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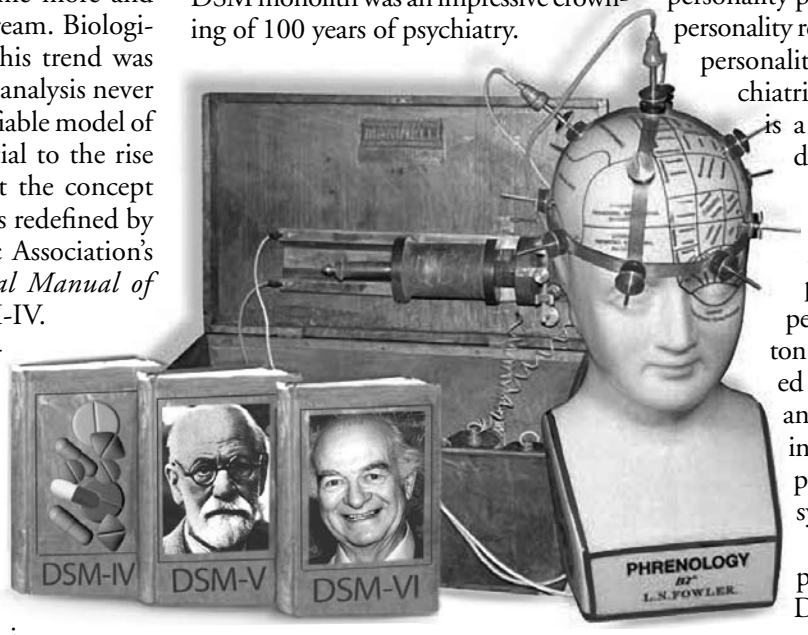
FROM THE EDITOR

Everything That Rises Must Converge: the Future of the DSM

Tom Wolfe once said that the demise of Freudianism can be summed up in a single word: "lithium." Psychoanalysis has certainly fallen on rough times these days, its practitioners recognizing they have become more and more outside the mainstream. Biological psychiatrists argued this trend was inevitable because psychoanalysis never offered a scientific or falsifiable model of mind. But more influential to the rise of biopsychiatry was that the concept of mental illness itself was redefined by the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* or DSM-IV.

The DSM-IV radically altered how we think of mental illness. By classifying more than 200 disorders into discrete labels, a variety of human behaviors–from depression and schizophrenia to bad handwriting and impulsive shopping sprees–were transformed from human phenomena into billable pathologies. For all the categoric precision of the DSM-IV scriptures it is, in fact, a very political opus of a legion of competitive personalities in academia, pharmaceutical laboratories, insurance boardrooms and social services. The effect has transformed psychiatry from the dark ages of conjecture to a smoothly running temple of positivism with doctor-deities healing the sick and casting out labels with the four sacraments of tranquilizers, tricyclics, SSRI's and anxiolytics. Never mind the patients, the DSM monolith was an impressive crowning of 100 years of psychiatry.



Consigned to the therapeutic wilderness, it wasn't surprising that Sigmund's descendents would attempt a reformation to get back in the game. This month, the International Psychoanalytic Association and the American Psychological Association, unveiled to the world *The Psychodynamic Diagnostic Manual.* This new guidebook is modeled on the DSM-IV in its format and title but instead of labeling groupings of mental symptoms, it proclaims that personality be evaluated first, and symptoms considered secondary. The first section of the manual describes 14 different personality patterns, and by drawing on personality research, identifies a patient's personality and fits it into their psychiatric difficulties. "The D.S.M. is a taxonomy of diseases or disorders of function. Ours is a taxonomy of people," the new manual declares. Dr. Stanley Greenspan, a professor of psychiatry and pediatrics at George Washington University states "We wanted to say to therapists: find out and discover the nature of the internal experience before you pigeonhole a person based on symptoms only."

We might term this psychodynamic book the DSM-V in that its the first serious attempt to break the cycle of labels and drugs in psychiatry. In the case of anxiety disorders, it ignores neurotransmitters in favour of Freud's "four basic danger situations," the loss of a significant other; the loss of love; the loss of body integrity; and the loss of

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EDITORIAL

affirmation by one's own conscience.

"I think it's a wonderful idea to broaden the scope of the current diagnostic manual, to give a sense of context, richness, and detail to the understanding of mental disorders," said Dr. Theodore Millon, scientific director of the Institute for Advanced Studies in Personology and Psychopathology in Coral Gables, Florida.

