

Nutrition & Mental Health

The Quarterly Newsletter of the International Schizophrenia Foundation



FROM THE EDITOR Worlds in Collision

The concept of homeostasis is one of the most elegant and beautiful things in biology. It was first defined by 19th century french physiologist Claude Bernard who made a critical observation on the constancy of the body's internal environment "It is the fixity of the milieu interieur which is the condition of free and independent life, all the vital mechanisms, however varied they may be, have only one object, that of preserving fixed conditions of life in the internal environment."

We maintain optimal homeostasis of our physical and mental health through a host of feedback mechanisms that control physiological variables such as biochemical synthesis and breakdown of neurotransmitters, hormones and receptors. We function optimally in the environment our bodies are designed for: an orthomolecular world of nutritionally dense, calorically sparse raw foods. Homeostasis of the mind is more than physical, however. Our perceptions and thoughts, the sense of control over destiny, our emotional expression, all combine with orthomolecular nutrition to maintain the equilibrium of mental health.

Homeostasis is a concept that is descriptive of most self-regulating systems and beyond the biological, it can

describe social, political or economic spheres as well. However, if we contrast the homeostasis of our personal health with the homeostasis of a healthy economy, it's surprising how divergent they are.

The globalized market economy is like a living system in itself with its own unique homeostasis. It grows and strives for efficiency by expanding markets and shaving costs to stay competitive. To grow, the economic engine is driven to create new opportunities for products, and through research and marketing it inflates demand beyond basic needs. The currency of this system is not biochemical but monetary, an abstract movement and consolidation of capital into the hands of a corporation's shareholders. The size and pervasiveness of the global economy transcends all other social systems. Today, fifty-one of the hundred biggest economies in the world are, in fact, multinational corporations whose goal is market success, rather than the health of populations. Because corporations are transnational entities they control much of the way we live, from the quality of our food, to the news we consume through the media.

Some of the biggest multinational players are in the food and drug sectors of the economy. In 1970, Americans spent about \$6 billion on fast food; in 2000, they spent more than \$110 bil-

lion, more than on higher education, and today, 25% of the population consumes chemically laden, high calorie, nutritionally sparse food at least once per day. With profit replacing biochemistry as the prime homeostatic arbiter, it's natural that 70,000 chemicals are commonly used in our food, including pesticides, herbicides and drugs, 99% of which did not exist 100 years ago. By supporting the healthy homeostasis of the economy, every year we expose ourselves to 100 pounds of refined sugar, 14 pounds of food preservatives, additives, flavorings, pesticides, herbicides and antimicrobials, and carry cellular levels of dioxins and heavy metals which are 300 times greater than pre-industrial times. The advent of refrigeration and preservatives enabled corporations to transcend the limited profitability of orthomolecular food and medicine, and the depletion of our soils due to modern farming practices has created a poverty of nutritional substrates for metabolism and detoxification.

The personal destructiveness of economic homeostasis is so obvious that it could never occur without the social controls over the system's flow of information. Public relations firms are thus tasked with homogenizing public opinion to support a synthetic food and drug economy. Our top public relations gurus

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Editorial Cont'd

have long held that the public reacts emotionally to topics related to health and safety and is incapable of holding rational discourse. Apropos, PR firms are justified in offering the discerning multinational company such creatures as “risk communicators” (whose specialty is to downplay all risks), and “outrage managers” to “deflect, defer, dismiss, or defeat” occasional public outcries. The result is that our state of health is fixed within a binary homeostasis—the orthomolecular milieu essential to our mental and physical equilibrium alongside a “media pseudo-environment”—which obfuscates the negative health effects of a smoothly running economy.

Take the environment of mind for example. We know the brain’s neuro-transmitters and receptor sites form the information pathways that make thought and emotion possible, but environmental pollutants can distort receptor sites, interfere with enzymes and derange the cascade of neurotransmitters. Pollutants also create free radicals which disrupt cellular energy production. Concurrent with these stressors are the chronically low levels of vitamins and essential fatty acids typical in modern western diets. One has to wonder how valid are labels such as schizophrenia, depression, anxiety or ADHD. Perhaps it’s just corporate spin to redefine the breakdown of our homeostatic controls into mental “disorders.” Mental illness labels, when matched to patented pharmaceuticals, may not promote individual health, but they no doubt add another layer of stability to the economy.

