

## Functional Medicine in Mood and Anxiety Disorders

Miles Simmons, MD

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## The 1990's "Epidemic" Unstable Bipolars

- ? Antidep's causing instability
- Bipolar Disorder, Type II
- Creative polypharmacy

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The Lord (above) is the subject of a massive U.S. Justice Department investigation.

## God Diagnosed With Bipolar Disorder

NEW HAVEN, CT—In a diagnosis that helps explain the confusing and contradictory aspects of the cosmos that have baffled philosophers, theologians, and other students of the human condition for millennia, God, creator of the universe and longtime deity to billions of followers, was

see GOD next page



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## Functional Medicine Principles

- Complexity – the web, systems theory
- Biochemical Individuality – genetic, epigenetic, life experience/exposures
- Organ Reserve – used up over time under stresses to tipping point
- Total Load – of environmental stressors

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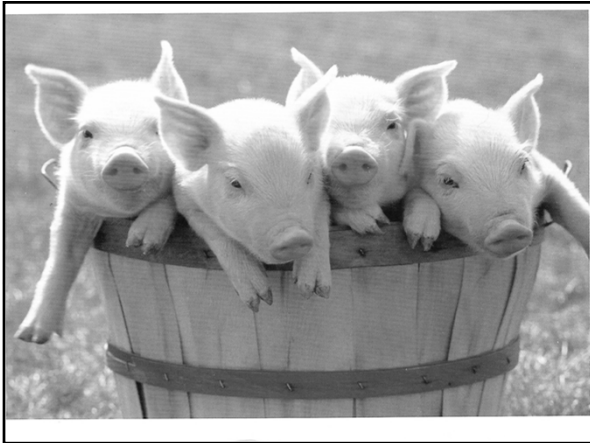
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## Internet Discovery – Dramatic Case

- Early 30's woman, professional
- 10 yr h/o bipolar, hosp'ns, multiple med trials with marginal helpfulness, 100 lbs
- She found EMP on internet
- We tried it – Full Recovery, no meds

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TRENDS: Holiday gifts for couch potatoes • C3

Central Alberta News

**Life & Leisure**

Sunday, December 1, 2001

**Bipolar breakthrough**

'Barnyard remedy' offers hope to mentally ill

"I'm actually very excited about it. Although, I don't want to get too excited."

Dr. Miles Stumm, Research psychiatrist

By LYNN ARCHIEZ  
Staff Writer

She smiles. Softer now. But now, expect for an extra problem, for TRUEHOPE SITE

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### Effective Mood Stabilization With a Chelated Mineral Supplement: An Open-Label Trial in Bipolar Disorder

Bonnie J. Kaplan, Ph.D.; J. Steven A. Simpson, Ph.D., M.D.;  
Richard C. Ferre, M.D.; Chris P. Gorman, M.D.;  
David M. McMullen, M.D.; and Susan G. Crawford, M.Sc.

**Background:** To determine in open trials the therapeutic benefit of a nutritional supplement for bipolar disorder.

**Method:** The sample consisted of 11 patients with DSM-IV-diagnosed bipolar disorder aged 19 to 46 years, who were taking a mean of 2.7 psychotropic medications each at study entry. Three additional patients dropped out prematurely. The intervention is a broad-based nutritional supplement of dietary nutrients, primarily chelated trace minerals and vitamins, administered in high doses. At study entry and periodically thereafter, patients were assessed with the Hamilton Rating Scale for Depression (HAM-D), the Brief Psychiatric Rating Scale (BPRS), and the Young Mania Rating Scale (YMRS).

**Results:** For those who completed the minimum 6-month open trial, symptom reduction ranged from 55% to 66% on the outcome measures, need for psychotropic medications decreased by more than 50%. Paired t tests revealed

Received Feb. 27, 2001; accepted June 11, 2001. From the Faculty of Medicine, University of Calgary (Drs. Kaplan and Simpson) and the Alberta Children's Hospital (Drs. Kaplan and Ms. Crawford), Calgary, Alberta, Canada. Drs. Gorman and McMullen are in private practice in Calgary, Alberta, and Dr. Ferre is in private practice in Salt Lake City, Utah.

Supported in part by the Alberta Children's Hospital Foundation and the Alberta Science and Research Authority, Calgary, Alberta, and Envision International, Farmington, Utah (who provided the C.M.D. Pro-100 supplement free of charge).

