* (1960), *Niacin Therapy in Psychiatry* (1962), *How to Live with Schizophrenia* (1966), *The Hallucinogens* (1967), *Smart Nutrients* (1980), *Orthomolecular Medicine for Physicians* (1989), and *Adventures in Psychiatry* (2005). This 2008 book, clear enough for every reader, is a classic example of Hoffer's thorough research, detailed references, careful observations and thoughtful writing.

While prescribing vitamins for patients, Hoffer took daily doses of niacin and ascorbic acid himself (vitamins B-3 and C). How many psychiatrists self-test their treatments? He experienced the niacin flush with two brief side effects: 1. warmth and 2. redness. He had no side attacks or toxic effects while taking vitamins, only side benefits. Abram Hoffer's decades-long personal experiment shows that the right doses of the right nutrients can help a doctor feel better and live longer. Will you live as long as Dr. Hoffer if you take vitamins B-3 and C? Maybe you will; note that Dr. Hoffer wrote this book in his 91st year.

Anyone can read about the decades of research, study the references and consider the regimens which Dr. Abram Hoffer and his colleagues developed, tested,




healed thousands of patients with, took themselves and wrote clinical success stories about, since the 1950s. Abram Hoffer and Andrew Saul wrote this informative, insightful, helpful and hopeful book to educate the public how we can restore our health, get proper medical care, adjust our diets and supplement our nutrients. Hoffer and Saul encourage us to eat foods that we can metabolize, and take nutritional supplements (vitamins, minerals and amino acids, antioxidants, energy and enzyme co-factors and essential fatty acids). If we suffer from metabolic problems, deficiencies or dependencies, we can ask our health professionals to complement standard medical treatments with nutritional regimens. If our doctors don't know about restorative care, we can ask for second opinions.

As you read this fascinating book, you will learn how to restore your health and live well by eating nutritious foods and asking health professionals to recommend nutritional supplements.

Ortho-molecular medicine has helped thousands of patients, for decades. Optimum doses of essential nutrients tested safe and effective. You can help yourself recover, feel better and live longer; then tell your friends and families!

**[Historical note**—Decades before Hoffer's time, malnourished and psychotic patients recovered from episodes of pellagra by taking niacin and tryptophan and improving their diets. Ref. Dr. J. Goldberger. Divided doses of vitamin B-3, as niacinamide, were also used to heal arthritis. Ref. Dr. W. Kaufman. In the 1950s, Dr. Hoffer applied his PhD in biochemistry to research schizophrenia, neurotransmitters and metabolic pathways. One evening he had a Eureka moment spotting a common chemical basis, an indole, in hallucinogenic compounds. He wondered if the human brain produces indoles and if so, might indole metabolites cause hallucinations or perceptual distortions during episodes of schizophrenia? Dr. Hoffer found indoles by tracking the metabolic pathways of catecholamines, especially when the oxidation of adrenalin shifts irreversibly to adrenochrome (an indole). 1 or 2% of people, schizophrenics, hallucinate that way. Hoffer tested various doses of niacin and ascorbic acid (vit. B-3 and C) and had more Eureka moments as megavitamin therapeutics restored normal brain function in patients with acute schizophrenia.]





How to Protect Against  
and Fight Alcoholism Using  
Nutrition and Vitamin  
Supplementation

# THE VITAMIN CURE

— FOR —  
**Alcoholism**

ABRAM HOFFER, M.D., Ph.D.

AND ANDREW W. SAUL, Ph.D.

Series Editor

# The Vitamin Cure for Alcoholism

## Orthomolecular Treatment of Addictions

by Abram Hoffer, PhD, MD, FRCP(C) and Andrew Saul, PhD

2009, Basic Health, 134 pages [www.basichealthpub.com](http://www.basichealthpub.com)

*The Vitamin Cure for Alcoholism* explains how patients can stop craving alcohol and restore their health. Two credible authors wrote this enlightening book. By the time he passed away at age 91 ½, Abram Hoffer, PhD, MD, FRCP(C) had earned an international reputation for researching and developing orthomolecular psychiatry (as a complementary dimension of care), teaching other doctors and educating the public. Thousands of patients recovered. Co-author Andrew Saul, PhD contributed his fascination with forgotten treatments and his capabilities as an author and an educator.

Before he became a physician and then a psychiatrist, Abram Hoffer obtained a PhD in biochemistry. Hoffer's advanced degree, research experience and observation skills proved useful during his medical studies. He learned to respect patients and above all, to do no harm. Starting in the 1950s and continuing for sixty years, Dr. Hoffer researched the chemical basis of psychiatry and developed treatments for schizophrenia, psychosis, anxiety, depression and alcoholism. Hoffer did the first double-blind placebo-controlled experiments in psychiatry, in the 1950s. He tested niacin and niacinamide (vitamin B3) for schizophrenia and discovered that optimum (large) doses of vitamins B3 and C can heal psychosis and restore normal brain function. Linus Pauling, PhD (Nobel-prize-winning chemist) read about Hoffer's vitamin therapy and found it so inspiring that, in 1968, Pauling invented a new word when he described Hoffer's practice of prescribing nutritional supplements to patients with schizophrenia as "orthomolecular" psychiatry.

When his patients had hallucinations, neurotransmitter imbalances, food sensitivities or addictions, Hoffer knew that episodes of mental illness can have a number of causes. He treated each patient according to the practice guidelines of psychiatry. Hoffer noted their mental status and took medical, mental and family histories, checked for infections and tested for medical problems (such as thyroid, adrenal, blood sugar and hormone disorders) before prescribing medications and complementing other treatments with vitamins, minerals and other nutritional supplements. Dr. Hoffer noticed that some patients tried to self-medicate with alcohol. Perhaps patients drank during episodes of schizophrenia or psychosis because they hoped to control their hallucinations, delusions and perceptual distortions. Abram Hoffer administered vitamin treatments when patients went psychotic, over-



indulged drinking or took LSD. Over his long and distinguished career, Dr. Hoffer helped thousands of patients by fine-tuning their diets and prescribing regimens of nutritional supplements. He learned that vitamins, trace minerals, amino acids, antioxidants, energy and enzyme cofactors can normalize metabolism and stabilize brain chemistry. Orthomolecular treatments proved safe and effective. Many patients recovered and stopped drinking.

Orthomolecular regimens of vitamins complemented other treatments but contrasted with the standard methods. Most psychiatrists only offered talk therapy or treatments with drugs, talks or electric shocks. Why bother telling drunk, depressed, anxious or psychotic patients that their brains need optimum nutrition? Don't sick patients know that alcohol can deplete nutrients and interfere with brain function? Dr. Hoffer remained true to the principles of good medicine; he considered the root causes of symptoms before making a differential diagnosis and recommending treatments. He knew that certain nutrients are essential for health and well-being. Hoffer researched metabolic, biochemical and nutritional factors involved with mental illness. He identified alcohol as a liquid sugar, just by looking at its chemical formula. Hoffer believed that biochemical individuality and sugar cravings contribute to alcoholism especially if patients have low blood sugar or problems metabolizing alcohol. As a biochemist, Hoffer reasoned that niacin (vitamin B3) could restore mental health, even after repeated episodes of drinking. He researched vitamin therapy for decades, found it safe and effective and helped thousands of patients recover and live well.

Over many years, Abram Hoffer published his research in scientific and medical journals. Perplexed and disappointed by the American Psychiatry Association's refusal to accept his research, appreciate his discoveries or repeat his double-blind experiments with niacin, Dr. Hoffer decided to educate the public about vitamin therapy. Realizing that most physicians do not test for biochemical disorders, monitor nutrition or prescribe vitamins, Abram Hoffer wrote a series of books for patients, families and caregivers in which he introduced biochemistry, summarized research and shared scientific and medical information about orthomolecular medicine. Andrew Saul has also written books to remind readers about still-useful treatments developed decades ago. Whether readers are patients, families, caregivers or health professionals, Hoffer and Saul present their information clearly and succinctly. Abram Hoffer's books include: *The Chemical Basis of Clinical Psychiatry*, *Niacin Therapy in Psychiatry*, *How to Live with Schizophrenia*, *Nutrients to Age without Senility*, *Smart Nutrients*, *Healing Schizophrenia*, *Adventures in Psychiatry: The Scientific Memoirs of Dr. Abram Hoffer and Orthomolecular Medicine for Everyone*. Decades of editorials and articles in the *Journal of Orthomolecular Medicine* share Hoffer's views about schizophrenia, psychosis and alcoholism. (free archives at [www.orthomed.org](http://www.orthomed.org))

Hoffer and Saul credit Roger Williams, PhD with researching vitamins in the 1940s, observing that lab rats vary in their tolerance for alcohol and experimenting with vitamins, recommending vitamins for alcoholism and developing the concept of biochemical individuality. (Reference: *Alcoholism—The Nutritional Approach* by R. Williams, PhD, 1959). In 1968, Hoffer and Osmond wrote *New Hope for Alcoholics* to report their research and explain that their "ideal program for treating alcoholics"

included “insightful experiences from which [patients] derived understanding about themselves and others”. Hoffer and Osmond paid careful attention to

1. diagnosis,
2. etiology,
3. assessment of drinking behaviors,
4. treatment of medical and metabolic aspects,
5. hopeful prognosis,
6. suicide prevention,
7. hospital access,
8. competent caregivers and
9. review of patient, family and community rights and duties.

They used niacin therapy to treat many alcoholics. *New Hope for Alcoholics* shared patient case reports, recovery stories and heartwarming testimonials written by several of the hundreds of alcoholic patients who recovered at Guest House, Michigan.

Updated a remarkable forty years later, in 2009, *The Vitamin Cure for Alcoholism*, a concise 134 pages with references, presents (1) Abram Hoffer’s decades of research, progress and success using optimum doses of niacin (with other vitamins, minerals and nutritional supplements) to heal patients with alcoholism and/or schizophrenia and (2) Andrew Saul’s experiences learning about vitamin therapy and teaching forgotten treatments. Readers can learn that even though Abram Hoffer kept busy treating his patients and writing, he encouraged a worldwide network of doctors to consider restorative orthomolecular regimens. A number of physicians confirmed that opti-doses of vitamin B3 can heal alcoholic patients. For example, Dr. R. Smith in Detroit and Dr. D. Hawkins in New York used vitamin therapy to help hundreds of their patients recover from psychosis, depression, anxiety and alcoholism. Bill W., a co-founder of Alcoholics Anonymous, found niacin therapy so important to his own recovery that as a layman, Bill wrote two booklets to encourage members of AA to take vitamin B3—hundreds recovered.

*The Vitamin Cure for Alcoholism* explains how to protect against and fight alcoholism using nutrition and vitamin supplementation. If you or someone you love has a problem with alcohol or another addiction, don’t wait for your doctor to (1) discuss nutrition, (2) test for metabolic disorders, (3) consider your biochemical individuality or (4) suggest an orthomolecular regimen of vitamins and minerals. You owe it to yourselves to read this fascinating book and learn that restorative treatments for psychosis and alcoholism have been researched, developed and administered successfully to thousands of patients, *for more than fifty years!*



# Psychiatry

**YESTERDAY (1950) AND TODAY (2007)**

From Despair to Hope with  
Orthomolecular Psychiatry



**Abram Hoffer MD PhD FRCP(C)**

# Psychiatry: Yesterday (1950) and Today (2007)

## From Despair to Hope with Orthomolecular Psychiatry

by **Abram Hoffer, PhD, MD, FRCP(C)**  
**2008, Trafford Publishing, 150 pages [www.trafford.com](http://www.trafford.com)**

Every year, thousands of mental patients visit psychiatrists and outpatient clinics seeking help for depression, bipolar disorder, anxiety, schizophrenia, attention deficit disorder, anorexia, autism, stroke, epilepsy, dementia and other distressing brain conditions. When we get so sick that we need a brain doctor, we would like care consistent with the practice guidelines of psychiatry and supported by scientific and medical research. We trust physicians who studied, trained and qualified as specialists. Busy psychiatrists assign diagnostic labels and prescribe meds, talks and shock therapies. They manage symptoms, but do sick brains heal? If we despair, how can we find hope? At age 91, Abram Hoffer, PhD, MD knows about psychiatry: yesterday (1950) and today. With six decades of experience as a clinician, researcher, teacher and author, Dr. Hoffer can guide us as we explore the healthcare maze. Readers of this book will learn how Dr. Hoffer developed restorative orthomolecular psychiatry and cared for his patients.

As you read Hoffer's book, you will realize that he is a rare psychiatrist, one in a thousand. With a PhD in biochemistry, Abram Hoffer's education, laboratory experience and observation skills proved useful during his medical studies. After graduating from the 'old school' which taught medical students to take care of patients and above all, do no harm, Abram Hoffer became a physician in 1949 and then a psychiatrist. He learned to assess each patient, to check for infections (such as syphilis) and test for medical problems (such as thyroid, adrenal, blood sugar and hormone disorders). Hoffer noticed that episodes of psychosis can have a number of causes; he was trained to consider the underlying cause(s) of each patient's symptoms before recommending any treatment(s). If patients go psychotic after years of untreated syphilis, can antipsychotic meds, electric shocks or talk therapies heal them? Not likely. Those patients need antibiotics. If patients starve or ingest food artifacts, can meds, shocks or talks heal them? No. Those patients need nutritious diets. If patients become psychotic when they have hormone problems or thyroid, adrenal or blood sugar disorders, will meds, shocks, or talks heal them? Not likely. Those patients need specific medical care. Dr. Hoffer treated psychotic patients with respect by giving mental status exams, taking histories, doing medical tests and making differential diagnoses before recommending safe and effective treatments.

With his medical school training and his PhD in biochemistry Dr. Hoffer

researched the chemical basis of psychiatry and developed restorative regimens for patients with schizophrenia, psychosis, anxiety and depression. If patients had neurotransmitter imbalances, food sensitivities, cerebral allergies or toxic overloads, Hoffer learned to help them. One evening while sitting at his kitchen table, Hoffer studied the chemical formulas of the hallucinogens such as mescaline. Eureka—he spotted an indole structure! He wondered if the human brain could produce indoles. Might those i-metabolites cause hallucinations or perceptual distortions? By tracing the metabolic pathways of tyrosine, adrenalin, noradrenalin and dopamine, Dr. Hoffer found indoles in the human brain.

Hoffer reasoned that irreversible oxidation can produce aminochromes (indoles such as adrenochrome and dopachrome) in 1 or 2% of people who overproduce indoles until they hallucinate with episodes of schizophrenia. Believing that indole levels could be controlled, Hoffer tested medicinal doses of niacin and ascorbic acid (vitamins B-3 and C) and discovered that vitamin therapy can restore normal brain function. Linus Pauling, a PhD chemist, called Hoffer's approach "orthomolecular psychiatry"—using optimum doses of nutrients to heal.