Humanity reintroduced into psychiatry. The Freudians believe they are on to something, but isn't there something vital that they've forgotten in their aspirations? They were not the only ones turfed out of the DSM-IV temple for heresy. Orthomolecular doctors and patients are forbidden entry for an entirely different schism: the belief that optimal mental health can be achieved by varying the concentrations of substances natural to the body. Some would say that if the truth is what you make it, is it not opportune for an orthomolecular counter-reformation against the prescription writers and resurgent Freudians? Perhaps we need an orthomolecular DSM-VI of mental health with a rational orthomolecular taxonomy which finally puts IV and V out of business for the betterment of mankind.

It is a noble and elegant idea-but ultimately destined to failure. What neither of the gladiators realize is the nature of the battle itself. Difficult as it is to admit, we must concede that there are real advances and accomplishments in the field of drugs, psychotherapy and orthomolecular medicine. Often some approaches triumph precisely where the other two have failed.

Can anyone doubt the life-saving effect of an emergency intervention with an SSRI in the case of someone with major unipolar depression contemplating suicide? Or what of a psychotic break with reality dropped in the midst of a young person's life? Neuroleptics at least stabilize the patient allowing discharge, and when used in microdoses along with niacin therapy can make the difference between debilitation or functional recovery.

In the same way, it would be naive to dismiss all psychotherapy as a retrograde throwback to 19th century Vienna. Some people do have difficulty expressing anger for fear of losing relationships, or suffer an existential crisis in mid-life. Examining beliefs, self-assertiveness and forgiveness is what is needed, not Prozac. Systematic desensitization for phobias is another case. Disrupting the perceptual-cognitive loops of agoraphobia shows that cognitive therapy rather than Valerian is the "truth" for this debilitating disorder.

We orthomolecular believers have our truths as well: that the biochemical milieu first and foremost should take precedence over drug fixes or theories of oedipal rage. Our conferences and research attest to these truths: the fact that adding simple things like proper nutrition, vitamins, minerals, and fatty acids results in Lazurus-like recoveries from schizophrenia, depression, bipolar disease and ADHD, precisely the illnesses refractory to other forms of treatment.

The eternal contention between the schools of pharmacy, psychology and orthomolecular therapy was never a battle of truth against error. The axis is not drugs, vitamins or talk, it is exclusivity versus convergence. Each model holds a part of the truth, but in the absence of the fullness of truth, it cannot progress to a humane and universal cure for mental illness. The very idea of a DSM system, whether it uses symptom scores, personality traits or bioassays *ipso facto* locks therapeutic possibilities out of the dazzling complexity of human nature. Error begins creeping in, with disastrous results for patients.

This, sadly, is what we have today: a balkanized scientism of winners and losers. Psychiatry, if it is to rise, must converge on the individual. No theory, however intricate, can achieve this goal. When the physician, freed of exclusionary theories, regains their autonomy to observe, diagnose and treat, real reformation is possible. Psychiatry will have its renaissance when the orthomolecular medicine, psychotherapy and pharmacology converge into a fullness of truth where the patient's recovery is the only measure of success.

–Greg Schilhab

IN BRIEF

Improved Mood and Behavior of Children During Treatment with a Mineral-Vitamin Supplement

Several studies have demonstrated that psychiatric symptoms such as depression, mood swings, and aggression may be ameliorated by supplementation with nutrient formulas containing vitamins, minerals and essential fatty acids. These findings have been reported in young criminal offenders as well as in adults with mood disturbance and other psychiatric disorders.

The purpose of the current case series was to explore the potential efficacy of a nutrient supplement in children. Nine children 8-15 years old with mood and behavioral problems completed this open-label trial. Parents completed the Child Behavior Checklist (CBCL), Youth Outcome Questionnaire (YOQ), and Young Mania Rating Scale (YMRS) at the onset of the study and following at least 8 weeks of treatment.

Analyses revealed significant decreases on the YOQ, YMRS and CBCL scales from baseline to final visit. For these chilldren, improvement for all outcome measures were relatively large. The findings suggest that formal clinical trials of broad nutritional supplementation are warranted in children with these psychiatric symptoms.

–J Child Adolesc Psychopharmacol, 14(1): 115-22 2004

Treatment of Depression: Time to Consider Folic Acid and Vitamin B_{12}

Numerous studies have confirmed the presence of low folate and low vitamin B_{12} status in depressive patients, as well as an association between depression and low levels of the two vitamins in the general population. Low plasma or serum folate has also been found in patients with recurrent mood disorders treated by lithium and patients with alcoholism. A recent study also suggests that high vitamin B_{12} status may be associated with better treatment outcome. Folate and vitamin B_{12} are major determinants of one-carbon metabolism, in which S-adenosylmethionine (SAM) is formed. SAM donates methyl groups that are

crucial for neurological function. Increased plasma homocysteine is a functional marker of both folate and vitamin B_{12} deficiency. Increased homocysteine levels are found in depressive patients. In a large population study from Norway increased plasma homocysteine was associated with increased risk of depression but not anxiety. There is now substantial evidence of a common decrease in serum and red blood cell folate, serum vitamin B_{12} and an increase in plasma homocysteine in depression. Furthermore, the genetic error that impairs the homocysteine metabolism is shown to be overrepresented among depressive patients, which strengthens the association. On the basis of current data, the researchers suggest that oral doses of both folic acid (800 microg daily) and vitamin B_{12} (1 mg daily) should be tried to improve treatment outcome in depression.

