

# Psychiatry

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POSTGRADUATE EDUCATION  
NEWSLETTER

JUNE 2003

## 2003 Upcoming Courses

### Psychiatry: A Comprehensive Update and Board Preparation

Monday-Saturday, September 15-20, 2003  
The Westin Hotel, Copley Place, Boston

### Psychopharmacology

Thursday-Saturday, October 16-18, 2003  
The Westin Hotel, Copley Place, Boston

### Home Study on Audio Cassettes

Psychiatric Neuroscience: A Primer for Clinicians

Psychopharmacology

Child and Adolescent Psychopharmacology

## FOR MORE INFORMATION:

For more information about this and other courses presented by the Department of Psychiatry at MGH, please visit our web site, call, write, or email our administrative staff, at:

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## Natural Remedies for Psychiatric Disorders: Considering the Alternatives

April 25-27, 2003

### COURSE DIRECTORS:

Jerrold F. Rosenbaum, M.D., David Mischoulon, M.D., Ph.D., Jonathan E. Alpert, M.D., Ph.D., and John B. Herman, M.D.

### COURSE ADMINISTRATIVE STAFF:

Gail E. Dickson, M.P.A., Stephanie Lipka Hackett, Arlene Lietz, and Katherine Pike, L.C.S.W.

Renowned for straightforward teaching of state-of-the-art psychiatry to practicing clinicians, the Massachusetts General Hospital (MGH) Department of Psychiatry sends this e-newsletter to our friends and colleagues, nearby and around the world. It prints out nicely, or can be read "on-line."

For those who were unable to journey to this course in Boston, it is intended as an update and "taste." For those who were able to join us, we hope this newsletter will provide a useful summary. Please let us know what you think. If you are interested in being included in this mailing list, please respond to: [PsychiatryPostgraduateEdu@partners.org](mailto:PsychiatryPostgraduateEdu@partners.org)

Here's to a long life of learning!

This course described and reviewed advances in the field and provided practitioners with what for most was new information about herbal remedies and alternative therapies. Recent research findings relevant to clinical practice were presented by MGH clinician-researchers as well as by distinguished guest experts.

Each of the approximately 260 attendees of this of this three-day continuing education course held at the Westin Hotel, Copley Place, Boston, received a comprehensive syllabus. Continuing Education certificates were provided for physicians, psychologists, social workers, and nurses who attended this course.



Here are some facts from the MGH's **Natural Remedies for Psychiatric Disorders: Considering the Alternatives** Course:

## **EPIDEMIOLOGY OF COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) AND INTEGRATIVE MEDICINE**

**David Eisenberg, M.D.**

Dr. Eisenberg presented an exciting, data-driven, and systematic review of the complementary and alternative medicine (CAM). He emphasized that the use of CAM is both prevalent and under-appreciated. Dr. Eisenberg also noted that:

- Complementary and alternative medical (CAM) therapies encompass a broad spectrum of practices and beliefs.
- Integrative medicine refers to ongoing efforts to combine the best of conventional and evidence-based complementary therapies, while emphasizing the primacy of the patient-provider relationship and the importance of patient participation in health promotion, disease prevention, and medical management.
- The prevalence of herbal remedies nearly quadrupled, while the total number of visits to CAM providers rose by roughly 50% in the 1990s.
- Out-of-pocket expenditures relating to CAM therapies have topped \$27 billion; nevertheless, fewer than 40% of CAM therapies used are disclosed to a physician.
- The majority of CAM therapy users perceive the combination of CAM and conventional care to be superior to either therapy alone.
- Users of CAM therapies seek the opinion of a medical doctor before or concurrent with their visits to a CAM provider; and they have a similar level of confidence in both types of providers.
- Nearly half of users of CAM believe that their doctors know little to nothing about dietary supplements.
- Unlike hospitalizations and physician services, complementary and alternative therapies are infrequently covered by insurance benefits.