Dr. Hoffer wrote many books and journal articles to establish orthomolecular medicine as a complementary dimension of care. An appendix to *Adventures in Psychiatry: the Scientific Memoirs of Dr. Abram Hoffer* lists his publications: 35 books and 600 articles. Even before Dr. Hoffer's time, there were precedents for restorative care. Malnourished pellagra patients recovered from episodes of psychosis by taking niacin and tryptophan and improving their diets. (Ref. Dr. J. Goldberger.) Other patients, who went psychotic after infections of syphilis, recovered by taking penicillin. With pellagra patients cured and syphilis patients getting penicillin, Dr. Hoffer researched schizophrenia, neurotransmitters and metabolism. After differentiating mental patients who had infections (such as syphilis or rabies) or medical problems (such as hypothyroid or pellagra), Hoffer identified patients whose hallucinations and perceptual distortions had biochemical causes. In the 1950s, while researching schizophrenia in the province of Saskatchewan, Canada, Dr. Hoffer cooperated with colleagues to develop restorative treatments. Dr. Hoffer published his findings in 600 medical journal articles. Years of Hoffer's editorials in the *Jnl. of Orthomolecular Medicine* share his views on psychiatry, research, progress and success treating schizophrenia and psychosis. (You can view the free archives of the JOM at [www.orthomed.org](http://www.orthomed.org))

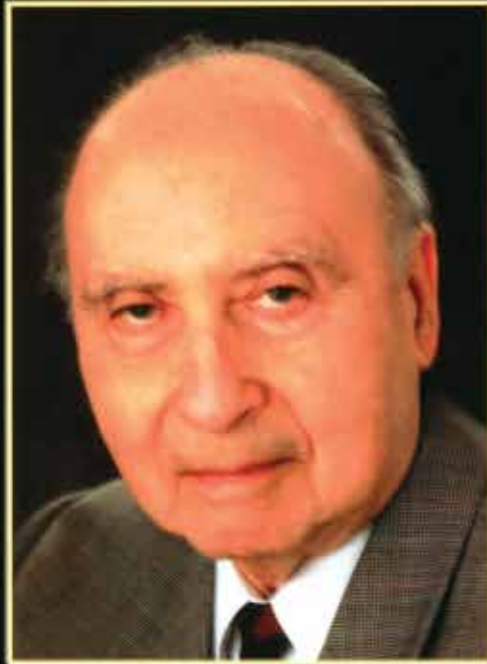
Conventional psychiatrists disputed, discounted and dismissed Hoffer's reports. Without studying Hoffer's double-blind placebo-controlled gold-standard research or reading Hoffer's books such as *Niacin Therapy in Psychiatry* (1962), *How to Live with Schizophrenia* (1966) and *Healing Schizophrenia* (2004), his articles or editorials, some doctors simply assumed that vitamins could not heal psychotic patients. Busy managing sick and deteriorating patients, 'modern' psychiatrists dissed Hoffer's biochemical hypotheses and ignored his claims of a 75% recovery rate for acute schizophrenia. Many psychiatrists assumed that Hoffer's experiments could not justify nutritional regimens for psychosis. The majority did not interview recovered orthomolecular patients, study Hoffer's reports, read his books or consider complementing pills, talks and shocks with vitamins, minerals or amino acids. For decades, closed-minded psychiatrists ignored orthomolecular research and withheld vitamins from hundreds of thousands of sick patients.

While Dr. Hoffer was using his old-school training to heal patients, then writing books and articles and networking with colleagues, most psychiatrists had little success treating psychosis. After World War II, chemical companies turned left-over rocket fuels into pharmaceuticals. Talk therapies and managed care changed the practice of psychiatry, but not for the better. Consider palliative care for cancer patients—terminal patients do not get well so doctors manage their last hours with sedatives and pain pills. Pills and the palliative care model took over psychiatry. Here's the logic—if psychotic patients will not likely recover, why not give them anti-symptom medications: antidepressants, anxiolytics, antipsychotics and anticonvulsants? Why dwell on side attacks, toxic effects or drug-induced neurological disorders? With pills and more pills available to squelch angst, numb pains, dumb brains and stimulate energy, why fuss over mental status exams, patient histories, medical tests or differential diagnoses? Quick and easy to rely on efficient shortcuts. As long as doctors manage mentals efficiently and keep them calm and quiet, safely distanced from normal people, who would notice? Abram Hoffer noticed that patients stabilized but did not recover taking tranquilizers, antidepressants, anticonvulsants or antipsychotics. Hoffer treated his patients according to the practice guidelines of psychiatry; he researched neurotransmitter disorders and developed restorative treatments. Many of Hoffer's patients recovered until they could work and pay taxes.

Year after year, from the 1950s to today, hundreds of thousands of mental patients consult psychiatrists and visit mental hospitals. The practice guidelines of psychiatry recommend: 1. mental status exams, 2. patient and family histories, 3. testing for medical problems and 4. differential diagnosing before 5. recommending safe and effective treatments. How many patients get 'efficient' shortcuts and substandard care: talk therapies without respect, interest, support, or encouragement, shelter but no privacy, food but poor nutrition, and mind-numbing treatments with anti-symptom meds or electric shocks? Years ago when psychotic patients only got meds, talks or shocks, Dr. Hoffer saw few recoveries; today if patients get those same treatments, few recover. Abram Hoffer researched neurotransmitter disorders, identified metabolic causes of psychosis and prescribed health-restoring doses of vital amines and other nutritional supplements. Many of his patients restored their health. He developed the concept of restorative orthomolecular medicine as a complementary dimension of care. A network of physicians, worldwide, learned about orthomolecular care and smart nutrients from Abram Hoffer. Thousands of psychotic patients recovered taking vitamins but even after decades of research, progress and success, orthomolecular medicine remains little-known.

In this book, Dr. Abram Hoffer (biochemist, physician and psychiatrist-retired) compares psychiatry yesterday (1950) with psychiatry today (2007). Today most patients get managed care, labels and pills, talks and shocks. Unfortunately, recovery rates remain low, little better than yesterday. Abram Hoffer outlines yesterday's problems with psychiatry, warns us about the dark side of psychiatry today and nourishes our hope for feeling better and living longer with restorative orthomolecular psychiatry.





# ADVENTURES IN PSYCHIATRY

The Scientific Memoirs of  
**Dr. Abram Hoffer**



# Adventures in Psychiatry

## The Scientific Memoirs of Dr. Abram Hoffer

by **Abram Hoffer, MD, PHD, FRCP(C),**  
2005, [www.KOSPublishing.com](http://www.KOSPublishing.com) Toronto.

**Abram Hoffer**, PHD, MD, FRCP(C), became a pioneering psychiatrist more than 50 years ago. In the 1950's, he applied the life science of biochemistry to the art of psychiatry. Not content with helping many patients recover from schizophrenia, he researched and developed biological treatments, linking diagnosis to medical care based on nutritional status and biochemical individuality. Dr. Hoffer discovered a dimension of restorative care, complementary to the standard medications, talks and shock therapies. Over the span of his long and distinguished career, Dr. Hoffer inspired a paradigm shift based on resolving patients' episodes and restoring their mental health. His innovative and important work correcting brain chemistry was welcomed by grateful patients but frowned upon by skeptical psychiatrists.

After sharing his research and progress reports in medical journals, Dr. Hoffer realized that most doctors either ignored or dismissed his ideas—without trying them. Believing that millions of mental patients deserved better quality care, Dr. Hoffer embarked on a campaign to educate the public using books, articles, meetings and conferences. We want to know what made Dr. Hoffer study schizophrenia so carefully. What motivated him to research, develop and foster the concept of orthomolecular medicine? What intrigued him so much that, at age 88, he still practiced psychiatry and medicine, he still researched and he still wrote books, papers and editorials? Hoffer's scientific memoirs share the story of his life's work and his medical adventures.

Abram Hoffer loved research; he had a kind heart, a quick wit, stick-to-itiveness, a supportive family and a knack for making friends, even with difficult patients. Rather than take quick and easy short cuts, as a keen young research psychiatrist in the 1950s, Abram Hoffer wondered what could cause the human brain to hallucinate and what could stabilize brain chemistry. The practice guidelines of psychiatry encourage physicians to differentiate the root cause(s) of each patient's symptoms before recommending effective treatment(s). True to the guidelines, Dr. Hoffer and his co-workers researched how to diagnose psychosis and restore brain chemistry by prescribing nutritional supplements—in therapeutic doses—and by improving patients' diets. A surprising number of patients recovered and kept well, as long as they continued their treatments.



What prompted Dr. Hoffer to prescribe supplements? How could nutrients restore mental health? Hoffer's memoirs explain. Dr. Hoffer and his colleague Dr. Osmond believed that unbalanced brain chemistry could be restored. By means of the first double-blind clinical trials ever done in psychiatry, they tested two vital amines: divided doses of either niacin or niacinamide (vitamin B3—a methyl acceptor) with ascorbic acid (vitamin C—an antioxidant). For decades, their double-barreled treatment has worked better than antipsychotic medications, tranquilizers, insulin comas and metrazole therapies. Even though thousands of patients got well enough to resume their educations, continue their careers and realize their dreams, conventional doctors scoffed at the idea that mere vitamins could resolve episodes of schizophrenia, a serious mental illness.

Unwilling to let skeptics discredit his life's work, Dr. Hoffer continued his research and published the case reports of recovered patients in medical books and journals, for more than 50 years. His memoirs tell the whole story. Dr. Hoffer had many clinical adventures as he determined the optimum doses of smart nutrients for his patients and encouraged colleagues to apply his methods, worldwide. In order to share research results and educate caregivers, Dr. Hoffer wrote more than 600 articles and more than 35 books.

Thousands of grateful patients owe their recoveries to Dr. Abram Hoffer. Thanks to his original work, vision, integrity and leadership in researching and developing restorative orthomolecular medicine, patients no longer need to suffer for decades with symptoms of schizophrenia, psychosis, depression, bipolar disorder, attention deficit disorder or autism. Hopefully, Dr. Hoffer's memoirs will encourage patients, families and caregivers to ask for restorative care; hopefully the paradigms of medicine will expand until the standards of care routinely offer orthomolecular treatments to patients with mental health problems, even schizophrenia. This won't just happen; we all need to help. If you or someone you love has a mental illness, you will enjoy reading *The Scientific Memoirs of Dr. Abram Hoffer* and getting inspired by his wonderful *Adventures in Psychiatry*.



# Part I—Remembering Abram Hoffer, PhD, MD

From the 1960s to the 2000s, Abram Hoffer wrote more than 35 books about psychiatry, biochemistry, research and clinical practice. His books read fresh and clear today. If you or someone you love has schizophrenia, psychosis, anxiety, depression or a bipolar mood disorder and if that patient does not recover on pills, talks or shocks, you would do well to read books by Abram Hoffer, PhD, MD. His books offer information, help and hope for complementing other treatments with restorative care. Hoffer's books teach us about disorders of brain metabolism, chemical imbalances, diagnostic tests to differentiate disorders of perception from other conditions, and restorative treatments which decades of research found safe and effective enough to help thousands of patients recover and live well. As you read his books, remember Abram's lessons:

1. When diagnosing an illness, consider metabolism and alternate pathways.
2. Vitamins and other nutrients, in optimum doses, have healing capabilities.
3. Orthomolecular patients can restore and maintain normal brain function.

If you read a selection of Abram Hoffer's books, you will notice the progression of his work and his steadily broadening efforts to educate the public. The books Dr. Hoffer wrote in the 1960s explained the scientific method of research, how he studied the metabolism of adrenalin and discovered that certain patients got sick when they produced hallucinogenic byproducts of catecholamine, metabolism—adrenalin indole byproducts such as adrenochrome and adrenolutin, noradrenaline byproducts such as noradrenochrome and dopamine byproducts such as dopaminochrome. He shared his research, the development of restorative treatments and the success when patients received optimum regimens of vitamins, minerals and other nutritional supplements. Other researchers found similar indoles in the metabolism of serotonin. Also in the 1960s, Dr. Hoffer began to write books directly for patients and the families of patients with schizophrenia because he realized that thousands of people were not hearing from their doctors about metabolic aspects of schizophrenia or restorative treatments.

In the 1970s and 1980s, Abram Hoffer broadened the scope of his work to report that orthomolecular psychiatry was validated by a number of other physicians and psychiatrists, let the public know that he had developed a diagnostic test for schizophrenia, the HOD test, and informed readers that patients could feel better if they studied their diets and improved their nutrition. He extended his restorative regimens to help elderly patients whether they had schizophrenia, senility, dementia or other age-related conditions.

In the 1990s and 2000s, Dr. Hoffer updated his early work by reporting research, progress and success and explaining how restorative regimens had helped many patients recover and live well. Hoffer's later books reference his earlier books so physicians and researchers can read the original work, brain biochemistry and scientific research. Dr. Hoffer wrote most of his books in layman's terms so patients, families and caregivers could understand and benefit from restorative orthomolecular treatments. If their health professionals do not study Hoffer double-blind placebo-controlled scientific experiments or offer restorative care, patients and families can read and learn for ourselves.

# Part II

## Reviews of books by other authors inspired by Abram Hoffer

<i>Anxiety: Orthomolecular Diagnosis and Treatment (2006)—Prousky</i>	65
<i>Could it be [a Deficiency of Vitamin] B12? (2005)—Palochock &amp; Stuart</i>	67
<i>Finding Care for Depression (2002)—Sealey</i>	69
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<i>Principles &amp; Practices of Naturopathic Clinical Nutrition (2008)—Prousky</i>	80
<i>The Secrets to Recovery from Mental Illness (2008)—Santini</i>	83
<i>The WRAP Story (2008)—Copeland</i>	87
<i>Vitamin C: The Real Story (2008)—Hickey &amp; Saul</i>	90

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# Dr. Hoffer inspired other authors and contributed to their books

## **Anxiety: Orthomolecular Diagnosis and Treatment**

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Jonathan Prousky, BPHE, BSc, ND, FRSH, 2006, CCNM Press, Toronto, [www.ccnmpress.com](http://www.ccnmpress.com), With an introduction by Abram Hoffer, PhD, MD

Introduction

Standardized Medical Diagnosis and Treatment of Anxiety Disorders

Orthomolecular Diagnosis of Anxiety Disorders

Treating Anxiety with Vitamin B-3 (Niacinamide)

Treating Anxiety with Vitamin B-12 (Cobalamin)

Treating Anxiety with Other B Vitamins, Inositol, and EFAs

Treating Anxiety with Minerals and Amino Acids

Treating Cerebral Allergy-related and Hypoglycemia-related Anxiety

Therapeutic outcomes

## **Biochemical Individuality**

### **The Basis for the Genetotrophic Concept**

Roger Williams, PhD, 1956, 1998, Keats Publishing, New Canaan, Conn.