–J Psychopharmacol, 19(1): 59-65 2005

High Homocysteine and Low B Vitamins Predict Cognitive Decline in Aging Men

This study aimed to assess the individual and independent effects of baseline plasma homocysteine, folate, vitamin B_{12}, and vitamin B_6 and of dietary B vitamin intakes on 3-year changes in cognitive measures in 321 aging men. Participants were from the Veterans Affairs Normative Aging Study. Cognitive function was assessed with the Mini-Mental State Examination and on the basis of measures of memory, verbal fluency, and constructional ability, which were adapted from the Wechsler Adult Intelligence Scale and the Consortium to Establish a Registry for Alzheimer's Disease batteries.

At baseline, dietary intakes were assessed with a food-frequency questionnaire, and blood was drawn for the measurement of B vitamins and homocysteine. The results showed that over a mean 3-year follow-up, declines in constructional ability (as measured by spatial copying) were significantly associated with increases of plasma homocysteine, folate, and decreases of vitamins B_6 and B_{12} and with the dietary intake of each vitamin. Folate (plasma and dietary) remained independently protective against a decline in spatial copying score after adjustment for other vitamins and for plasma homocysteine. Dietary folate was also protective against a decline in verbal fluency. A high homocysteine concentration was associated with a decline in recall memory. The results of this study indicated that low B vitamin and high homocysteine concentrations predict cognitive decline and spatial copying measures appear to be most sensitive to these effects in a general population of aging men.

–Am J Clin Nutr, 82(3): 627-35 2005

Iron Deficiency and Impaired Cognition in Toddlers: an Underestimated and Undertreated Problem

The prevalence of iron deficiency anemia (IDA) during the first year of life has been dramatically reduced in developed countries, mainly due to the increase in breastfeeding and the use of iron-fortified feeding formulae. However, in US and UK children aged 1-2 years, recent studies have shown prevalence rates of >10% and 30% for IDA and iron deficiency, respectively. The daily iron intake in children aged 1-2 years is lower than in any other age group during life.

IDA during the first 2 years of life is associated with impaired mental and psychomotor development and these deficits are long lasting, and perhaps irreversible, despite the correction of the anemia. Another compelling reason to prevent iron deficiency in children, especially in children aged 1-2 years, is the proven association of iron deficiency with increased lead absorption. Lead-associated cognitive deficits occur at blood lead levels <10 mug/L, a level once thought to be harmless. The current prevalence rates of iron deficiency and IDA in toddlers, especially among those in the lower socioeconomic groups, are unacceptably high. These young children are doubly at risk for neurodevelopmental impairment, both from the iron deficiency itself as well as from CNS damage caused by the associated increased lead absorption. The current screening and treatment recommendations for IDA in the US and in other developed countries appear to have been unsuccessful in preventing iron deficiency and IDA in a large number of toddlers. Similarly, the associated problem of impaired mental and psychomotor development has not been adequately recognized or addressed in the existing medical literature. The authors recommend that, after breastfeeding or an iron-fortified formula is stopped, iron deficiency and IDA be prevented by routine daily supplemental doses of 10mg of elemental iron via iron-fortified vitamins, iron drops, or iron-fortified drinks.

–Paediatr Drugs, 7(6): 347-52 2005

Cognitive Aging, Childhood Intelligence, and the Use of Food Supplements: Possible Involvement Of N-3 Fatty Acids

This observational study examined the effects of food supplement use on cognitive aging. Subjects born in 1936 whose mental ability was tested in 1947 and who were followed up in 2000-2001 were assessed for cognition, diet, food supplement use, and risk factors for vascular disease. Fish-oil users were also matched with nonusers, and cognitive function was related to erythrocyte n-3 fatty acid composition.

At the age of 64 years, cognitive function was higher in food supplement users than in nonusers before adjustment for childhood IQ. After adjustment for childhood IQ, digit symbol (mental speed) test scores were higher in food supplement users. Fish-oil supplement users consumed more vitamin C and vegetable and cereal fiber than did non-supplement-users.