## **NATIONAL CENTER FOR COMPLEMENTARY AND ALTERNATIVE MEDICINE (NCCAM) HISTORY AND OVERVIEW**

**Margaret A. Chesney, Ph.D.**

Dr. Chesney presented an eloquent overview of CAM and placed its growth in an historical perspective. She described how the field has developed and gained a foothold in the mainstream of academic medicine and general practice. She also clarified the steps necessary for further research in the field. Specifically, Dr. Chesney noted that:

- Factors that pushed people away from conventional care include a failure of conventional medicine to yield cures, adverse effects of conventional medicines, a lack of practitioners' time, dissatisfaction with a technical approach, and fragmentation of care by specialists.
- Factors that pulled people to CAM include media reports of dramatic cures, a belief that CAM therapies are natural, patient empowerment, a focus on spiritual and emotional well being, and the therapist providing comforting care.
- CAM therapies include naturopathy, chiropractic care, and the use of magnets, yoga, prayer, meditation, massage, diets, and herbal remedies.
- In 1993 the NIH Revitalization Act established the Office of Alternative Medicine (OAM) to facilitate the study and evaluation of CAM practices and to disseminate the results to the public.
- The National Center for Complementary and Alternative Medicine (NCCAM) held its first international conference in London in 2001.
- Areas of interest for CAM research involve cancer, women's health, neurosciences, cardiovascular disease, musculoskeletal disorders, and aging.
- NCCAM's phase III clinical trials include the study of ginkgo biloba in dementia, acupuncture in osteoarthritis, shark cartilage in lung cancer, vitamin E in prostate cancer, St. John's wort in major depression, and EDTA chelation therapy in benign prostatic hypertrophy.



## ST. JOHN'S WORT FOR DEPRESSION

Andrew Nierenberg, M.D.

Dr. Nierenberg's presentation, laced with humor and graphics, demonstrated the impact of St. John's wort on the treatment of affective illness. Dr. Nierenberg's lecture highlighted the methodology and results of studies in the field and made the data understandable to all in attendance. Dr. Nierenberg also noted:

- \* Hypericin is generally considered to be the active ingredient of St. John's wort for treatment of depression.
- \* St. John's wort has minimal monoamine oxidase inhibitor (MAOI) activity.
- \* Side effects of St. John's wort include dry mouth, dizziness, and constipation.
- \* St. John's wort is known to interact with warfarin, cyclosporin, oral contraceptives, theophylline, digoxin, and indanavir.
- \* Hyperforin induces CYP 3A4 expression that can lead to a reduction in the therapeutic activity of agents that are metabolized by CYP 3A4; caution is required in HIV+ patients, cancer patients, and those who are status-post transplantation.
- \* Standard doses of St. John's wort for depression are generally 300 mg t.i.d.
- \* Trials of St. John's wort for depression reveal that it is sometimes better than placebo, equivalent to low-dose tricyclic antidepressants, and generally safe.

## OMEGA-3 FATTY ACIDS FOR BIPOLAR DISORDER AND UNIPOLAR DEPRESSION

Andrew Stoll, M.D.

Dr. Stoll presented a comprehensive overview of the benefits of omega-3-fatty acids for health in general and for dysregulated mood in specific. Outcomes of pharmacotherapy were discussed at length and special consideration given to a variety of fatty acid preparations. Specific facts related to the use of omega-3-fatty acids in mood disorders included:

- \* "Natural" products (where controlled data exists to show an effect on the CNS) include lithium, omega-3-fatty acids, St. John's wort, melatonin, inositol, kava, yohimbine, l-tryptophan, DHEA, vitamin D, ginkgo biloba, valerian, SAME, and folic acid.