Genetic basis of biochemical individuality

Individual enzyme patterns

Implications for advance in psychiatry

## **Cholesterol Control without Diet**

### **The Niacin Solution**

William Parsons, MD, 2003, Lilac Press, Scottsdale, Arizona

Part 1: The Niacin Solution

Use of Niacin for Cholesterol Control: A Brief History (acknowledges A. Hoffer and R. Altschul for discovering that niacin lowers cholesterol, published in Archives of Biochemistry and Biophysics, 1955)

Part II: The Medical Section

## **Could It Be B12?**

67

### **An Epidemic of Misdiagnoses**

S. Pacholok RN & J Stuart, DO, 2005, Quill driver Books, Sanger, CA

Deadly Mimic: When B12 Deficiency Masquerades as Neurological Disorders

Am I Losing My Mind: when B12 Deficiency Causes Mental illness

Stroke, Heart Disease and Vascular Problems: the B12-HCY Connection

## **Depression: The Breakthrough Integrative Approach for Effective Treatment**

### **What Your Doctor May Not Tell You**

Michael Schachter, MD with Deborah Mitchell, 2006, Warner Wellness, New York

Coming to terms with depression

What's Wrong with the Mainstream Approach to Treatment

Discover Your Biochemical Profile

Get the Professional Help You Need

**How to prevent and treat depression comprehensively**

Up with Amino Acids

Make the most of EFAs

Lift Your spirits with Nutrients and Herbs

Eat Your Way Out of Depression

Rid Your Body of Mood-Altering Toxins

Harness Your Hormones

Psychotropic Drugs: What's the Story

Stories of Success

**The Earth's Gift to Medicine**

**Minerals in Health and Disease**

K Wenzel, MD & R Patarrachia, ND, 2005, KOS Publishing, Toronto

With a foreword by Abram Hoffer, PhD, MD

Section 1—The Individual Minerals

Section 2—Clinical Applications

**Finding Care for Depression, Mental Episodes & Brain Disorders**

**69**

Robert Sealey, BSc, CA—2002, SEAR Publications, Toronto, [www.searpubl.ca](http://www.searpubl.ca)

chapter by A. Hoffer, PhD, MD—***How Orthomolecular Medicine Can Help***

**72**

Part 1—The Trusting Patient

Part 2—Exploring the Mental Healthcare Maze

Part 3—Tools for Finding Care

Part 4—References for Restoring Mental Health

**The Food-Mood Solution**

**All-Natural Ways to Banish Anxiety, Depression, Anger, Stress and Alcohol Problems And Feel Good Again**

Jack Challem, 2007, J Wiley & Sons, Hoboken, USA

With a foreword by Melvyn Werbach, MD

Part 1—The Food-Mood Connection

Part II—How to improve Your Moods

**Healing Depression & Bipolar Disorder without Drugs**

**Inspiring Stories of Restoring Mental Health through Natural Therapies**

Gracelyn Guyol, 2006, Walker & Co., New York

With a foreword by Stephen Sinatra, MD, author of *The Sinatra Solution*

Part I—Clearing Potential underlying Biological Causes

Part II—The Most Effective Nondrug Therapies

Part III—Creating Your Future

## **Natural Healing for Bipolar Disorder**

### **A Compendium of Nutritional Approaches**

Eva Edelman, 2009, Borage Books, Oregon, US, [www.boragebooks.com](http://www.boragebooks.com)

With a foreword by Abram Hoffer, PhD, MD—written Oct., 2008

Introduction

Part I—Nutrient survey

a) Mania and stabilization, b) Mania and depression, c) Bipolar depression

Part II—Major biotypes

1. Pyroluria

2. Histamine, methylation

3. Undermethylation/high folate (Histadelia)

4. Overmethylation/low folate (Histapenia)

Part III—Neurotoxins

Metals, Other

Part IV—Health

1. Gut, Candida, Allergies, Sugar

2. Endocrines

3. Organic Brain Disorders

4. Immune and Autoimmune disorders

Part V—Lifestyle—Stress, Optimal diet, Exercise, Biorhythms

Part VI—Related Disorders

1. Comorbid disorders

2. Children & Elderly

## **Natural Healing for Schizophrenia**

Eva Edelman, 1996, Borage Books, Oregon, US, [www.boragebooks.com](http://www.boragebooks.com)

With a foreword by Abram Hoffer, PhD, MD

Nutrients, Major biotypes,

Neurotoxins, Neurotransmitters

## **Nutrition and Mental Illness**

### **An Orthomolecular Approach to Balancing Body Chemistry**

Carl Pfeiffer, PhD, MD, 1987, Healing Arts Press, Rochester, Vermont

Understanding Mental Illness

Anxiety and Phobias—the Copper Connection

High Histamine Can Cause Depression

B6 and Zinc—the Missing Link

Brain allergies

Hypoglycemia—The Sugar Blues

Minerals, Mood Swings and Manic Depressive Disorders

How to Age Without Senility

Drugs—the Treatment that Leads Nowhere

Optimum Nutrition for Mental Health

Nutrition Programs for Specific Diseases

### **A Promise of Hope**

#### **The True Story of a Woman with Bipolar Disorder and The Miraculous Treatment that Cured Her [a multinutrient supplement]**

Autumn Stringam, 2007, Harper Collins Publishers, Toronto, [www.truehope.com](http://www.truehope.com)  
With an afterward by Charles Popper, MD

### **Principles and Practices of Naturopathic Clinical Nutrition**

**80**

Jonathan Prousky, BPHE, MSc, ND, 2008 CCNM Press, Toronto, [www.ccnmpress.com](http://www.ccnmpress.com)  
With a preface by Abram Hoffer

#### Principles

- Biochemical individuality
- Nutritional status
- Energy Balance
- Toxicology of common nutrients

#### Practices

- Includes Psychiatric and behavioral disorders

### **The Schizophrenias—Ours to Conquer**

C. Pfeiffer, PhD, MD, Mailloux & Forsythe, 1970, Bio-Commun., Kansas

- Characteristics of the Schizophrenias
- Major Biochemical Types of the Schizophrenias
- Other Biochemical Theories
- Treatment [using vitamins and minerals]

### **The Secrets to Recovery from Mental Illness—a Mother's Guide**

**83**

Linda Santini, MD, 2008, Bellingham, Wash, USA, [www.amazon.com](http://www.amazon.com)  
With a foreword by Abram Hoffer, MD

- Part I—One Small Boy
- Part II—Getting Real About Mental Health
- Part III—Orthomolecular Medicine for All

### **Seven Weeks to Sobriety**

#### **The Proven Program to Fight Alcoholism through Nutrition**

Joan Mathews Larson, PhD, 1997, Ballantine Publishing, New York

- Assessing the damage
- Breaking the Addiction
- Correcting Chemistry
- Tailoring Repair
- Good-bye Depression
- Biochemical Traps that Block Recovery
- Planning the Future

## **Supplement Your Prescription**

### **What Your Doctor Doesn't Know about Nutrition**

The Essential Guide to Making Prescription Drugs Work Better for You

Hyla Cass, MD, 2007, Basic Health, Laguna Beach, CA [www.basichealthpub.com](http://www.basichealthpub.com)

How Drugs Deplete Nutrients

[Nutritional] Prescriptions for Psychological Health—Antidepressants

## **Vitamin C: The Real Story**

**90**

### **The Remarkable and Controversial Story of Vitamin C**

by Steve Hickey, PhD and Andrew Saul, PhD, 2008, Basic Health Publications Inc., CA

## **The WRAP Story**

**87**

### **[82] First Person Accounts of Recovery and Transformation**

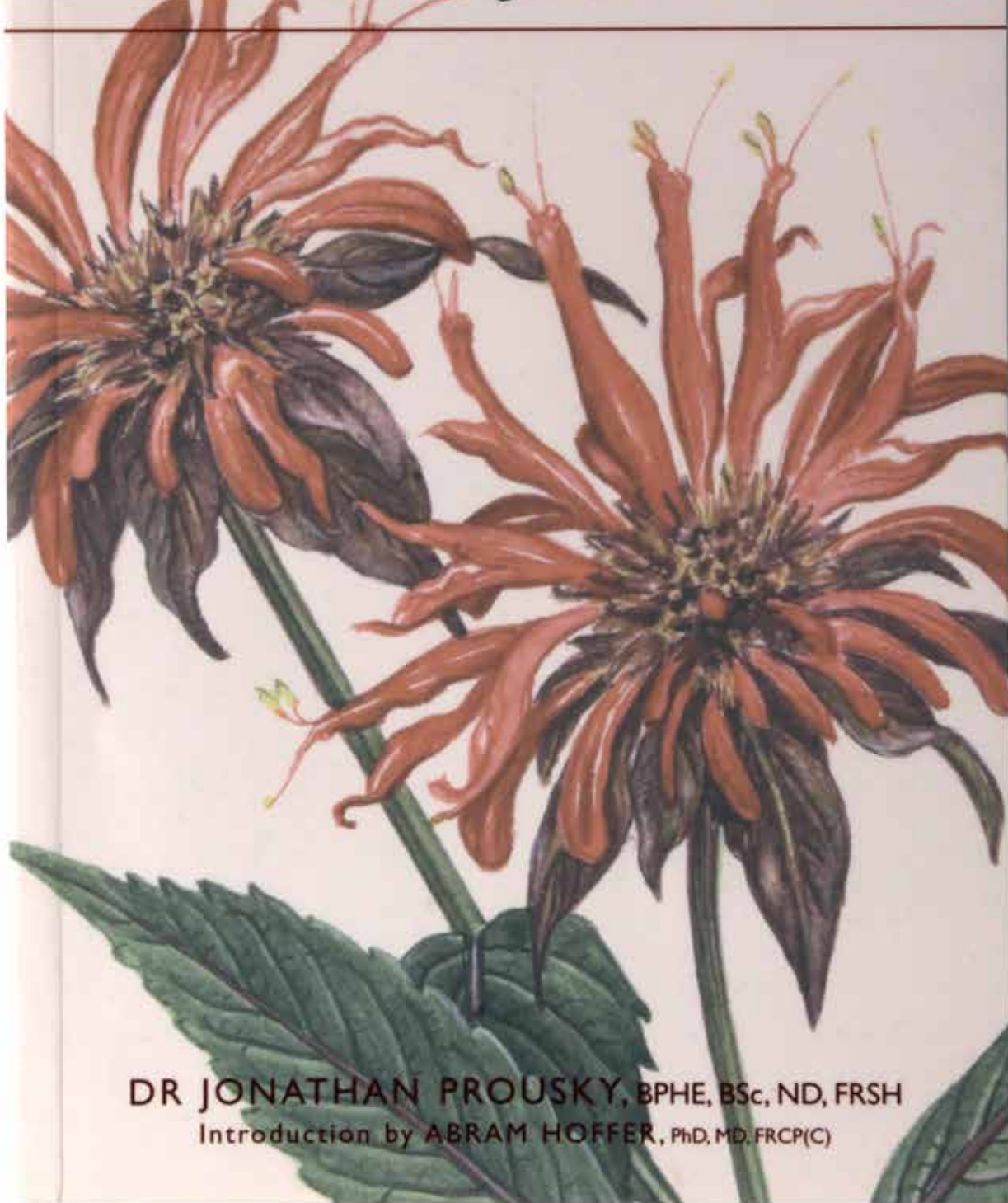
Mary Ellen Copeland, PhD, 2008, Peach Press, US, [www.mentalhealthrecovery.com](http://www.mentalhealthrecovery.com)

Includes 2 orthomolecular recoveries



# ANXIETY

*Orthomolecular Diagnosis and Treatment*



DR JONATHAN PROUSKY, BPHE, BSc, ND, FRSH

Introduction by ABRAM HOFFER, PhD, MD, FRCP(C)

# Anxiety: Orthomolecular Diagnosis and Treatment

**by Dr. Jonathan Prousky, ND, FRSH, 2006, CCNM Press, Toronto**  
**(intro. by Abram Hoffer, PhD, MD, FRCP(C))**

Anxiety affects many people. The anxious brain may have a survival advantage due to its hypersensitive danger-detection capabilities but prolonged anxiety can cause such acute discomfort that anyone who has experienced years of anxiety will consider it a mixed blessing—life-saving but troubling. Author Dr. Jonathan Prousky, ND, FRSH does not recommend drugging patients into sedation or oblivion, but instead he addresses the range of possible causes, while outlining how health practitioners can base medical care on scientific and medical research and the development of safe, proven and effective treatments. The commonly-used benzodiazepine anxiolytic medications receive due mention, however Prousky recommends a restorative approach, using nutritional supplements which do not lead to escalating doses, do not cause drug dependencies and do not trigger withdrawal symptoms, nor does the patient become overly-sedated, just restored to a calm mental state.

Readers seeking restorative care for anxiety will find this book interesting, insightful and helpful. Each chapter of this 125-page volume offers scientific and medical references for medical professionals and lay readers who wish to verify the author's information. Jonathan Prousky, ND an experienced health professional, offers his knowledge based on his careful study of the little-known field of restorative orthomolecular medicine and his years of applying its principles and practices with his patients. For decades, a succession of scientific and medical professionals researched mental illnesses such as schizophrenia, psychosis, depression, attention deficit disorder and autism and cooperated to develop restorative orthomolecular medicine. Many books share their research, progress and success and so does the *Journal of Orthomolecular Medicine*.

Even before their time, in the early 1900s, the then-common illness of pellagra caused hundreds of thousands of patients to suffer with dementia, dermatitis, diarrhea and death. Before dying, pellagra patients experienced psychosis and anxiety. Decades ago, Dr. Joseph Goldberger researched pellagra, determined that it resulted from a nutritional deficiency and recommended a recovery diet (later found to include niacin). Prousky and Hoffer believe that sub-clinical pellagra can develop today if vulnerable patients live on processed foodstuffs which lack essential nutrients. Other problems, e.g. hypoglycemia (low blood sugar), can also disrupt brain chemistry and cause anxiety.

Fortunately, orthomolecular treatments can restore normal brain function. Restorative treatments use nutritional supplements to refuel depleted brains, normalize enzyme biochemistries and calm over-activities, without the side attacks or toxic effects which often accompany high doses of prescription pills. Dr. Prousky has helped hundreds of anxious patients to recover and live well by applying the principles and practices of restorative orthomolecular and naturopathic medicine.

Not every patient recovers overnight. It can take time to diagnose the underlying problem and recommend appropriate treatments. Prousky does not offer false hope, or suggest quick-fix short cuts. His book outlines the steps for proper diagnosis of the root cause(s) of each patient's symptoms and trials of restorative regimens, customized to suit each patient's biochemical individuality. He explains how the right doses of the right vitamins, minerals, amino acids and enzyme co-factors and even botanical medications, (plant extracts used safely for medicinal purposes over many centuries), can heal anxiety.

Jonathan Prousky explains how restorative care can help anyone who suffers with anxiety to recover and live well. Let's notice the concept: restorative orthomolecular medicine was researched, tested and found safe and effective by biochemists, physicians and psychiatrists who cooperated for decades to help thousands of patients cope with serious mental illnesses such as schizophrenia, psychosis and depression. This book shows how Dr. Prousky applies the restorative approach to help patients cope with anxiety.



## Could It Be [a Deficiency of Vitamin] B12? An Epidemic of Misdiagnoses

**by Sally Pacholok, R.N. & Jeffrey Stuart, D.O., Word Dancer Press Inc., CA, 2005**

Sally Pacholok learned about vitamin B12 deficiency the hard way, from personal experience. While training to become a nurse, she experienced symptoms which her doctors dismissed as “insignificant”. One specialist charted her as a “hysterical female” before any diagnostic testing. Soon after Pacholok finally did get tested, that hematologist called to discuss Sally's medical reality—she had a deficiency of vitamin B12, a metabolic condition called pernicious anemia, which often gets misdiagnosed. For more than twenty years, Pacholok researched B12 deficiencies and compiled cases of patients who trusted their doctors to diagnose them accurately and treat them effectively, but found themselves misdiagnosed and mistreated or left undiagnosed and untreated. Untreated B12 patients risk permanent neurological complications.

Pacholok learned that deficiencies of vitamin B12 were first identified in the early 1900s. If patients' symptoms included apathy, memory loss, restlessness, irritability, confusion, dementia, delirium, depression, delusions, hallucinations,

paranoia and mania, they were considered “mad”. If those patients also had enlarged red blood cells (macrocytosis), their diagnosis was “megaloblastic madness”. In the 1920s, doctors administered raw liver to “mad” patients, thereby increasing B12 levels. Some patients recovered. It turned out that a deficiency of the 12th B vitamin can cause blood, brain and other health problems. For decades, medical journals have reported patients who recovered after getting supplements of vitamin B12.

Even though a hundred years of medical research has consistently connected B12 deficiency with psychiatric and other problems, in some patients, the misdiagnoses and mistreatments continue. Few patients get tested for urine MMA (methylmalonic acid/creatinine ratio) or serum homocysteine. These tests can uncover B12 deficiencies, even if serum tests look normal. Mental patients don’t usually get supplements of vitamins; instead most psychiatrists quickly and easily prescribe pills, often without diagnostic testing. The authors point out that medications for depression and bipolar disorder usually cost more than \$1,000 per year. Two and three drug combinations and other medications for multiple sclerosis or dementia can cost thousands of dollars. B12 shots cost \$20 for a year.

Nurse Sally Pacholok and physician co-author Jeffrey Stuart, (who has practiced emergency medicine for more than twelve years), make this longstanding medical condition fresh and new for readers. They present a selection of patients who were misdiagnosed and mistreated but recovered after B12 supplements—best by injection. Each chapter has a list of research articles, both current and decades-old. Their book teaches us that a range of symptoms can lead to mistaken diagnoses when the root cause involves a deficiency of vitamin B12. Misdiagnoses include aging problems, neurological conditions (such as multiple sclerosis), stroke, heart disease and vascular problems (linked to high homocysteine), learning and developmental problems, infertility and even mental diagnoses (depression, bipolar disorder, schizophrenia and autism). The authors encourage patients and families to ask for tests (urine MMA and serum homocysteine) and supplement vitamin B12 to restore normal levels.