The homeostasis of mind has evolved over thousands of years to relate to a natural world of abundant, patent-free and low-tech nutrients. When we contrast this natural world with the proprietary, PR-driven consumerism of the food and drug empire, we are inevitably led to the conclusion that in their ideal states of equilibrium, the individual and the economy are naturally antagonistic. Health begins with knowledge and choice. By recognizing how different our health needs are from that of a robust economy, we can make orthomolecular choices for our personal health which also support the economic sphere.

—Greg Schilhab

NEWS Antidepressants Found Ineffective for Teenagers

A new study reported in the *Globe and Mail* on February 17, 2004, shows that antidepressant drugs prescribed to tens of thousands of Canadian teens and children are barely more effective than placebos in treating adolescent depression. According to psychiatrist Jane Garland, head of the Mood and Anxiety Disorders Clinic at Children’s Hospital, “The disappointing reality is that antidepressant medications have minimal to no effectiveness in childhood depression beyond a placebo effect.” In her commentary, Dr. Garland also criticized “opinion leaders in child psychiatry” for remaining silent in the face of escalating data on the relative ineffectiveness of SSRIs.

The *Canadian Medical Association Journal* details the study of seven selective serotonin reuptake inhibitors, including Prozac. No SSRI has been approved by Health Canada for patients under 18, although the “off-label” use of medications is common. Nearly 14 million SSRI prescriptions were written

for Canadians of all ages in 2002 at a cost of \$869-million. Drug manufacturers have come under increasing attack for withholding trial results indicating significant adverse side effects with only minimal effectiveness in children and teenagers, and Health Canada has now issued an advisory to anyone under 18 taking SSRI antidepressants to consult with their doctors “to confirm that the benefits still outweigh the potential risk.”

Dr. Garland cited one study showing that 69 per cent of clinically depressed young patients improved taking the SSRI drug Zoloft, compared with 59 per cent who improved taking a placebo. “Essentially, only one in 10 patients receiving [Zoloft] improved, a result described in the report as, statistically and clinically significant, when it is almost certainly clinically meaningless.” She said physicians should inform young patients and their parents that medication will not cure depression, although it might improve some symptoms. And they should also be told that psychiatric or behavioural adverse effects are at least as likely as antidepressant effects.

from the *Globe & Mail*



IN BRIEF

5-HTP's Precursor (Tryptophan) May Boost Confidence and Reduce Aggression

Consuming the essential amino acid tryptophan may help people be more sure of themselves, according to a new study published in the August 2003 issue of *Neuropsychopharmacology*. People consuming 3 grams of tryptophan daily were found to be more confident and less quarrelsome than those taking a placebo. Tryptophan is an important precursor of serotonin, a brain chemical involved in regulating mood. Low levels of serotonin have been found to be related to depression, impulsivity and aggression.

Dr. Debbie S. Moskowitz and colleagues from McGill University in Montreal, conducted a 12-day, double-blind, cross-over study with 98 healthy volunteers. Subjects took 1 gram of tryptophan with meals, three times a day, and completed daily questionnaires that assessed various mood states and behaviors.

Moskowitz reported that taking tryptophan increased dominant (agreeable) behaviors and reduced quarrelsome behaviors. This is consistent with previous studies that have found that tryptophan can enhance mood in depressed individuals, but that it has no mood-altering effect in healthy individuals.

-Neuropsychopharmacology 2001;25(2): 277-289

L-Carnosine Supplementation in Children with Autism

L-Carnosine is an amino acid dipeptide that may enhance frontal lobe function. Researchers in this study sought to investigate L-Carnosine supplementation in 31 children in an 8 week blinded trial. Children were assessed at a pediatric neurology clinic with the Childhood Autism Rating Scale (CARS), the Gilliam Autism Rating Scale (GARS), the Expressive and Receptive One-Word Picture Vocabulary tests (E/ROWPVT), and biweekly parental Clinical Global Impression of Change (CGI), at baseline and 8 week endpoint.