Presented in part at the 50th Annual Meeting of the Canadian Psychiatric Association in October 2000 and at the meeting of the Society of Biological Psychiatry in May 2001.

We thank Dr. Catherine Field, Mr. Anthony Stephan, Mr. David Hardy, and Dr. Charles Pepper for their support and consultation.

Reprint requests to: Bonnie J. Kaplan, Ph.D., Alberta Children's Hospital, 1820 Richmond Rd. S.W., Calgary, AB T2T 3C7, Canada (e-mail: kaplan@calgary.ca).

Solid scientific research shows that many dietary nutrients, including minerals and vitamins, are essential for normal brain function. For instance, deficient levels of various B vitamins are related to pathologic brain

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## Kaplan, et al.: Open Label Trial

- 7 of 11 Bipolars with marked response seen on 3 standardized symptom scales
- 50% reduction in medication over all

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### Commentary

See also article beginning on page 936.

## Do Vitamins or Minerals (Apart From Lithium) Have Mood-Stabilizing Effects?

Charles W. Popper, M.D.

Nutritional scientists have been well funded by agribusiness to find ways to deal with factors that interfere with animal health, including aggressive and destructive behavior. When farm animals become "violent"—when pigs start biting each others' ears and tails, when chickens attack chickens—farmers have learned that the aggressive behavior can be reduced by adding certain minerals and vitamins to their diet, without the need for veterinary intervention.

In 1996, animal nutrition specialist David L. Hardy described this approach to Anthony F. Stephan, whose children had severe treatment-resistant bipolar disorder. Stephan then added similar nutrients to his children's diet. On the nutritional supplements, both children stabilized clinically and have not needed psychiatric medication for the last 5 years. Hardy and Stephan began advising family members and friends about this nutrient supplement and

a strong effect size ( $> .80$ ) was observed for ratings of depression as well as mania. Most patients could reduce their doses of psychiatric medications, and some patients became stable without any psychiatric medication. Only 2 patients started on new medications that might conceivably have contributed to their stabilization. Even allowing for the usual overestimation of effects in open-label series, these preliminary findings raise interesting questions about nutrition-behavior interactions.

In view of the 50 years of experience with lithium, the notion that minerals can treat bipolar disorder is unsurprising. However, the nutrient supplement studied by Kaplan and colleagues contains no lithium. Might other dietary nutrients have mood-stabilizer properties?

Some may object that a clinical trial of a mixture of ingredients is inherently unscientific: How can one know which ingredient is the active one, whether a smaller

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## Popper - Clinical Case Series

- 22 Bipolars – children, teens, adults
- 76% had moderate to marked positive response
- 50% medication-free and stable 6-9 mos.

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**THE FUNCTIONAL MEDICINE MATRIX**

Environmental Inputs  
(Diet, Nutrition, Exercise)

Immune & Inflammatory Imbalance

Energy Production/ Oxidative Stress

GI Imbalance

Detox & Biotransformation

Structural Imbalance

Hormonal & Neurotransmitter Imbalance

Mind & Spirit

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 a healthier model of healthcare  
MAINE'S CENTER FOR FUNCTIONAL MEDICINE AND THE HEALING ARTS

## Conventional Lab Testing

- CBC, Chemistries, thyroid, lipids, celiac
- 25 hydroxy vit D
- Homocysteine - methylation
- hs-CRP - inflammation
- Ferritin – availability of iron as mineral cofactor
- DHEA-Sulfate – adrenal function

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 a healthier model of healthcare  
MAINE'S CENTER FOR FUNCTIONAL MEDICINE AND THE HEALING ARTS

## Functional Lab Testing

- Adrenal
- Stool
- Nutritional
- Food Sensitivities
- Heavy Metals

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## Fight - Flight Response

- Competition culture, denial of interdependence, loss of loving community
- All stresses, derange entire physiology to prepare to run or fight for life
- Gut, sugar, immune, brain, thyroid, sex h's, use up vits and mins

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## Gut Imbalances

- Dysbiosis – Imbalanced Microbiology
- Lack of digestive enzymes
- Heartburn
- Inflammation, eg. From food sensitivities
- Dietary effects
- Liver effects

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## Hormone Imbalances

- Stress Hormones
- Sugar Metabolism
- Thyroid
- Sex Hormones

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## Brain Imbalances

- “Housekeeping” Neurotransmitters
- GABA – gamma aminobutyric acid
- 5-HT – serotonin
- Norepinephrine
- Dopamine
- Acetyl-choline