Abram Hoffer’s friend and colleague, the late Bernard Rimland, PhD, known for researching autism and developing restorative treatments, recommended this book because “the authors provide an invaluable service for medical consumers who want to protect their families and for medical care providers who truly care about their patients.”





# FINDING CARE FOR DEPRESSION

*Mental Episodes & Brain Disorders*

WITH A CHAPTER BY ABRAM HOFFER, MD, PhD, FRCP(C)  
HOW ORTHOMOLECULAR MEDICINE CAN HELP

## A LAYMAN'S GUIDE WITH

*Recovery Stories, Tips & Traps*

*References For Restoring Mental Health*

*Mental Healthcare Compass*

*TAYO – The Healthcare Planner*

Illustrated by Charles Sucsan

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**Robert Sealey, BSc, CA**

Author of *Depression Survivor's Kit*, SEAR Layman's Guide Series



# Finding Care for Depression, Mental Episodes & Brain Disorders

**Robert Sealey, BSc, CA, 2002, SEAR Publications, Toronto**

**With a chapter by Abram Hoffer, PhD, MD**

**—*How Orthomolecular Medicine Can Help***

Beginning with his outpatient horror story, Robert Sealey tells us what can happen when an unsuspecting patient trusts an incompetent psychiatrist. Then he contrasts the quality of his care with the practice guidelines of psychiatry and observes that its consensus of expert mental health professionals recommends accurate diagnosis and effective treatments using standard of care procedures. After his interviews with 150 depression survivors brought to light coping concerns and problems with substandard care, Sealey developed tools for patients, family and caregivers. He offers a mental healthcare compass, practical tips, avoidable traps, checklists, worksheets and even a healthcare planner.

The book comes with an annotated bibliography; the extensive reference section has more than 250 books suitable for laymen. Snapshot reviews, notes and quotes inspire readers to learn about quality mental healthcare. Sealey rates many standard books as well as books written by psychiatric survivors and health professional survivors. Orthomolecular references get four stars (rated *restorative*).

With the health system controlling costs and cutting corners to cope with a difficult economic reality, thousands of patients live with chronic mental illnesses like depression. Patients, family and caregivers are increasingly left to fend for themselves when they could benefit from information and guidance. Sealey explains how patients can monitor their progress, ask for accurate diagnoses and cooperate with restorative treatments. If there are problems or a bad outcome, they can ask for other opinions.

We expect a credible layman's guide from a writer whose Bachelor of Science degree included courses in biological and medical sciences and psychology. Still, we wonder what motivated Sealey. How did he find mental healthcare that is consistent with the practice guidelines of psychiatry and applies the life science of biochemistry restoratively for clinical purposes? What did he discover by probing the health system? Why did he decide to help patients find quality care?

Robert Sealey, BSc, CA works as an independent consultant in North York, Ontario, Canada. From the age of seventeen, Bob suffered prolonged episodes of depression. Eight health professionals failed to 'cure' him. After decades of misdiagnosis and mistreatment, medical incompetence and short cuts, Sealey wanted to restore his

mental health. He kept trusting that it could be done. When a mood disorder 'expert' psychiatrist omitted thirteen standard of care procedures, Bob deteriorated. At the age of forty-six, determined to get well, Bob used his resilience and persistence to set up an Independent Depression Project, explore the mental healthcare maze and write the SEAR series of layman's guides. *Finding Care for Depression, Mental Episodes and Brain Disorders* is his latest work, a sequel to his *Depression Survivor's Kit* and *Mental Healthcare References*.

A one-time business fraud investigator, Bob advises local clients about accounting, tax and financial planning. Thirty percent of his clients have depressions, mental episodes or brain disorders. He understands their concerns because his own brain has faults and fallibilities. Bob is variable, volatile and vulnerable to episodes of depression and hypomania. Reactive, intense, hypersensitive, periodically creative and surgingly energized, he is bipolar, migrainous and anxiety-ridden. Nevertheless, Bob has been stable since 1996, taking a daily regimen of vitamins and nutritional supplements.

I ask readers to consider his account seriously because his illness might have left the patient forever incapacitated and a charge on his family and community. His anecdote represents only one of thousands of stories about similar patients who recovered using orthomolecular treatment. The evidence has been published in many clinical accounts, standard and complementary journals and many books. The evidence is there. It needs only to be studied and applied. Sealey opens the door.

Bob encourages patients, family and caregivers to hope, learn, cooperate and benefit. He reminds us that many people have mental disorders. We all know some of these poor souls: silenced, stigmatized, marginalized and shunned as if they were lepers. They suffer with conditions like depression, bipolar disorder, schizophrenia, ADD, autism, OCD, anxiety, migraine, stroke and dementia.

If their involuntary symptoms are masked by powerful psychiatric medications, patients may seem better but negative 'side' effects of their prescription drugs may leave them uncomfortable, frustrated and disappointed. Such problems are too often dismissed or ignored. Meanwhile restorative orthomolecular medicine is available to help them. We recognize the urgent need for teaching aids designed for laymen: vulnerable patients, concerned family and informed caregivers. By writing about mental healthcare in a direct and uncompromising manner, Sealey questions psychiatric minimalism. Noting that competent mental healthcare involves more than labeling and drugging sick people, he advocates for accurate diagnoses and effective treatments. His tips, tools, teaching tales and references educate readers about the practice guidelines of psychiatry, standard of care procedures and restorative orthomolecular medicine.

If you or someone you know lives with depression, mental episodes or a brain disorder, this book can help you find effective care.

**Review by Abram Hoffer, PhD, MD**



# [a chapter from] *FINDING CARE FOR DEPRESSION* HOW ORTHOMOLECULAR MEDICINE CAN HELP

by Dr. Abram Hoffer

Many people suffer depression so severe and for such a long time that it forces them to ask for medical care. Over fifty years ago, only people with severe cases of depression or melancholia sought help. They were often admitted to psychiatric hospitals where there was little help until the first effective treatment, called electroconvulsive therapy, was discovered. Psychotherapy and psychoanalysis were tried on a large scale but proved futile for most depressed patients, and their suicide rate remained high.

There was little effective treatment for severe clinical depression until psychiatry entered its chemical age and the first antidepressant called imipramine was discovered in Europe. We are still in this chemical treatment era except that now we have dozens of different antidepressants. Each modern one is said to be better than the preceding ones. "Better" means fewer side effects, but on a comparative basis, there is little evidence that newer antidepressants are more effective in alleviating depression. Antidepressants work best when used together with a sympathetic form of medical guidance or psychotherapy. This approach to depression is used by many physicians.

Because there are no laboratory diagnostic tests for depression, it is difficult to distinguish it from other medical conditions in which symptoms of depression are a major problem. Schizophrenic patients are invariably depressed, as are many patients with serious or debilitating physical diseases such as cancer, chronic fatigue and many more. Furthermore, the word *depression* is given too heavy a burden when it is used to describe conditions that have no similarity to each other. Thus if you fall and stub your toe, you may be momentarily depressed. If you fail an exam which meant something to you, you might become depressed for longer than that. If your spouse or parent or child dies, the experience of depression called mourning may last for several years. These "depressions" are different from each other and require different ways of being helped. Just as the Innu have many words to describe the different types of snow, we need many different words to correctly characterize the various conditions of depression. An expanded vocabulary for depression would remove from the word *depression* its heavy burden of describing every person who is medically unwell, sad, tired, clinically depressed, and so on.

The main problem in treating depression has been, and still is, to diagnose it properly so that each group of patients with depression is homogeneous, and to have treatments that are specific and effective for each type of depression. I do not know when modern psychiatry will improve the specificity and effectiveness of caregiving for depression, nor do we yet have restorative care for depression—except for the new upstart branch of medicine called orthomolecular medicine and psychiatry. What, then, is orthomolecular medicine, how did it get started, and why was it so helpful to Robert Sealey, who did not recover from his mood disorder until he began, mostly on his own, to practise its principles?

Orthomolecular medicine started in Saskatchewan in 1952 when Dr. H.



Osmond and I gave large amounts of niacin (vitamin B-3) and ascorbic acid (vitamin C) to a catatonic schizophrenia named “Ken” in the Saskatchewan Hospital in Weyburn. We had just received our supply of these vitamins from Merck and Company in order to try them as a treatment for schizophrenia. This was based upon our adrenochrome hypothesis in which we suggested that these patients were sick, not because they were bad or evil, or had bad or evil mothers, but because they produced chemicals or poisons in their bodies which caused perceptual distortions and other problems in their brains (like LSD or hallucinogenic drugs do).

Ken, age 22, did not respond to insulin coma treatment or ECT (then typical treatments for catatonic schizophrenia) and he was dying in his coma. Since he could not swallow, Dr. Osmond and I used a tube to pour 10 grams of vitamin B-3 and 5 grams of vitamin C directly into Ken’s stomach. The second day he was able to sit up and drink a solution which had 3,000 mg of vitamin B-3 (niacin) and 3,000 mg of vitamin C (ascorbic acid). By the end of 30 days on the same daily dose, he was normal. We discharged him. This was the first clinical test of our therapeutic hypothesis that a patient’s schizophrenic brain disorder could be effectively treated by using supplements of two vitamins, normally vital amine nutrients for healthy human beings. Dr. Osmond and I believed that supplements of vitamins B-3 and C would reduce the hallucinogenic levels of adrenochrome which we believed accumulated in the brains of some schizophrenic patients. We were lucky that our hypothesis worked and Ken got well.

Encouraged by this, we gave the same treatment to eight additional patients in two hospitals and they recovered. This is called a pilot trial. Such a small test is designed to measure the best dose range and look for any side effects. I was not very worried about side effects of niacin since I knew that water soluble vitamins were extraordinarily safe. Toxicity tests in dogs showed that 5 grams of niacin per kilogram of body weight would kill half of them. A test dog weighing 20 kg would get 100 grams of niacin. The dose that kills 50% of the test animals is called the LD 50. That dose would be equivalent to giving a 30 kg child 150 grams of niacin and a 60 kg adult 300 grams (more than one half a pound) every day. Anyone who swallowed that much niacin would probably vomit it promptly back up. Our treatments typically use 3 to 6 gram doses of niacin. This is nowhere near the LD dose. One of my female patients took, as a suicide gesture, two hundred 1/2 gram (=500 mg) tablets of vitamin B-3. Before she began to take vitamin B-3 as directed—at the rate of 2 tablets, 3 times a day—she became angry at her mother and swallowed the whole bottleful. For the next three days, she complained of stomach ache but then had no further complaints. She eventually recovered from her schizophrenia.

Dr. Osmond and I used our scientific knowledge of the life science of biochemistry to develop reasons why supplements might be effective treatments for schizophrenia. We began our search for a restorative treatment for schizophrenia by looking at 3 to 6 gram doses of vitamin B-3 and matching doses of vitamin C. We then applied to Ottawa for a research grant so that we could run a larger scale clinical study. We were advised that we must do the trial using a double dummy design. This was later called double blind. It meant that the patients to be tested would be divided by random selection into two groups: half would be given a placebo (an inert substance) and the other half, the vitamins being tested. These patients were not chronic mental hospital back ward patients. They were ill for the first time or had

had several attacks with remissions. For this type of patient, the generally recognized recovery rate is about 35 percent. No one, including the patients involved in a double blind study, would know whether they were getting placebo or vitamins.

We agreed to the conditions of this study and as a result, by 1960, we conducted the first six double blind controlled experiments in psychiatry. Since you cannot hide the effect of the niacin flush, we added a hidden group who were given a form of vitamin B-3 called niacinamide which does not cause any flush. We found that the two-year recovery rate using the vitamin therapy was 75 percent compared to the 35 percent recovery using the placebo.

These positive clinical trials and the experience gained by many hundreds of other patients treated outside of the controlled trails convinced me that the addition of this vitamin to the standard treatment of that day would markedly improve the therapeutic outcome. Based on our experiences, we asked my sister Fannie Kahan to rewrite the book, *How to Live With Schizophrenia*, which was based on the earlier drafts of this book that Humphry Osmond and I had written. We asked her to take our final manuscript and rewrite it into plain English comprehensible to the average twelve year old. This book helped our patients to understand their treatment.

A few years later, the Committee on Therapy of the American Schizophrenia Association was established. It involved over a dozen physicians, mostly psychiatrists. They became the pioneer doctors who rapidly expanded the use of vitamin treatment. As the early pioneers of orthomolecular medicine, they trained many other doctors in North America. Dr. Linus Pauling, a PhD biochemist, happened to read *How to Live With Schizophrenia* one weekend while he was visiting friends. He was astonished by the fact that we were giving huge (megavitamin) doses of vitamins, up to 1000 times more than the RDA (recommended daily allowance). He soon gave up his plans to retire and accepted a position at the University of California in San Diego, California. He started receiving letters from patients after they were treated with vitamins and recovered.

In 1968 Dr. Pauling published his important work, "Orthomolecular Psychiatry," in *Science* magazine where he showed how large doses of vitamins could be helpful. Above all, he emphasized the importance of working with molecules—substances—that were normally present in the human body. Our work coincided with his earlier work with sickle cell anaemia which was the first molecular disease to be described. Dr. Pauling's paper launched the orthomolecular medical movement and embroiled him in a major controversy for the next 30 years of his life. His credibility was attacked by every established health group including physicians, psychologists, nutritionists, social workers and even some government departments.

The Committee of Therapy, after long discussions, decided to adopt his word 'orthomolecular' as the one word which best described what we were doing. Now over thirty years later, the word is well established outside of the United States and Canada. In these two countries where the research was done, there is still major reluctance to use the word. Some orthomolecular medical practitioners in North America are still looked upon as strange or labelled as quacks. This does not make sense since these doctors are only applying the life science of biochemistry to the art of medicine. Internationally, orthomolecular medicine is spreading quickly. The International Society of Orthomolecular Medicine has seventeen member countries. It is expanding into Europe, South America, Japan and Korea.

As defined by Linus Pauling, PhD, and accepted by the Committee on Therapy of the American Schizophrenia Association and later the Huxley Institute of Biosocial Research, orthomolecular medicine is a system of medicine which depends heavily on the therapeutic use of natural substances which are normally present in the human body. These are the vitamins, minerals, essential fatty acids, enzymes, hormones such as insulin and melatonin, and other compounds. Note that hormone therapy has been used in general medicine for a long time. The main emphasis of orthomolecular medicine is on compounds that are present in our food but that can be reinforced by adding supplements until each person takes in optimum amounts of nutrients. Each patient benefits by getting what their biochemical systems need for them to be well.

The advantage of using natural products is that they are safe. There have been no deaths from vitamins in the past twenty-five years. Each year in the United States alone there are over 100,000 deaths following the use of medical drugs in hospitals. It follows that prescribed drugs have to be used very carefully since the therapeutic index is so narrow. The TI (therapeutic index) is the ratio of the toxic dose compared to the effective dose. Thus for niacin to lower cholesterol levels, the effective dose is usually 1 gram after each of three meals (i.e., three grams daily). The toxic dose is about 300 grams. For niacin, the TI ratio is  $300/3 = 100$ . There is no known toxic dose of vitamin C and therefore it is so safe that the therapeutic index for vitamin C is undetermined.

In contrast, drugs have to be prescribed very carefully by physicians who must pay strict attention to side effects and toxic reactions; meanwhile, vitamins are safe. A physician may need to spend several years mastering the intricacies of drug therapy, whereas any intelligent person can master the intricacies of vitamin therapy in a much shorter time. Society has recognized this by insisting that drugs must be prescribed whereas vitamins are available over the counter.