Total erythrocyte n-3 fatty acids and the ratio of docosahexaenoic acid to arachidonic acid was associated with better cognitive function in late life before and after adjustment for childhood IQ. Food supplement use and erythrocyte n-3 content are associated with better cognitive aging. If associations with n-3 content are causal, optimization of n-3 and n-6 fatty acid intakes could improve retention of cognitive function in old age.

–Am J Clin Nutr, 80(6): 1650-7 2004

–Greg Schilhab

ORTHOMOLECULAR FRONTIERS

The Gut Brain Axis in Mental Health

Orthomolecular medicine tends to focus on additive forces–altering the balance of protein, carbohydrate and fatty acids, or supplementation to achieve an optimal biochemical environment. Often overlooked is the role played by the metabolism of the gut itself, despite decades of research tying the poor digestion to poor health. Why can't the gut be healed by the vitamins we take for our bodies as a whole? The answer lies in the exquisitely complex gastrointestinal system itself, where every nutrients' uptake relies on a complex choreography of acids, enzymes and beneficial bacteria. Impaired gut metabolism which stops nutrients at the door cannot reach the gut, body or mind to achieve healthful effects. Two major gastrointestinal dysfunctions–achlorhydria and dysbiosis–seem to play a significant role in mental health and disease.

Achlorhydria is a condition of impaired stomach acid secretion, and is often associated with atrophic gastritis. The physiological role of gastric acid is to initiate protein breakdown through the enzyme pepsinogen; to augment nutrient absorption; and to provide a barrier effect of entry of microorganisms to the GI tract. Atrophic gastritis causes gut inflammation and a loss of function of the secretary cells of the stomach, allowing infiltration of macrophages and lymphocytes. Chronically inflamed mucosa can also result in malabsorption of vitamin B_{12} . There is a connection between B_{12} deficiency and mental illness. Research shows as much as 30% of hospitalized mental patients may be deficient in the vitamin.

B_{12} is also crucial for the synthesis or utilization of important neuro-factors including monoamines, melatonin and serotonin as well as for the function and maintenance of nerves themselves. Even though there may be adequate sources of these crucial mental nutrients in the diet, it is often the case that undetected achlorhydria and gastritis prevents their incorporation in the body, with resulting psychiatric symptomatology.

Researchers postulate a theory that could explain why Achlorhydria impairs mental health. In the absence of sufficient acids and enzymes, proteins are no longer properly broken down in the digestive tract and cells in gut tissue die off prematurely as the gut lining becomes "leaky." Casein, gluten, and other compounds in the diet may then permeate into the bloodstream. Their activated by-products, called exorphins, could act directly on the brain to trigger opioid-like effects associated with mental disorders such as autism.

Intestinal dysbiosis refers to an impaired intestinal environment where beneficial bacteria normally needed for nutrient synthesis, digestion and absorption are displaced by harmful microflora which produce toxins, inflammation and poor uptake of health-sustaining nutrients.

A baby is born with an immature immune system and the establishment of healthy balanced gut flora in the first few days of life plays a crucial role in later maturation of the immune system. If the baby does not acquire appropriate gut flora it can result in a destructive cycle of immune compromisation, chronic infection and antibiotics, which damage the child's gut flora and immune system even further.

Fungi such as Candida have a good chance to occupy large tracts in the digestive system of such a child. These pathogenic microbes start digesting food in their own way producing various toxic substances, which get absorbed into the bloodstream, and cross the blood-brain barrier. The number and mixture of toxins can be very individual, causing different neurological and psychological symptoms. Due to a greatly reduced number of beneficial bacteria, the child's digestive system instead of being a source of nourishment becomes a source of toxicity in the body. Nutritional deficiencies can follow, with impaired absorption of most vitamins, minerals and amino acids. Additionally, healthy gut flora themselves produce folic acid, B_1, B_2, B_6, B_{12} and vitamin K.

Some research supports these ties between dysbiosis and mental illness. Researchers have noted similarities between coeliac disease and the digestive tracts of schizophrenics. In a recent study published in the *American Journal of Gastroenterology* in 2000, colonoscopies performed on 60 autistic children showed a 90% incidence of chronic enterocolitis, an inflammation of the mucous membrane of the intestine.

Because of the vulnerability of our digestive systems to inflammation as well as its symbiotic dependence on healthy gut microflora, the brain-gut axis should be a first-line of investigation in mental illness. In many cases, it is the simple optimization of the environment of our "gateway for orthomolecules" which is all that is needed for an optimal environment of mind.

–Greg Schilhab

From the New Yorker

"What's the Second Best Medicine?"