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- Amino acid  $\Rightarrow$  intermediate(s)  $\Rightarrow$  NT
  - $\uparrow$   
enzymes  
 $\uparrow$   
• B vits, minerals
  - $\uparrow$   
enzymes  
 $\uparrow$   
B vits, minerals

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## Case 1

- Prof'l man wary of doctors
- Long history of periods of low mood and Etoh intake to self medicate many x/yr
- Found me hoping to avoid meds
- High homocysteine – treated this, no more lows, no more impulse to drink for 1 yr

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## Case 2 – Woman early 30's

- Chaotic, alcoholic family; sober since 23
- 4 marriages; 2 children; responsible job
- Chronic Constip'n; severe HA's
- Recurrent Major Depression
- Responded to antidepressants initially

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## Case 2 – cont'd

- Aft 2 yrs, more depressed, then severe bipolar
- On Disability
- Mood stabilizing cocktails, then flax in '98
- Lethal overdose – recovered, more meds
- EMP trial in '01 – much more stable, 32 pills triggered OD trauma – EFT helped

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## Case 2 – cont'd

- Occasional brief bursts: Paxil, Risperidone, sleepers
- Functional Medicine- Gut: 4R program empirically
- Malnourished- worked on healthy diet
- Fatigue prominent, mood mild depressed
- Any liver support- sick quickly
- Adrenal support added

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## Case 2 – cont'd

- Able to stop tobacco in '03
- '05 – urine provoked toxic metals: Hg & Pb
- Eventually started chelation therapy
- Fatigue improving steadily, work part time

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## Case 3

- Mid-40's male, starting his 3<sup>rd</sup> Major Dep'n
- Mult meds in past, helped some, but awful
- Sought me desperate for an alternative to meds
- Terrible diet, 3 plus gallons cola daily
- Balanced diet and tapered off cola – mood improving in one week, fully recovered in 4 wks

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## Case 4

- Early 50's woman, h/o severe child abuse
- Therapy and healing work most of life with tremendous progress – enjoy much in life
- Meds for dep'n, anx, panic sx's at times
- Still strong sx's at times
- Adrenal – adrenal and brain support - recovering

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## Case 5

- Early 40's mother, life long dep'n, OC sx's
- Progressive worsening; brain fog, fatigue
- Constip'n, sugar, stress, early traumas
- Gut; adrenal; EFT for traumas, marital
- Slow 4 yrs, an unusual diet- final recovery

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## Take Home

- Foundations for whole life healing:  
Healthy Eating, Sleep, Movement, Stress  
Reduction, Relaxation Practice, Heal the  
Past, Cultivate Love over Fear in every  
moment, Cultivate Loving Community

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## Healthy Eating

- Don't skip breakfast – keeps adrenalin up
- 3 or more meals, balanced protein, healthy fats, complex carbs, fruits and veggies
- Organic, whole foods as much as possible
- Sit down, relax, recall gratitudes, chew well, don't rush
- Eliminate any suspicious foods, eg. Gluten, dairy, eggs, soy, corn, others

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## Specific Supports

- Omega-3 oils – 1 to 6 grams per day
- High quality multi vitamin/mineral 2 or 3 x/day
- Probiotics and prebiotics for GI
- Explore natural strategies for cholesterol
- Explore natural anti-inflammatories

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## Resources in Print

- The UltraMind Solution-Mark Hyman, MD
- Digestive Wellness – Eliz Lipski, MA
- Adrenal Fatigue – James Wilson, ND
- Functional Clinical Nutrition
- Textbook of Functional Medicine

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## Take Home

- Any symptom that becomes chronic is a wake up call to heal/balance your whole life
- All your organs are affecting all your other organs/systems, including your brain/emotion

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## Take Home

- Anxiety, Depression, and Bipolar mood disorders can be improved, and in some cases resolved, with the “Foundations” and with functional supports to the brain and other organs where needed

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## About Miles Simmons, MD

- Board-Certified Psychiatrist
- BS, Chemistry, University of Denver, Denver, CO
- MD, University of Texas, Houston, TX
- Psychiatric Residency, University of Texas, Houston, TX
- Chairperson, Psychiatry Department at Mid Coast Hospital in Brunswick, ME
- A True North practitioner since 2002

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