To me, it makes sense to depend more on nutrient supplements because they can help to restore defective chemical reactions in the body. Thus in pellagra there is a deficiency of NAD, the coenzyme made from niacin. Giving niacin to a person who is ill with pellagra allows that person's body to synthesize enough NAD so that the symptoms of their disease vanish. On the other hand, drugs interfere with natural reactions. The most effective drugs are those that most closely resemble natural molecules and can be metabolized and excreted. Very dangerous drugs kill because they interfere with reactions in the body. They act as poisons. The ideal killing drug cannot be metabolized and therefore builds up in the body. The ideal therapeutic compound does not build up, but enhances the natural reactions of the body and any excess is excreted. Drugs fall somewhere in between. The closer they are to natural molecules, the more successful drugs can be as therapeutic agents.

### **Conditions Treatable by Orthomolecular Medicine**

Even after working in this field since the 1950s, I do not know all the conditions that will respond. There has still not been enough research in this area. We started with schizophrenia and we had very good results. Almost 80% of the early pioneers of orthomolecular healthcare were psychiatrists. The members of the Committee on Therapy soon found that the principles that worked well with schizophrenia also worked well with other disorders such as depression and anxiety; for children with behavioral and learning disorders; and for reversing some of the ravages of aging. However, each condition benefits most from a specific and tailored regimen.

When we saw Ken recover so quickly from catatonic schizophrenia, we did not think in terms of depression. In the first few years that we used vitamins, we excluded every non-schizophrenic patient. Diagnosis was very important and we wanted to work only with schizophrenic patients. Later on we found that kryptopyrole, which we found in the urine of most schizophrenic patients, was also present in other patients and they also responded well to orthomolecular treatment. We found some people who were very depressed and they had this compound in their urine, but they were not schizophrenic. They also got well on the same vitamin therapy.

We know now that the vast majority of mental patients can be treated, but there are certain indications which determine the regimen of natural supplements which should be used in each case. I am convinced that every psychiatric patient should be treated with nutrition and nutrient supplements along with the standard drugs (but preferably without drugs whenever this is possible). No matter what the disease is, the body can cope better if it is as healthy as possible.

We started with Ken, a catatonic schizophrenic. His response encouraged us to persevere; we treated thousands of mental patients under careful medical supervision and now we come to the case of Mr. Sealey who is not schizophrenic but suffered severe depression until he placed himself on the orthomolecular program. He also recovered.

### **The Orthomolecular Program for Restorative Mental Healthcare**

**NUTRITION**—Individual nutrients singly or in combination cannot be used to replace food. The first principle is to examine the food—the patient's diet. The relation between food and health is complex. This has been written about in dozens of books including a book that I wrote with Morton Walker, DPM, called *Orthomolecular Nutrition* (Keats Publishing, New Canaan, Connecticut, 1978) and another book of mine called *Hoffer's Laws of Natural Nutrition* (Quarry Press, Kingston, ON, 1996). The balance of optimal nutrition that was established during evolution between animals and their environment was so strong that most animals in the wild remained healthy without needing nutritional consultants to advise them. Animals remain healthy because they eat the foods their species has consumed for thousands of years. The best zoos follow the same principle.

Humans have corrupted this relationship by altering food and creating artifacts that appear to be foods but are not very healthy. We have done this to the degree that the natural safeguards present in animals against eating foods which will make them sick are no longer operative. For example, in nature, foods which are bitter will not be eaten because animals do not like bitter-tasting foods. Bitter-tasting foods tend to be poisonous. However, poisons can be embedded in food artifacts which are every bit as dangerous, especially over the long haul, as preparations that have all the appearance and taste of healthy food.

I find two simple rules provide a useful guide for a healthy diet. Most patients understand and they can work with these rules. The first is that all junk food must be removed from the diet. I define junk food as all food preparations containing added free sugars such as sucrose, glucose and lactose. If these are eliminated, about 90 percent of the common additives in our commercial foods will also be eliminated, and this is advantageous. The second rule is to avoid all foods to which you are allergic, even foods which are supposedly healthy for a "normal" person. Food allergies and

sensitivities have to be determined by the patient and physician working together. Keeping in mind that the principle of biochemical individuality often applies, if a person is allergic to a common food such as wheat and continues to eat wheat, nutrients will not overcome the symptoms generated by that food allergy.

**THE SUPPLEMENTS**—These are the vitamins, minerals, essential fatty acids and other natural compounds. They are used in optimum quantities. The problem here is that very few physicians understand what this means. Many doctors still follow the food guides provided by the government's RDAs. The RDAs were developed to guide governments about the probable needs of a large majority of the community. The RDAs are only to be used for the healthy part of the population. Therefore, they do not apply to pregnant women, children, and anyone who is ill (i.e., about half the human population). We need recommended daily allowances for each different disease. So far the concept of taking optimal doses of supplements is still too new and frightening to the medical profession, even though they know that when using drugs, one must use the optimum dose to get the expected results and avoid toxic reactions.

The term *megavitamin* was created by Irwin Stone when he discussed vitamin C. It is not really a good word because it just means large dose. It has not been defined more precisely. Some patients have looked for "megavitamins" as if there were vitamins called megavitamins. The term refers to the size of the dose. This varies with each nutrient. The best dose of a nutrient depends on the state of each person's health and that individual's biochemical needs. I suspect that eventually every nutrient will find a role for some patients in optimum or orthomolecular doses. The first ones used were vitamins E, C, B-3, B-6 and more recently other vitamins such as folic acid. Folic acid was recently found to be helpful for the treatment of many cases of depression although as Mr. Sealey learned, this is not necessarily a helpful supplement in all cases of depression.

Between 1950 and 1970, major interest evolved around the vitamins, over the next ten years minerals were added, and since then the essential fatty acids have been recognized as having great importance.

Resistance to the use of vitamins in orthomolecular doses was very great but began to moderate after the term *antioxidant* came into use. Some of the same doctors who were opposed to using megavitamins later changed their minds and began to use antioxidants such as vitamin E and vitamin C. The discovery that niacin lowered cholesterol levels was published in 1955 marking the introduction of the new paradigm—the vitamins-as-treatment paradigm. A vitamin dependency is said to exist when a person cannot get well unless given mega doses of one nutrient. This was found to be the case with Canadian soldiers kept in Japanese prisoner of war camps for 44 months. I treated some camp survivors who were very ill but recovered when they were given large doses of niacin.

A few diseases may be expressions of a double dependency (i.e., they need two or more nutrients in large doses). An example is Huntington's Disease which requires large doses of vitamin E and niacin. I am positive that many more will be found when a proper search is undertaken. If a fraction of the money now being spent studying new drugs was applied toward orthomolecular research, an enormous amount of useful information could be gained in a few years.

Recently, I received confirmation that trigeminal neuralgia will respond to the combination of vitamin B-12 injections, vitamin C and L-lysine. Shingles also appears

to be a triple dependency on the same three nutrients. The number of permutations and combinations is immense.

**XENOBIOTICS—Drugs.** These are molecules foreign to the body, but may have structural similarity to natural products or they would be too toxic to be used. Orthomolecular doctors also prescribe drugs, on the principle that one should recommend the best of modern medicine for every condition. A doctor should not be a bigot, either for or against any set of medical compounds.

Orthomolecular physicians use nutrition and supplements as the main program and drugs as add-ons for certain indications, with the aim of getting patients off psychiatric drugs as soon as possible. Tranquilizer drugs can produce a number of negative effects in many patients which I have called the tranquilizer psychosis.

### **Results Gained by Orthomolecular Treatment**

Evidence-based medicine has become the fashion at least in the medical journals and perhaps in the colleges of medicine. I find this ironic since physicians have used evidence-based medicine for thousands of years. The evidence was sometimes faulty and often biased, but at the times these practices were used, they were the best available. Modern evidence-based medicine is not what you might think. It is evidence that can be gained only from the double-blind controlled randomized prospective therapeutic trial.

My colleagues and I were the first psychiatrists to conduct this type of experiment; I was among the first to examine the method carefully and conclude that while useful, it was not the gold standard, but only one of several ways to research. For many types of disease, this type of experiment is totally unusable.

Devotees of this approach will not take Mr. Sealey's account of his illness and his recovery seriously, because they are blinded by the clothes fashioned by the double blind method, like the naked Emperor's clothes. I ask readers to throw away their blindfolds and to read this account carefully and seriously, because it is one account of a serious illness which might have left the patient forever incapacitated and a charge on his family and community. His anecdote represents only one of thousands of similar cases which have recovered given orthomolecular treatment. The evidence has been published in many clinical accounts, in many standard and complementary journals, and in many books. The evidence is there. It needs only to be read and studied.

So far, out of over fifty physicians who have spent a day or more in my office to observe my practice and talk to my patients, none have resumed their original way of practice. They all became orthomolecular physicians. Medical resistance remains high. Recently, I saw a chronic schizophrenic patient for the third time in 6 months. He was referred by his psychiatrist. After orthomolecular treatment, he was almost normal. The only residual symptom was that he still heard voices, but they were much quieter. He was looking forward to finding employment. For the previous three years, he could not work. He stopped seeing the psychiatrist who referred him to me because the psychiatrist would not agree he was better. They fought over his progress. The referring psychiatrist was so blinded by his belief that only drugs could help the patient that he could not see how the patient was making positive progress using orthomolecular methods.

Dr. B. Rimland, founder of the Autism Research Institute, recently reviewed the

efficacy of drugs compared to nutrients. He accumulated data from 18,500 parents of autistic children who had been treated. He compared the number of children who were better and the number who were made worse. He found the following ratios of “better over worse.” This might be called the EI (efficacy index). The most effective substances have high EI ratios and the least effective have low EI ratios. Here are comparative EI ratios for commonly used treatments for autistic disorders:

**Lower Efficacy**

Antipsychotics	Range from 0.5 to 4.1
SSRI antidepressants, lithium	Range from 1.2 to 3.0

**Higher Efficacy**

Vitamin B-3	8.6
Vitamin B-6 and magnesium	10.9
Vitamin C	15.3
Zinc	14.8

The higher EIs for nutrients indicate that children with autistic disorders can benefit more if they take appropriate doses of vitamin B-3, vitamin B-6, magnesium, vitamin C and zinc, than if they take commonly used psychiatric medications.

Over the past 45 years, I have seen thousands of mental patients recover using orthomolecular medicine even though they previously failed to recover using orthodox clinical treatments. It is important that we no longer deprive our psychiatric patients of their chance to get well. To reach my definition of recovery, they must be free of signs and symptoms, they must get on well with their families and the community and they must be able to work enough to provide for their needs and pay income tax.

It is interesting that after suffering for nearly thirty years (ten with undiagnosed and untreated symptoms of depression, and then twenty years with an apparently misdiagnosed and undertreated bipolar II mood disorder), Robert Sealey restored his mental health using orthomolecular methods.

He read many medical reference books and fanned the spark of his desire to get well until it turned into a passion. He finally found restorative care for his mood disorder. Now he is using the story of his experiences to help other people. Readers will sense his frustration and disappointment when his mental health professionals did not follow their professional guidelines, did not offer competent care and did not help him get well. Even when he took the prescription medications that his doctors recommended, he did not restore normal brain function, but found his symptoms masked as he struggled with negative effects of antidepressants, mood stabilizing and benzodiazepine medications. Mr. Sealey learned that he could trust the logic of the practice guidelines of psychiatry. He kept searching for an accurate diagnosis. He used the guideline principles to get a proper diagnosis and he read reference books until he found and applied the restorative practices of orthomolecular medicine. He restored his mental health without negative effects.

Today Robert Sealey can live well. He works as a self-employed professional in Ontario. He consults with healthy clients and also with people who have episodes of depression and other brain disorders. He writes articles and guides for laymen and health professionals. He shares his experiences living with a bipolar II mood disorder and using restorative mental healthcare. He wrote *Finding Care For Depression*

for patients and caregivers. Mr. Sealey's success using orthomolecular methods for effective mental healthcare can inspire patients, consumers, survivors and caregivers to learn about, ask for and benefit from restorative mental healthcare.

I encourage you to consider Mr. Sealey's recovery story and refer to his helpful selection of tools and tales, tips and traps, reviews and references for laymen and caregivers. People who live with depression and other mental illnesses can use this book if they want to find care for depression, mental episodes and brain disorders.

December 20, 2000 by **Abram Hoffer, MD, PhD, FRCP(C)**



## Principles and Practices of Naturopathic Clinical Nutrition

by **Jonathan Prousky, ND, MSc, CCNM Press, Toronto, 2008**

**(416 pages, available at [www.Amazon.com](http://www.Amazon.com) and [www.ccnmpress.com](http://www.ccnmpress.com))**

With its wealth of clinical information, well organized and clearly explained, this insightful text recommends restorative treatments and presents research evidence. With ten years of clinical experience, seeing patients with various health problems including psychiatric disorders, author Jonathan Prousky, ND, MSc knows about the healing capabilities of nutritional regimens, even for anxiety, ADHD, autism, alcoholism, bipolar disorder, depression and schizophrenia. While the author did not address this medical text to laymen, Prousky's accessible writing style makes scientific and medical information understandable to every reader, no matter what their education. Prousky presents clinical pearls about nutrition and nutrients. He encourages readers to learn about naturopathic and orthomolecular care, cooperate with differential diagnostic workups and consider the benefits of treatments with vitamins, trace minerals and amino acids i.e. supplements.

Abram Hoffer's preface states that readers can trust Prousky's reports. After meeting Jonathan Prousky and reading many books about orthomolecular medicine, I agree. Prousky's book reminds me of Dr. Hoffer's *Orthomolecular Medicine for Physicians* (OMP), printed in 1989 and no longer easy to find. Hoffer's book still reads fresh and clear today. Prousky's clinical guide adds current information. Fortunate readers of both books will realize that Jonathan Prousky has carefully studied Abram Hoffer's research and clinical findings. Prousky not only learned how to help his patients restore their health, but he also writes about restorative care and he teaches orthomolecular principles and practices to naturopaths-in-training. Prousky's textbook explains the healing power of complementary naturopathic and orthomolecular practices. He encourages medical students and health professionals to read about orthomolecular medicine and consider nutritional regimens. Some



professionals may follow Prousky's example and document the progress of their patients by writing their own books and medical journal articles. Hopefully this will help to sustain orthomolecular medicine for decades to come.

Prousky's important clinical textbook belongs in the libraries of a wide readership where his excellent information can bring clinical help and hope for restoring health to thousands of patients. If sick and vulnerable people trust quick labels and easy shortcuts and only get toximolecular pills, (the usual synthetic prescription medications), they are unlikely to heal as well as patients whose health professionals read Prousky's comprehensive clinical guide and learn to assess nutritional and biochemical aspects and recommend restorative regimens to complement other treatment modalities.

As an example, let's consider benign prostatic hypertrophy. What does conventional medicine offer aging men who have trouble with their waterworks?—DRE exams and PSA tests before painful and repeated surgical procedures combined with pills and unwanted side effects. When I had that sort of trouble, I googled and read how Feinblatt and Gant were researching another medical problem when they noticed that three amino acids—glycine, glutamic acid and alanine—helped a surprising number of patients to restore normal 'flow'. In 1958, they published their finding in the *Journal Maine Medical Assoc.*, available from the Prostex website. Prousky's 2008 book shares their discovery, which was confirmed by other doctors in 1962, but remained little-known for the past fifty years. Within one day, those three amino's eased my discomfort.

Thousands of trusting patients hope that our health professionals will find, read and apply books about restorative treatments which were researched and found safe and effective by Abram Hoffer and other orthomolecular pioneers. Readers of *Naturopathic Clinical Nutrition* can thank Jonathan Prousky for studying orthomolecular medicine very carefully and then writing this thorough, detailed and documented textbook with more than 400 pages of clinical information about the principles and practices of naturopathic and restorative orthomolecular medicine.