The 17 children who were on placebo did not show statistically significant changes on any of the outcome

measures. After 8 weeks, the 14 children in the L-Carnosine group showed statistically significant improvements on the GARS total score, GARS Behavior, Socialization, and Communication subscales, and the ROWPVT. EOWPVT and CARS showed trends in improvements, which were supported by parental CGI.

The researchers concluded that oral supplementation with L-Carnosine resulted in demonstrable improvements in autistic behaviors as well as increases in language comprehension that reached statistical significance. Carnosine is not well understood, but it is believed to modulate neurotransmission and affect metal ion transfer of zinc and copper in the brain. This may enhance neurological function or act in a neuroprotective fashion.

-J Child Neurol 2002;17:833-837

Theanine: Anxiety Reducer and Mood Enhancer

L-theanine is an amino acid found almost exclusively in tea plants and constitutes between 1-2% of the dry weight of tea leaves. With economically feasible methods of producing the identical L-theanine now available, investigators are exploring the unique pharmacology of this compound. Research on human volunteers has demonstrated that L-theanine creates a sense of relaxation by directly stimulates the production of alpha brain waves, creating a state of deep relaxation and mental alertness; and it is also involved in the formation of the inhibitory neurotransmitter, GABA. GABA influences the levels of two other neurotransmitters, dopamine and serotonin, producing the key relaxation effect. In one study of neurological responses to L-theanine, brain wave topography showed that alpha waves were recorded approximately 40 minutes after the subjects had taken either 50 or 200 mg of L-theanine. In a separate study, the intensity of alpha waves were determined to be dose dependent (with a 200 mg dose showing a significant increase over controls) and detectable after 30 minutes. L-theanine also has a significant effect on the release or reduction of neurotransmitters like dopamine and serotonin, resulting

in improved memory and learning ability. L-theanine may also influence emotions by stimulating the release of dopamine and reducing brain serotonin concentration. L-theanine may find new use as a mental and physical relaxant that does not induce drowsiness. Based on the results of the clinical studies, L-theanine is most effective in the range of 50-200 mg, with the effect being felt within 30 minutes and lasting for 8-10 hours.

-Alternative & Complementary Therapies 2001, April; 7: 91-95.

-Trends Food Sci Tech 1999; 10:199-204.

Galantamine: A Dual-Action Cholinesterase Inhibitor to Treat Alzheimer's Disease

Conventional medical treatment for dementia uses acetylcholinesterase inhibitors that elevate acetylcholine levels and allow the neurotransmitter to persist in the synaptic cleft for a longer period of time. Galantamine is a natural supplement derived from the common snowdrop, a plant closely related to the daffodil, which has recently been discovered to be an effective acetylcholinesterase inhibitor.

In one multicenter, double-blind, placebo controlled trial conducted in Europe and Canada, 653 patients with mild to moderate Alzheimer's disease were treated with either galantamine or a placebo. After six months of supplementation, patients receiving galantamine showed significantly improved scores on an 11 item Alzheimer's assessment scale compared to placebo. The study authors concluded that galantamine slowed declines in functional ability and cognition, and was well tolerated by patients. In a second recent study, 285 patients diagnosed with Alzheimer's disease and cerebral vascular disease received either 24 mg per day of galantamine or a placebo for six months. At the end of the one-year trial patients treated with galantamine showed clinically significant improvements in cognitive functions and maintained their cognitive functions for the entire 12-month study. In contrast, cognitive functions deteriorated among those in the placebo group.

-BMJ 2000 Dec 9;321(7274):1445-9.

-Dement Geriatr Cogn Disord, 2004, 2003 Oct 13.

BOOK REVIEW

Too Good to be True? Nutrients Quiet the Unquiet Brain: A Four Generation Bipolar Odyssey

by David Moyer, LCSW
Nu-Tune Press, P.O. Box 691
Penn Valley, CA 95946
Softcover US \$20

In looking at the wealth of information in *Too Good to be True*, this book could as easily be called The Bipolar Patient's Encyclopedia.

Part 1 discusses the Moyer family as a witness to mental illness, telling of four bipolar family members who touched four generations.

Through the story of a caring and empathetic father who seeks help for his bipolar son, Part 2 describes the symptoms of bipolar disorder and the side-effects of treatments.