- \* Open-label or anecdotal data exists for a CNS effect from the following substances: progesterone, ephedrine, selenium, zinc, and chromium.
- \* The modern Western diet is profoundly depleted of essential fatty acids (e.g., omega-3-fatty acids) and trace minerals.
- \* General health benefits of omega-3-fatty acids includes: a reduced incidence of MI, improved survival after MI, improvement in Crohn's disease and ulcerative colitis, lower corticosteroid use in inflammatory bowel disease and rheumatoid arthritis, improvement in the symptoms of rheumatoid symptoms, improved outcome after renal transplantation, and improvement in depression and ADHD.
- \* Mechanisms by which omega-3-fatty acids may work in bipolar disorder include a reduction in the generation of second-messengers, anti-kindling effects, blockade of calcium channels, altered receptor function, altered CNS cytokine function, and an alteration in the arachidonic acid pathways.
- \* Drawbacks of use of omega-3-fatty acids include GI distress at high doses, a fishy aftertaste with some brands, and a theoretical risk of increased bleeding.
- \* Atypical dose for omega-3-fatty acids is 2-5 g/day in a b.i.d. schedule; food increases its absorption.
- \* At the present time fish oil is preferred over flaxseed oil.
- \* Flaxseed oil contains high concentrations of alpha-linolenic acid and is an excellent treatment for constipation.
- \* Fish eat phytoplankton (e.g., algae), which synthesize long-chain omega-3 fatty acids, and pass omega-3 fatty acids through the food chain; terrestrial sources (e.g., flax) synthesize a shorter-chain omega-3 (alpha-linolenic acid).
- \* Fish high in omega-3 content include Atlantic cod, haddock, sea scallops, tuna, Pacific oysters, rainbow trout, and pink salmon.

## SAME, FOLATE, B12, AND DEPRESSION

Jonathan E. Alpert, M.D., Ph.D.

Dr. Alpert demonstrated once again his command of the literature regarding psychopharmacology and drug-drug interactions. Highlights from his presentation included:



- \* Folate is also known as pteroylpolyglutamate (vitamin B9).
- \* Folate-rich foods include Quaker Cap'N Crunch cereal, lentils, black-eyed peas, spinach, Kellogg's Corn Flakes, orange juice, broccoli, and whole-grain bread.
- \* Causes of folate deficiency include inadequate intake (e.g., dietary sources are heat-labile), malabsorption, inborn errors of metabolism, genetic polymorphisms (e.g., methyltetrahydrofolate reductase), and conditions associated with an increased demand for folate (e.g., pregnancy, infancy, diseases associated with cellular proliferation, and bacterial overgrowth).
- \* Drugs that cause folate deficiency states include anti-convulsants (e.g., phenytoin, phenobarbital, carbamazepine), oral contraceptives, methotrexate, trimethoprim, and alcohol.
- \* Vitamin B12 is also known as cyanocobalamin.
- \* Vitamin B12-rich foods include beef, turkey, and crab.
- \* Vitamin B12 deficiency can be caused by a dietary lack (strict vegetarian diet), malabsorption, competition for dietary sources (e.g., tapeworm or bacterial overgrowth), congenital transcobalamin II deficiency, or use of certain drugs (e.g., colchicine, H2 blockers, cholestyramine, nicotine, oral contraceptives, and AZT).
- \* Folate and B12 deficiency can lead to macrocytic anemia, neuropathy, cognitive dysfunction, and depression.
- \* Folate deficiency is nearly twice as common as is B12 deficiency.
- \* Mood disorders are more common among individuals with folate deficiency than with B12 deficiency.
- \* Folate deficiency may hinder response to antidepressants.