Note to readers—

1. Dr. Hoffer updated *Orthomolecular Medicine for Physicians* (1989) as *Orthomolecular Medicine for Everyone* in (2008).
2. Dr. Prousky updated *Principles and Practices of Naturopathic Clinical Nutrition* (2008) as *Textbook of Integrative Clinical Nutrition* (2012) – 506 pages





The  
Secrets  
to  
Recovery  
from  
Mental Illness  
A Mother's Guide

Linda Santini, M.Ed.

Foreword by  
Abram Hoffer, M.D., Ph.D.

# The Secrets to Recovery from Mental Illness—A Mother's Guide

by Linda Santini, MEd, [www.BookSurge.com](http://www.BookSurge.com), Seattle, 2008 with a foreword by Abram Hoffer, PhD, MD

What can a parent do when a child has a mental illness—for years? Linda Santini asked questions, read and searched for help. Her detailed guide shares experiences, information, references, research and tips for (1) coping with episodes and monitoring symptoms, (2) surviving misdiagnoses and substandard treatments, (3) navigating the mental healthcare maze and (4) finding quality care. Linda teaches us the secrets to recovery.

What could be secret about medical care for a brain condition? Growing kids often have bad moods or even episodes of depression, anxiety or attention deficits not to mention 'borderline' behaviors. Surely most doctors know how to help. Or do they? Linda and her family consulted psychiatrists who appeared competent but only offered quick labels and easy prescriptions, then more pills and therapy sessions. Did these doctors mention that the practice guidelines of psychiatry recommend ten (or more) steps for (a) making an accurate diagnosis and (b) planning safe and effective treatments? No, too busy.

By keeping quiet about the guidelines, psychiatrists withheld that information. Linda's sick children did not recover as long as their doctors shortcut the recommended medical procedures. Those physicians also failed to mention that psychiatric medications, mixed and matched and given in ever-increasing doses, can make some patients worse. They did not alert Linda to the possible side effects of brain pills; they did not tell her that patients can deteriorate without accurate diagnoses and quality care. Why did several specialists keep those important considerations to themselves? Why so many secrets?

The doctors also did not tell Linda that some patients respond to a treatment protocol which adds vitamins, minerals and amino acids to medications and therapy. Not surprising after the American Psychiatry Association reported, decades ago, that this approach had no value. Did the APA reviewers dismiss it too quickly? Orthomolecular medicine has been researched and developed for more than fifty years and helped thousands of patients to recover and live well. Wouldn't the APA want to investigate how safe and restorative regimens of nutritional supplements could help so many patients?

For years, Linda Santini watched her boys deteriorate after they were misdiagnosed and mistreated. Like most mothers, Linda would not give up. She

studied medical books and searched for help. She unearthed the best-kept secret of all. She read that a small team of medical professionals led by biochemist and psychiatrist Abram Hoffer, PhD, MD and his colleague Humphry Osmond, MD researched and developed a restorative treatment for schizophrenia, in Canada, in the 1950s. Linus Pauling, a PhD chemist, named the concept 'ortho-molecular' medicine in 1968. (i.e., correct the molecules).

Historical note: While decoding their first double-blind placebo-controlled experiment, the first in psychiatry, Hoffer and Osmond observed that 75% of patients recovered from acute schizophrenia after they received optimum doses of niacin, a methyl acceptor (also known as vitamin B-3), as well as ascorbic acid, an antioxidant (also known as vitamin C). Conventional psychiatrists pooh-poo'h'd vitamin therapy and dismissed the healing potential of restorative regimens based on biochemistry. For decades, Hoffer and Osmond researched the adrenochrome hypothesis of schizophrenia. They learned that a metabolic byproduct of adrenalin can make patients ill. One or two percent of people produce too much adrenochrome and adrenolutin. These indole compounds can cause perceptual difficulties. The symptoms worsen during times of distress and can progress to delusions and hallucinations, i.e., schizophrenia, as well as depression, anxiety and attention deficits. Antipsychotic medications can help but can cause problems in high doses however an optimum regimen of nutritional supplements can restore normal brain function. Most psychiatrists keep quiet about brain chemistry but Dr. Hoffer did not. For decades as he cared for thousands of patients, he shared his findings with colleagues and wrote books and journal articles to educate patients, families and health professionals.

The more Linda Santini read about orthomolecular medicine, the more it fascinated her. She took one of her sons to see Abram Hoffer in Victoria, BC. Dr. Hoffer diagnosed him carefully, explained how overactive adrenalin metabolism can make some people sick, even psychotic, and recommended nutritional supplements to complement medications. Linda encouraged her son to cooperate with the restorative program. He recovered. When her other son got sick, Linda knew what tests to ask for and how to get help.

For years, Santini saw her two boys get sicker and sicker; eventually she found antidotes to misdiagnoses and mistreatments. She learned that many patients suffer and deteriorate while safe, effective and restorative orthomolecular regimens are ignored by conventional psychiatrists. Knowing that many families trust pills and talks, Linda put her training as a teacher to good use by writing *The Secrets to Recovery from Mental Illness—A Mother's Guide*. Her book reveals little-known secrets, warns about substandard psychiatry and introduces a complementary dimension of care. Dr. Abram Hoffer wrote the foreward. Abram Hoffer co-founded restorative orthomolecular medicine more than 50 years ago. He has written many books and more than 600 papers for medical journals.

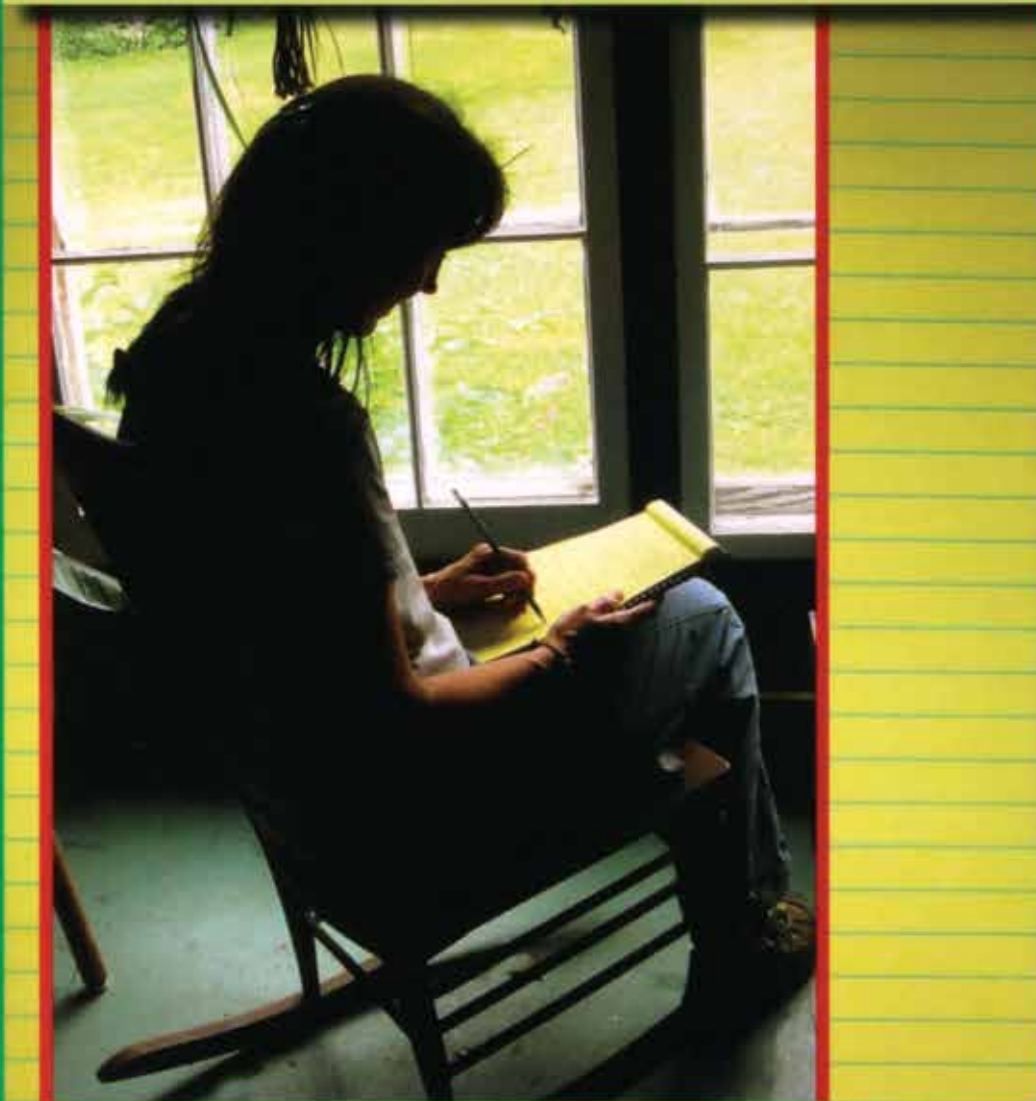
If you, your family or friends have mental health problems which get worse until you suspect substandard care, you can use Linda Santini's book to find help. She shares reference books which explain how competent doctors start with medical tests and diagnose carefully before they plan safe and effective treatments. She also outlines the restorative approach, which complements brain pills with a regimen of nutritional supplements based on each patient's diagnosis and biochemical patterns. Even after years of depression, bipolar disorder, psychosis, schizophrenia or attention

deficit hyperactivity disorder, many patients can recover and live well. Doctors can complement the standard treatments—medications, talks and shocks—with restorative orthomolecular regimens. There are biomedical treatments for autism and Aspergers too. Linda's heartfelt book will inspire patients and caregivers to ask for accurate diagnoses and guideline-quality care.



# The WRAP® Story

First Person Accounts of Personal and  
System Recovery and Transformation



Stories compiled by Mary Ellen Copeland



# The WRAP Story

[W.R.A.P. = Wellness **R**ecovery Action Plan]

**First Person Accounts of Personal Recovery and Transformation**

**compiled by Mary Ellen Copeland, Ph.D, 2008, Peach Press, Vermont**

*The WRAP Story*, an anthology, has 82 stories written by people who recovered from mental illnesses: depression, anxiety, ADD, bipolar disorder or schizophrenia. Their heartwarming accounts share strategies for recovery which Vermont psychologist, Mary Ellen Copeland, PhD studied, researched, developed, wrote about and taught, even when she had her own problems with depression and a bipolar diagnosis.

Story #1, in the first chapter, explains that when Mary Ellen Copeland was ill, she struggled with symptoms. As her life unraveled, her family did not know how to help. After several hospitalizations and trials of strong and stronger medications, Mary Ellen asked her psychiatrist, “How do people recover, get well and stay well?” Her doctor said there was no information about recovery, but he learned that you do not say “no” to Mary Ellen Copeland. She wanted recovery information so badly that she developed it herself. Her wellness personal recovery action plan (WRAP program) included vitamin therapy.

People said that Mary Ellen’s research methods would not work but she went ahead anyway. People said that she could not get published or put on a workshop. She did. She wrote and taught so well that patients started to recover and tell other patients. Her latest book, a compilation of 82 fascinating WRAP-based recoveries, shares Mary Ellen’s recovery as well as her research and development of WRAP self-help tools and recovery strategies. She encourages recovered patients to pay forward what they learned.

My recovery story appears in the chapter about wellness recovery tools. After decades of problems with a bipolar II mood disorder, migraines, anxiety and other diagnoses, I was sick, suffering and deteriorating. My healthcare professionals offered quick labels and easy meds, but those shortcuts did not help. I was victimized by substandard care, misdiagnoses and mistreatments. As a trusting patient, I wanted an accurate diagnosis and restorative treatments. Then I needed tips and tools to rebuild my shredded life. Mary Ellen Copeland’s books about living with depression and bipolar disorder helped me understand and cope with my condition. Her WRAP concept encouraged me to develop a wellness recovery action plan. My wellness ‘toolkit’ includes: bibliotherapy (reading to heal), restorative orthomolecular medicine, networking and volunteering. My written recovery plan identifies trigger factors and early warning signs and outlines daily activities to maintain wellness. If a crisis looms



or a relapse starts, I review my plan, adjust my doses of vitamins, minerals & amino acids (brain 'fuels'), check my medications, call my health professionals and connect with my support network.

The 82 recoveries in *The WRAP Story* anthology speak to the problems of psychiatry and offer self-help solutions which patients found safe and effective. Rather than trusting the tradition of nihilism in psychiatry [careless doctors who do nothing to heal], patients can develop their own wellness recovery action plans. Eighty-two people explain how they took responsibility for educating themselves about diagnoses, found effective treatments, identified vulnerabilities and sustained commitments to self-help. They recovered. While modern psychiatrists focus on quick labels and easy prescriptions, Mary Ellen Copeland recommends self-help strategies to help sick, suffering and vulnerable patients recover and live well. Her *Wellness Recovery Action Plan* helped thousands of patients—the stories in *The WRAP Story* anthology tell readers that Mary Ellen's wellness recovery action planning concept has performed well under pressure and proven itself practical, safe, adaptable and flexible enough for everyday use by patients and health professionals.

I sent Dr. Hoffer a copy of this book which he read with interest. He knew that Mary Ellen Copeland shared her recovery story at an orthomolecular conference in Toronto. She spoke at a public education evening meeting which featured several recovered orthomolecular patients. After reading *The WRAP Story*, Abram e-mailed that he considered it an important book which patients can use to help themselves identify trigger factors and learn how they can restore and maintain their mental health.

The single-minded determination of Mary Ellen Copeland, herself a recovered patient and a PhD psychologist in Vermont, powered her series of 16 self-help books and WRAP plans, videos, workshops, trainers and facilitators across the United States. Thousands of recovered patients, worldwide, can thank Mary Ellen for teaching us how to use self-help tools, plan and recover. If you or someone you know gets sick during episodes or has a chronic mental health problem, please remember that *The WRAP Story* comes with Mary Ellen's intriguing wellness recovery action planning concept and 82 inspiring stories written by patients who used WRAP tools to plan, cope, recover and stay well. [www.mentalhealthrecovery.com](http://www.mentalhealthrecovery.com)

Other books by Mary Ellen Copeland, PhD:

- The Depression Workbook
- Living Without Depression and Manic Depression
- The Loneliness Workbook
- The Worry Control Workbook
- Winning Against Relapse
- Wellness Recovery Action Plan



# Vitamin C: The Real Story

## The Remarkable and Controversial Story of Vitamin C

by **Steve Hickey, PhD and Andrew Saul, PhD, 2008, Basic Health Publications, CA**

A curious title. What could be remarkable or controversial about vitamin C?

Thousands of children take Flintstone multis every day; don't they get enough vitamin C? Many adults take some C when they have a cold. Even without supplements, don't most people get enough vitamins and minerals in their fruits and veggies? Authors Hickey and Saul think we need to know the truth about vitamin C. Their fascinating book presents some remarkable vitamin C discoveries. They outline its health-maintaining functions, introduce its health-restoring capabilities and warn us about anti-vitamin factoids.

Steven Hickey, PhD and Andrew Saul, PhD present the real story clearly and carefully. Readers will gradually realize that the vitamin C story has two dimensions. On the bright side, scientific and medical researchers have documented decades of vitamin research, clinical progress and success. Vital amines, and other nutritional substances, are essential for health and useful for healing. Over the past 100 years, a succession of scientific researchers studied the biochemistry of vitamin C and learned that vital amines sustain metabolism. Minimal doses of vitamin C can heal scurvy however optimum doses of vitamin C have remarkable health-restoring capabilities. Researchers carried out clinical trials, detailed patient recoveries, corroborated findings and wrote journal articles and reference books. The vitamin C story also has a disturbing dark side. Rather than telling the truth, certain health professionals dismiss the vitamin C research and disparage the clinical progress reports. They ignore vitamin C's health-maintaining functions and dispute its health-restoring capabilities. The anti-vitamin-therapy skeptics use factoids to support their denials, as outlined in this book.