Part 3, entitled "Perhaps Not," deals with conventional psychiatry, DSM labels, the benefits and side-effects of drugs used for mood disorders, and reflections about mental healthcare. Also included are issues in differential diagnoses and the quest for effective treatments. Moyer lists the range of genetic and environmental conditions that can cause or contribute to bipolar symptoms.

David Moyer's great aunt killed herself before the Moyer family even knew she was depressed. His grandmother was "eccentric." His father suffered the ups and downs of manic depression. As a boy, David heard the family stories and observed that the happy family times were shadowed by his father's mental problems. David developed a dread of bipolar episodes.

For 28 years, Lt. Col. David Moyer (US Air Force, retired) worked as a social worker, therapist and mental health administrator. When his son developed symptoms, David's professional training and experience could not fix his son's brain. Conventional psychiatry wasn't the answer either. The usual medications stabilized things but caused negative effects. Schizophrenia meds stopped the visions but added more side effects.

An empathetic and concerned father, Moyer scanned the Internet for 'restorative' treatments. He learned about the Synergy system in Calgary, Alberta. Tony Stephan, the father of several bipolar children offered to share True Hope nutritional supplements. After the suicide of his first wife, when she was ill with a bipolar mood disorder, several of Tony's children developed symptoms. A friend explained how farmers use vitamin and mineral supplements to settle stropy pigs. After a similar regimen calmed his children, Tony told local bipolar patients. Several tried the supplements and recovered. Then Tony asked scientific and medi-

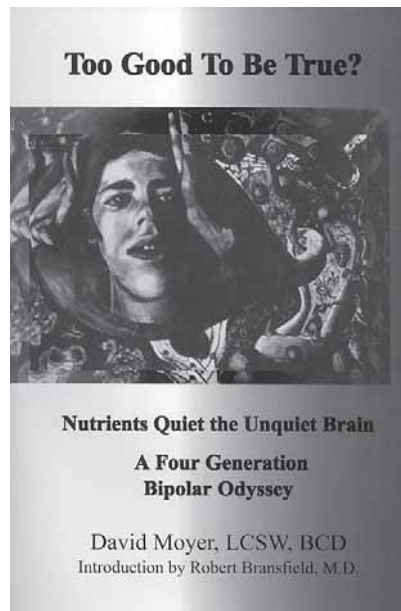
Medications and hospitalizations contained the patient but didn't restore his mental health. David's son seemed to do better when he took the nutrients and tapered his medications.

Pleased but curious about how the supplements worked and wanting a differential diagnosis and proven treatments, the Moyer family embarked on a medical search for answers. A series of health professionals told them that their son showed signs of various biological and medical problems, each one causing or contributing to his "bipolar" symptoms. Treatments seemed promising but the overall results were unclear. So many possible diagnoses; such a complicated case. An unresolved medical mystery.

Bipolar sufferers, concerned families, frustrated caregivers and even mental health professionals will find Moyer's book well-researched and thought-provoking. *Too Good To Be True* encourages readers to consider restorative mental healthcare. Marvel at the complex family dynamics as you read how four generations of the Moyer family were affected by four members with bipolar disorders; consider the puzzling spectrum of 'bipolar' symptoms; find true hope for restorative care; learn as the author looks beyond conventional psychiatry and explores leading edge biological and medical treatments while searching for the Holy Grail of bipolar recovery.

Too Good To Be True: Nutrients Quiet the Unquiet Brain shares one family's experience of bipolar disorder and includes information about depression, bipolar and schizoaffective symptoms, medical triggers, family and caregiver issues, medication side effects and compliance concerns, limits of conventional psychiatry, leading edge medical care and restorative treatments. Maybe David Moyer doesn't have all the answers—he doesn't claim to—but he certainly asks a lot of interesting questions and has written a book well worth reading.

—Review by Robert Sealey,
BSc, CA www.searpubl.ca



cal researchers to test the supplements, particularly on patients with bipolar mood disorders. Over the past two years, positive research results were presented to the Canadian Psychiatric Association and written up in medical journals.

David Moyer wondered whether Tony Stephan's Synergy system might be too good to be true. How could vitamins, minerals and amino acids quiet an unquiet brain? Charting his son's progress over a five-year period, Moyer noticed high and low cycles. Down moods and outbursts alternated with relatively 'normal' periods.