Like a Swiss-army knife, vitamin C has multiple capabilities. When we pick up a Swiss-army knife for the first time, we expect to find large and small blades but we may not inspect it carefully. In an emergency, we happily discover that a Swiss-army knife comes with a versatile set of built-in tools: a screwdriver, a tooth pick, a cork screw and a file. After these tiny tools save lives, the word gets out. Eventually the public learns that each Swiss army knife comes with life-saving tools. Consider the metabolic and healing capabilities of vitamins as tools for restoring health. In milligram doses, vitamin C enables essential metabolic pathways to sustain life. Small doses can heal scurvy. If taken in large enough doses when a patient has cancer or an infection or an overload of toxins, vitamin C can heal and restore health.

The general public still does not know that vitamin C has a number of lifesaving capabilities. Meanwhile, certain experts, who should know better than to publish false information, scoff at vitamin C research, forget its biochemistry, ignore its metabolic functions and deny its therapeutic value. Why don't more scientific and medical professionals study the vitamin C research, review the clinical trials, interview recovered patients and learn that therapeutic doses of vitamin C really can restore health and save lives? Too busy. How can trusting patients know if our doctors understand and apply the healing capabilities of vitamin C or use false factoids to withhold vitamin treatments? Patients and families, caregivers and health professionals

can read books and articles about vitamin C to learn the facts for ourselves.

*Vitamin C: The Real Story* teaches us that a hundred years after the discovery of vitamin C, mankind is still researching the biochemistry of essential nutrients and developing medical applications. We learn that vital amines, trace minerals, amino and fatty acids, hormones and many other nutrients are essential for sustaining life. Optimum doses can restore health. Orthomolecular health professionals know that regimens of vitamin C and other nutritional supplements, if given in the right doses, can help patients recover and live well. They routinely prescribe supplements and adjust the doses to suit each patient's diagnosis and biochemical individuality. Readers of this book will learn to distinguish the facts about vitamin C from the anti-C factoids. Patients can ask their doctors about vitamin research, optimal doses and patient recoveries. Readers are cautioned to take care with their health. Anyone who reads this book will learn useful facts about vitamin C and its clinical applications: therapeutic doses of vitamin C can restore health when taken as recommended by qualified medical professionals who understand biochemistry and know when to prescribe vitamin C as a complementary and restorative treatment.



# Part II—Remembering Abram Hoffer, PhD, MD

In addition to writing more than 35 of his own books, Abram Hoffer inspired and encouraged other authors, around the world. Believing that each and every book about restorative care could help the public learn about orthomolecular medicine, Dr. Hoffer wrote forewords and contributed chapters to other authors' books and he reviewed their books in his role as founder, editor and contributor to the *Journal of Orthomolecular Medicine*.

Speaking of the *Journal of Orthomolecular Medicine*, readers of this book can visit [www.orthomed.org](http://www.orthomed.org) and gain free access to archives of the journal spanning decades. Year after year, Dr. Hoffer edited this fascinating journal in which he not only shared his views about orthomolecular medicine and restorative treatments for schizophrenia but he also encouraged other scientists, researchers and clinicians to contribute their ideas, concepts, experiments and clinical progress reports.

The name of the journal changed several times as orthomolecular medicine developed. At first, it focused on metabolic aspects of schizophrenia and psychosis.

As orthomolecular medicine progressed, the journal provided information for helping patients with depression, attention deficit disorder, autism, migraines, epilepsy, stroke and Parkinsons, as well as celiac disease, arthritis, cancer and a range of infectious diseases.

Thank you Abram Hoffer for your extraordinary efforts, over six decades, to apply the life science of biochemistry to the art of medicine as you studied brain and body chemistry, discovered safe and effective treatments, researched and developed restorative regimens and painstakingly documented your progress and clinical success. Thanks to your many exceptional books, patients, families, caregivers and health professionals can read and learn how a restorative approach can complement other treatments.

Thank you for helping patients and caregivers learn about restorative orthomolecular medicine so patients and caregivers can complement other treatments with restorative regimens, recover normal health and live well.

# Remembering Abram Hoffer, PhD, MD, FRCP(C)

## Nov 17, 1917–May 27, 2009

Abram Hoffer passed away May 27, 2009, aged 91. He enjoyed a long and distinguished career as a biochemist, researcher, physician, psychiatrist, teacher, author, editor, mentor, healer and friend to thousands of patients, families, caregivers and health professionals. Rarely has one man done so much to help so many patients recover from and live well with schizophrenia, psychoses and other illnesses. Abram researched and developed safe, effective and restorative treatments which included vitamins, minerals, amino acids and other nutritional supplements. His programs helped patients feel better and live longer.

On April 19, 2007, 200 people attended a Gala Evening at the Royal York Hotel, Toronto to honour Abram Hoffer, in his 90th year, for his lifetime of achievements in biochemistry, research, clinical psychiatry and public education. Speaking for thousands of recovered orthomolecular patients, I was pleased to say “Thank you Dr. Hoffer!” After that wonderful evening, I compiled a 15-step action plan for volunteers which Dr. Hoffer approved and presented to the Board of the International Schizophrenia Foundation.

My name is Robert Sealey. I have a BSc degree in biological and medical sciences from the University of Toronto. I also have a bipolar mood disorder. Like many mental patients, I endured years of bad moods and other symptoms, undiagnosed and untreated. Then I trusted the wrong doctors and got misdiagnosed and mistreated. Several medications made me worse. After 28 years of that, in 1996, orthomolecular medicine saved my life!

Too many patients suffer and deteriorate, year after year, like I did. This is not surprising if their psychiatrists rely on shortcuts and only treat with labels, pills and talks. Desperate for help, I read many books while searching for restorative care. Eventually, I was astonished to read that more than 50 years ago, Abram Hoffer applied his PhD in biochemistry to the art of medicine. Working as a research psychiatrist, he reasoned out what happens, biochemically, when a sick brain hallucinates, goes psychotic or gets depressed or addicted to alcohol. Then he proposed restorative treatments. In the 1950s, in Saskatchewan Canada, Dr. Hoffer and his team did the first double-blind placebo-controlled experiments in psychiatry. Their discoveries lead to the development of safe, effective and restorative treatments for schizophrenia, psychosis and depression.

75% of their patients recovered, a success rate unheard of then, and still remarkable today! They published their findings in 1957—more than 50 years ago! Continuing for more than 50 years, Dr. Hoffer and his colleagues researched and developed restorative treatments for schizophrenia, psychosis and other health problems. Not content with helping patients get well, Dr. Hoffer translated biochemistry and psychiatry into the English language by writing more than 30 books and 600 articles and editorials. His prolific writing brought information, help and hope to patients and health professionals around the world.

Even after 50 years of research, progress and success, conventional psychiatrists say Dr. Hoffer’s regimens don’t work. Who should a sick person believe? Recovered patients say restorative regimens work quite well. A worldwide network of

orthomolecular doctors agrees. When I trusted my life to restorative care, it worked quickly, safely and effectively. I recovered taking vital amines, trace minerals, amino acids, and other essential nutrients. My sick brain needed those 'fuels' to restore health and keep well. I kept reading books and articles about restorative care until I become a well-read patient. To pay it forward, I wrote books, reviews, articles and a website [www.searpubl.ca](http://www.searpubl.ca)

In Canada, *hundreds of thousands* of people know the heartache of mental illness [*millions more worldwide*]. They need restorative care and they need it NOW! You can tell them about orthomolecular medicine, but don't expect their psychiatrists to listen. With full waiting rooms, too many doctors only have time to offer labels and pills, apparently too busy to follow their professional practice guidelines, recommend in-depth medical tests, make differential diagnoses or offer restorative care.

Thanks to Abram Hoffer's research, vision, integrity and leadership, mental patients no longer need to suffer for decades with symptoms of schizophrenia, psychosis, depression, bipolar disorder, anxiety, attention deficit or autism. Orthomolecular medicine can help but only if patients, families, caregivers and health professionals learn about it from books, lectures or people who know about restorative programs for mental health.

On Thursday, April 19, 2007, more than 200 friends of restorative orthomolecular medicine applauded Dr. Hoffer's lifetime achievements in four areas:

- more than 50 years of research and many wonderful discoveries
- co-founding orthomolecular medicine as a restorative dimension of care
- networking, writing and educating the public and, most of all,
- helping thousands of patients to recover and live well.

For more than 50 years, Abram Hoffer shared his research, progress and positive findings by orthomolecular public education and networking. During the 36th annual conference of the International Society of Orthomolecular Medicine in Toronto, Abram invited us to join his public education marathon. Recovered patients, families, caregivers and health professionals can **Help Orthomolecular Public Education**. I call this Project H.O.P.E.

### **We Can Honour Abram Hoffer by Helping to Educate the Public**

Before orthomolecular medicine can become a standard of care, many more people need to hear about it. Patients, friends, families and caregivers can help to educate the public by passing the good word about restorative ortho-care. Anyone can read and learn from Abram Hoffer's many excellent books; then we can tell our families and friends. Anyone can use the 15-steps for volunteers listed in this booklet and at [www.searpubl.ca](http://www.searpubl.ca)

We can honour and remember Abram Hoffer if we tell the public about his lifetime achievements and his scientific and medical research, his biochemical work and his developing orthomolecular medicine as a complementary and a restorative dimension of care. We can expand his worldwide community of friends by networking and cooperating to tell the world about orthomolecular medicine! Beautiful treatments for beautiful minds!

# One Patient's Point of View about Orthomolecular Psychiatry

For many years I had problems finding quality care. Misdiagnosed and mistreated by a succession of health professionals, I got worse taking prescription medications. While ill with a bipolar II mood disorder and other problems, I read about psychiatry, orthomolecular medicine and other specialties. Gradually, I learned about disorders of metabolism. I wrote this article to outline one patient's perspective on the past, present and future of orthomolecular psychiatry. Before trusting my life to orthomolecular medicine, a little-known alternative, I wanted to learn how it works. Abram Hoffer's books enlightened me. I read 26 of Dr. Hoffer's 36 books and some of his references. For ten years, I corresponded with Abram Hoffer. He kindly encouraged me to read, restore my health and tell my recovery story.<sup>1</sup> Here's what I learned.

## **Drs. Hoffer, Osmond and Smythies Applied Biochemistry to Psychiatry**

When they worked together in the UK, Dr. H. Osmond and Dr. J. Smythies proposed a biochemical basis for psychosis. Dr. Osmond brought his research papers when he moved to Saskatchewan where he met Abram Hoffer. In the early 1950s, Dr. Hoffer and Dr. Osmond had hundreds of schizophrenic patients but no 'restorative' treatments. In those days, few patients recovered.

Abram Hoffer's memoirs, *Adventures in Psychiatry*, explain how they researched schizophrenia and discovered that a disorder of catecholamine metabolism can cause episodes of psychosis, anxiety and depression. Before becoming a physician and starting his research in psychiatry, Dr. Hoffer obtained a PhD in biochemistry. That advanced degree helped him review the scientific and medical literature and study the metabolism of catecholamines, particularly adrenalin (also called epinephrine).<sup>2</sup>

## **Hoffer and Osmond Linked Indoles to Schizophrenia—The Adrenochrome Hypothesis**

Hoffer and Osmond found 1937 and 1940 reports by Richter and Green, British scientists who studied a lesser oxidation pathway of catecholamine metabolism and discovered adrenochrome, an indole byproduct.<sup>3,4</sup> (See also Graham.<sup>5</sup>) Sitting at his kitchen table, Abram Hoffer had a eureka moment when he sketched the chemical structures of several hallucinogens on a napkin and suddenly realized that those compounds were all indoles.<sup>2</sup> Could a disorder of adrenalin metabolism produce too many indoles until a vulnerable patient hallucinated? Hoffer and Osmond decided to study the effects of adrenochrome.

In the 1950s, the two doctors took adrenochrome under controlled conditions. They soon experienced the same symptoms as their psychotic patients. Their detailed accounts of these experiments on themselves make fascinating reading.<sup>2,6,12</sup> Reasoning that some patients may produce too much adrenochrome (or other indoles), Hoffer and Osmond wondered if a methyl acceptor and an antioxidant could help. In the first double-blind placebo-controlled experiments ever done in psychiatry, they tested therapeutic doses of niacin and ascorbic acid (vitamins B<sub>3</sub> and C). Seventy-five

percent of their patients recovered.<sup>7</sup> Hoffer and Osmond designed the Hoffer-Osmond Diagnostic Test to diagnose patients with schizophrenia if they had perceptual and thinking problems.<sup>8</sup> They tested vitamin regimens and noted which patients recovered. Hoffer and Osmond researched disorders of catecholamine metabolism, designed a series of scientific experiments to test their 'adrenochrome hypothesis' and performed double-blind placebo-controlled clinical trials. They began to develop safe and effective treatments for schizophrenia.<sup>2</sup>

In 1958, Hoffer, Osmond and Smythies wrote *Schizophrenia: A New Approach for Psychopathology, A Source Book*.<sup>9</sup> Their powerful and prescient chapter explains how they applied biochemistry to research psychosis and why they believed that a disorder of adrenalin metabolism could cause schizophrenia. Hoffer and Osmond also wrote chapters for the 1958 book, *Chemical Concepts of Psychosis*<sup>6</sup> and in 1960 they detailed their theories about disorders of adrenalin metabolism in *The Chemical Basis of Clinical Psychiatry* (supported by hundreds of references).<sup>10</sup>

Year after year, Dr. Hoffer wrote papers and articles for medical journals. His 1962 book, *Niacin Therapy in Psychiatry*, teaches us that (1) niacin (also called vitamin B3 or nicotinic acid) has healing capabilities; (2) Hoffer and Osmond did double-blind experiments; and (3) vitamin therapy helped many of their first patients. Dr. Hoffer outlined the properties of nicotinic acid and presented a case series of 60 patients.<sup>7</sup>

Hoffer and Osmond's 1966 book, *How to Live with Schizophrenia*, was well received by patients and families who needed information, help and hope.<sup>11</sup> It sold more than 100,000 copies. Their 1967 book, *The Hallucinogens*, analyzed compounds which cause hallucinations and compared adrenochrome experiences with hallucinations caused by other indole compounds such as mescaline and lysergic acid diethylamide.<sup>12</sup>

Unfortunately, mainstream psychiatrists disputed Hoffer and Osmond's idea that a disorder of adrenalin metabolism could cause schizophrenia. A succession of mental health professionals dismissed their research. Rather than study the research reports and read Hoffer and Osmond's books, skeptics either claimed (falsely) that vitamin therapy could not possibly help psychotic patients and or claimed (falsely) that Hoffer never did any double-blind placebo-controlled experiments.

### **Orthomolecular vs. Standard Psychiatry: Tension, Bias, Progress and Public Education**

After reading the How To book, Linus Pauling, PhD revised his earlier term "molecular medicine" into "ortho-molecular medicine." In his 1968 article, "Orthomolecular Psychiatry," published in *Science*, Pauling, a Nobel prize winner (chemistry and peace), described Hoffer and Osmond's restorative approach as "orthomolecular" psychiatry.<sup>13</sup> "Ortho" means "correct" and "molecular" refers to chemistry so Pauling's word means "correct the chemistry." "Orthomolecular psychiatry" aptly describes the practice of prescribing optimum doses of vitamins (and other supplements) to restore normal metabolism. Abram Hoffer quickly accepted the word "orthomolecular." When combined with the name of any medical specialty (such as "orthomolecular psychiatry") or as "orthomolecular medicine," the resulting phrase helps patients, families, researchers and clinicians understand the process of diagnosing biochemical disorders, prescribing nutritional supplements and helping patients recover.



Although useful to many people, Pauling's well-intentioned but complicated term also caused tension and confusion. The phrase "orthomolecular psychiatry" provoked scorn and skepticism from many psychiatrists.

In the 1950s and 1960s, psychiatry used various treatments including Freudian analysis, talk therapy, insulin comas, electric shocks or the newly-developed antipsychotic (neuroleptic) medications such as chlorpromazine. Psychiatrists trained to use talk therapy or psychopharmacology did not accept Dr. Hoffer's vitamins-as-therapy paradigm. Hoffer and Osmond's research, progress and success in treating schizophrenia "restoratively" did not impress close-minded psychiatrists who ignored biochemistry, dismissed vitamin therapy and continued prescribing drugs, talks or shocks or trusting patients' lives to therapeutic nihilism (doing nothing but watch and wait). Mainstream psychiatry misunderstood the 'orthomolecular' concept. A 1973 report by an American Psychiatry Association Task Force advised its members not to consider vitamin therapy as an alternative to the usual treatments.<sup>14</sup>

Pauling's excellent term "orthomolecular" highlighted the gap between the quick and efficient approach commonly used in modern psychiatry (i.e., label and medicate) and the orthomolecular approach which diagnoses metabolic disorders and complements other treatments with nutritional supplements. Few doctors had the time or the motivation to learn orthomolecular regimens. Their bias against the restorative approach meant that many psychiatrists and physicians withheld "orthocare" from millions of patients. The rejection and exclusion of "orthomolecular" medicine by his own profession did not stop Abram Hoffer from launching a public education campaign to bring orthomolecular information, help and hope directly to the public. For six decades, while seeing thousands of patients in his clinical practice, Dr. Hoffer somehow found the time to write and network with colleagues, patients and families as he planned his campaign to educate the public about orthomolecular medicine.<sup>2</sup> He wrote books, articles and editorials, organized meetings and spoke at conferences, around the world. Dr. Hoffer taught the orthomolecular approach to open-minded physicians and he encouraged recovered orthomolecular patients, like this author, to share our recovery stories.<sup>1,2</sup> Over ten years, I spoke at 20 public meetings and volunteered at orthomolecular conferences in Toronto, Vancouver, Ottawa and Montreal. Few people in Toronto know about "orthomolecular" medicine. Where I live, mental patients or their families rarely hear a psychiatrist say that a restorative approach can complement other treatments, safely and effectively. I kept studying and learning, hoping to find additional information to share with patients and families.

## **Inborn Errors and Disorders of Metabolism**

By reading scientific and medical books, I learned that other specialists also treat disorders of metabolism. In his 1908 Croonian lecture, Dr. Archibald Garrod introduced the concept of Inborn Errors of Metabolism. Dr. Garrod studied disorders of tyrosine metabolism such as alkaptonuria.<sup>15</sup> He inspired many doctors to research disorders of metabolism and develop effective treatments. Over the years, the list of known metabolic disorders has grown to include several hundred; most are rare.<sup>16</sup> Like Dr. Hoffer, these researchers applied biochemistry to discover that disorders of metabolism typically involve lesser or blocked pathways, inherited metabolic disorders, genetic polymorphisms, deficiencies, excesses, toxins, enzyme inefficiencies,

antimetabolites,<sup>17</sup> and biological antagonists.<sup>18</sup> Some patients with metabolic disorders respond to customized treatments using vitamins or other supplements. According to medical professionals who see patients with disorders of metabolism, treatments can include substrates (amino acids) and/or enzyme co-factors (vitamins and minerals), byproducts, hormones or even dietary adjustments. A disorder of metabolism may be inborn (i.e., inherited) or it can appear following an infection, inflammation<sup>19</sup> or ingestion of toxins.<sup>20</sup> Medical conditions, even auto-immune disorders (such as celiac disease) can affect metabolism. Internists,<sup>21</sup> endocrinologists<sup>22</sup> gastroenterologists and pediatricians routinely look for disorders of metabolism when they see patients with certain patterns of symptoms.<sup>16</sup>

## **Identifying and Treating Disorders of Metabolism**

Books about orthomolecular medicine and books about other medical specialties which also treat disorders of metabolism teach us that researchers have discovered disorders of metabolism, developed diagnostic tests and recommend restorative treatments which use vitamins, minerals, amino acids and other substances normally present in the human body. Treatments for metabolic disorders have to be customized based on each patient's differential diagnosis and biochemical individuality.<sup>23,24</sup> In volume 25 #2, 2010 of the *Journal of Orthomolecular Medicine*, L. John Hoffer, MD, PhD, a professor of medicine, offered his views as a "cautious clinical researcher" on the past, present and future of orthomolecular psychiatry<sup>25</sup> and in 2008, he wrote that some schizophrenic patients actually have disorders of metabolism.

"It is currently popular to regard schizophrenia as a 'multiple-hit' neurodevelopmental disorder; equally plausible is the older hypothesis of a toxic psychosis triggered by an abnormal [level of an] endogenous metabolite. Organic brain disorders indistinguishable from schizophrenia may be induced by certain drugs and by neurological, metabolic, inflammatory and infectious diseases. Such disorders account for approximately 5% of cases initially diagnosed as first-episode schizophrenia by expert psychiatrists. Wilson's disease, unrecognized adult phenylketonuria, pellagra and celiac disease can induce brain disorders indistinguishable from schizophrenia... Although known metabolic disorders and neurologic injury only rarely cause clinical schizophrenia, their very existence is good reason to search for the abnormal molecules, enzyme activities and markers of brain injury that may eventually reveal its cause or causes. Examples of orthomolecular therapy include dietary phenylalanine restriction in phenylketonuria, high-dose pyridoxine therapy in pyridoxine-responsive variants of homocysteinuria, and the treatment of pellagra psychosis with niacin..."<sup>26</sup>

## **Do Patients Want Labels, Meds, Talks and Shocks or Guideline-Quality Care?**

Hundreds of thousands of mental patients risk deteriorating if they get substandard care. Unfortunately, few modern psychiatrists diagnose or treat disorders of metabolism, or recommend restorative treatments. Many psychiatrists prescribe antidepressants, anxiolytics, antipsychotics or anticonvulsants. These medications do not heal disorders of metabolism but they do suppress symptoms. Psychiatrists also recommend talk therapy such as cognitive behavioral therapy (CBT). While CBT may encourage patients to improve their patterns of thinking, feeling and responding, talk

therapy does not diagnose or treat underlying metabolic disorders. The American and Canadian practice guidelines of psychiatry encourage psychiatrists to note mental status, take medical and mental histories, order lab tests, examine patients carefully and diagnose underlying medical conditions [such as disorders of metabolism].<sup>27</sup> Psychiatrists could follow their practice guidelines when they examine patients and they could order blood tests and make differential diagnoses before recommending appropriate treatments. Even if conventional psychiatrists do not believe in the orthomolecular approach, they could consult specialists who know how to diagnose and treat disorders of metabolism.

### **Abram Hoffer Differentiated Psychoses from Syphilis, Pellagra, Celiac Disease and Redox Disorders**

As a research psychiatrist and a clinician, Dr. Hoffer believed in examining patients carefully, testing their blood, making a differential diagnosis and determining the cause(s) of patients' symptoms before recommending treatments. If he tested a patient's blood and found that the patient had a spirochetal infection, but was labelled "schizophrenic" after an episode of psychosis during an advanced stage of syphilis, Dr. Hoffer would treat that infected patient with antibiotics.<sup>28</sup> If a patient experienced psychosis after becoming ill with pellagra, Dr. Hoffer understood that some starving patients needed niacin and tryptophan, as well as balanced diets.<sup>29</sup> Hoffer also believed that some processed foods were so depleted of essential nutrients that even non-starved patients could develop nutritional deficiencies and show signs and symptoms of metabolic disorders. If a patient had poor absorption of nutrients during episodes of celiac disease, Dr. Hoffer knew that the patient could benefit from nutritional supplements as well as a gluten-free diet.<sup>2</sup>

In the 1950s, Hoffer and Osmond began to identify a group of psychotic patients who did not have infections, inflammations or gluten sensitivities. These patients had redox disorders.<sup>7</sup> The irreversible oxidation of catecholamines (adrenalin, noradrenalin and/or dopamine), using a lesser oxidative pathway, increased their levels of aminochromes, (hallucinogenic indoles such as adrenochrome, adrenolutin or other quinone metabolites). The doctors' research showed that these patients could recover on vitamin therapy if they received optimum doses of a methyl acceptor (niacin or niacinamide) along with an antioxidant (ascorbic acid).<sup>2,6,7,9,10,11</sup> Dr. Hoffer proposed an "adrenochrome hypothesis" when he wrote about the metabolic form of schizophrenia which he sometimes called hyperaminochromia. *Adventures in Psychiatry: The Scientific Memoirs of Dr. Abram Hoffer* tells us about his career and his schizophrenia research. The bibliography lists Hoffer's 36 books and 600 articles that he wrote for medical journals.<sup>2</sup> Dr. Hoffer's book: *Psychiatry: Then (1950) and Now (2007)* compares conventional psychiatry with the restorative orthomolecular approach.<sup>30,31</sup>

### **Conclusion—Mental Patients can Recover and Live Well on a Restorative Program**

The orthomolecular approach helped me recover from a bipolar disorder, safely and effectively. I wrote this article because I believe that the public needs to know that orthomolecular medicine has a solid scientific foundation consistent with other medical specialties that also treat patients who have metabolic disorders.

Skeptics may question how supplementing vitamins, trace minerals, amino acids, energy and enzyme cofactors, antioxidants, methyl acceptors or hormones can help patients recover from episodes of serious mental illness. Readers of the *Journal of Orthomolecular Medicine* learned from Dr. Hoffer and other contributors that the restorative approach can help patients who have psychosis or acute schizophrenia (perception and thought disorders), depression, anxiety or bipolar (mood disorders), ADHD, autism or Asperger's syndrome (attention disorders) and stroke, dementia or Parkinson's disease (aging and neurological disorders). The public also needs to know that a succession of researchers and clinicians studied Hoffer and Osmond's experiments, verified their discoveries and used the orthomolecular approach (vitamins, minerals and other supplements) to help thousands of their patients. *Orthomolecular Psychiatry: Treatment of Schizophrenia*, ed. by Hawkins and Pauling, published this evidence, in 1973.<sup>32</sup> Recent advances have been documented in medical books.<sup>33,34,35,36</sup>

### **Abram Hoffer Asked Us to Help Orthomolecular Public Education**

After decades of research, progress and success, Dr. Hoffer and his colleagues left the world a substantive educational legacy. Their important books and papers still read fresh and clear so their discoveries and their reports can continue to inspire scientific and medical professionals. In his ninetieth year, speaking at a 2007 dinner to honour his lifetime achievements, Dr. Hoffer encouraged us to continue his marathon project to help orthomolecular public education. We can tell our families and friends about orthomolecular medicine; we can expect new discoveries, monitor progress and cooperate with researchers who study disorders of metabolism and support clinicians who prescribe restorative regimens to help patients recover and live well. On behalf of thousands of recovered orthomolecular patients, I am pleased to say, "Thank you Dr. Hoffer!" and "Yes we will continue Project H.O.P.E."

(Note: Pages 95 to 101 were previously published in the *Journal of Orthomolecular Medicine* in 2010)

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# Welcome to Project H.O.P.E.!

Friends of restorative orthomolecular medicine can tell patients and families, caregivers and health professionals about 50 years of orthomolecular research, progress and success. Thousands of patients have used regimens of nutrients to recover & live well after episodes of schizophrenia, pellagra, psychosis, depression and anxiety.

Restorative programs can heal mental and physical illnesses involving:

**Moods and perceptions:** metabolism, oxidation and methylation,

**Mitochondria and enzymes:** cellular energy and brain fuels,

**Nutrition:** deficiencies, food sensitivities, digestion and allergies.

## You Can Network! You Can Help!

Patients need information, help & hope so they can find quality care, recover and live well. If you share what you know, you could save a life!

Networking is free. In one minute you can introduce orthomolecular medicine. You can share recovery stories, mention restorative regimens and show books. You can encourage patients to find/ask for: 1) competent health professionals, 2) mental status exams, 3) medical and mental histories, 4) blood tests before taking meds, 5) differential diagnosis, 6) meds—risks/benefits, 7) treatment plan. Then patients can request restorative orthomolecular regimens.

## Orthomolecular Resources

ISOM (International Society of Orthomolecular Medicine)

ISF (International Schizophrenia Foundation), Toronto 416-733-2117

JOM (Journal of Orthomolecular Medicine, quarterly journal)

Masks of Madness: Science of Healing (documentary film DVD)

N&MH (Nutrition & Mental Health, quarterly newsletter)

Orthomolecular Medicine Today conference—Vancouver or Toronto

Reading list of books and articles (available from ISF—ISOM—JOM)

Web site [www.orthomed.org](http://www.orthomed.org) (journal articles, conference details, book list)

## Orthomolecular Medicine Today Annual Conference

<b>WHERE?</b>	Toronto or Vancouver	The Fairmont Hotel
<b>WHEN?</b>	April	Details at <a href="http://www.orthomed.org">www.orthomed.org</a>
<b>WORKSHOP</b>	Sunday after conference	Mental Health Regained

*Please Help Orthomolecular Public Education!*

**Please tell your friends and families, caregivers, colleagues and health professionals about orthomolecular medicine.**

# 15 Ways You Can Help Orthomolecular Public Education!

1. **Share helpful, hopeful information** with people who have health problems or care for family members: **50+ years of orthomolecular research, progress and success**, including published double-blind placebo-controlled trials. Note—free archives of the *Journal of Orthomolecular Medicine* at [www.orthomed.org](http://www.orthomed.org)
2. **Learn the orthomolecular regimens** for mood disorders—depression, anxiety & bipolar; thought disorders—schizophrenia & psychosis; attention disorders—ADHD & autism. You can **tell** patients, families and caregivers about orthomolecular medicine.
3. **Study** books, articles & recovery stories to present at support meetings and health shows.
4. **Speak** about orthomolecular research, clinical developments, progress & success.
5. **Read, review and share books and articles** about orthomolecular medicine. If you find a new book, you can write a review to hand out or submit for publication.
6. **Write** orthomolecular recovery stories. Encourage recovered patients to write about their recoveries and get their stories published.
7. **Meet and network** with patients, families, caregivers and health pros. Share what you know. If people say that there are no 'restorative' treatments for mental illness, show them the ISOM book list and tell them about Dr. Hoffer's research, memoirs, books and articles.
8. **Attend the annual conference—Orthomolecular Medicine Today**—bring a friend.
9. **If you belong to health-related groups** such as MDAO—Mood Disorders of ON, ISF—International Schizophrenia Foundation or CCA—Canadian Celiac Association, ask if you can share information, book reviews and recovery stories.
10. **Call the ISOM office** if you get the chance to speak at a meeting. ISOM will provide book lists, film flyers, reviews of Dr. Hoffer's scientific memoirs—*Adventures in Psychiatry*.
11. **Start an orthomolecular book club** or just tell friends about your favourite ortho books. Encourage book club members to bring a friend, family member or caregiver.
12. **Find volunteers** in your area and cooperate with support meetings where you can network and discuss how patients can benefit from restorative orthomolecular medicine.
13. **Add orthomolecular links** to your web sites e.g. [www.searpubl.ca](http://www.searpubl.ca)
14. **Tell people about the film documentary *Masks of Madness: Science of Healing***; show the film at support groups, health shows and meetings. Hand out book lists.
15. **Encourage people to volunteer** time and money, energy and effort to network, share orthomolecular research and help ISOM and the ISF to educate the public.

**After trying these 15 steps, you can brainstorm more ways to help.**

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