## EVALUATING THE DATA: LIMITATIONS OF RESEARCH AND QUALITY ASSURANCE ISSUES WITH NATURAL REMEDIES

**Maurizio Fava, M.D.**

Dr. Fava eloquently described a step-by-step approach to clinical research. He identified and defined a variety of terms and highlighted those factors that serve as the cornerstone of high quality research. Facts presented included:

- \* Our knowledge of the efficacy of natural remedies comes from positive anecdotal experience, direct-to-consumer advertising, newspapers and magazines, word of mouth, lectures and conferences, and the scientific literature.
- \* The validity of scientific studies relies upon appropriate study design, an understanding of the placebo response, use of appropriate outcome measures, and statistical analyses.
- \* When a study is uncontrolled it is hard to separate true drug effects from placebo-like effects.
- \* Treatment adherence in a drug trial is often assessed by self-report, by pill counts, and by testing blood levels.
- \* Statistical methods used in a drug trial include comparison of rates of response/remission vs. the degree of change in outcome measures, time to response/remission, degree of significance, and effect size.
- \* Meta analyses and pooled analyses can help clarify inconsistencies across individual studies.

## DRUG INTERACTIONS WITH NATURAL MEDICATIONS

**Jerry Cott, Ph.D.**

Dr. Cott defined terms and presented facts regarding drug-drug interactions. He also discussed a wide range of effects derived from the P 450 isoenzyme system. Facts from his presentation included:

- \* In North America, one-fourth of all prescriptions are written for plant products or products based on plants.
- \* 75% of these are used in ways that directly correlate with their traditional uses by native cultures.
- \* Herbal remedies can interact with certain drugs, with foods, and with other herbs.
- \* St. John's wort (*hypericum perforatum*) can reduce plasma levels of indanavir, cyclosporin, and digoxin.
- \* The bioflavonoid constituents in grapefruit juice inhibit intestinal CYP 3A4 and may cause clinically significant interactions with cyclosporine and diazepam.
- \* Cruciferous vegetables (e.g., Brussels sprouts and broccoli) induce CYP 1A2.



## RELAXATION THERAPY TRAINING

**Herbert Benson, M.D.**

An internationally known expert on the relaxation response and other areas of behavioral medicine, Dr. Benson eloquently presented data on the physiologic impact of the relaxation response, hypnosis, and related techniques. He made the discussion interactive and demonstrated techniques for relaxation. Specifics of his presentation included:

- When a person engages in a repetitive prayer, word, sound, or phrase, and when intrusive thoughts are passively disregarded, physiologic changes ensue (e.g., decreased metabolism, heart rate, respiratory rate, and slower brain waves).
- Meditation, repetitive prayer, progressive muscle relaxation, hypnosis, Zen, yoga, tai-chi, and Lamaze can all elicit the relaxation response.
- The relaxation response can be effective in a number of diseases and conditions (e.g., hypertension, insomnia, infertility, PMS, anxiety, and hostility).

## ACUPUNCTURE IN PSYCHIATRY AND PAIN MANAGEMENT

**Randy L. Gollub, M.D., Ph.D., and Albert Yeung, M.D.**

Drs. Gollub and Yeung brought knowledge from the “bench” to the bedside and tried to show how therapeutic interventions can be rationally applied based upon an understanding of physiology and cellular mechanisms related to pain. In specific they emphasized that:

- Acupuncture is widely employed in Eastern countries for the treatment of neuropsychiatric disorders (especially pain).
- In > 65,000 clinical acupuncture treatments not a single major adverse event was reported.
- Obstacles to more widespread utilization of this treatment include the difficulty in mapping the relations between traditional Chinese medicine and known physiologic systems.
- Acupuncture and/or the application of heat to an appropriate meridian act to restore flow and balance of “chi” (e.g., vital energy).
- Acupuncture produces significantly more analgesia than appropriate placebos in experimental pain.

- Acupuncture has been used to treat a wide range of psychiatric disorders, e.g., schizophrenia, bipolar disorder, and anxiety and mood disorders as well as substance abuse.

## HYPNOSIS

**Owen S. Surman, M.D.**

In this talk, Dr. Surman comprehensively reviewed the history of hypnosis (discussing the role of Mesmer, Braid, and Erickson, among others) and demonstrated how to apply the technique. A variety of examples of how to apply theory and knowledge to the bedside were provided. In addition, Dr. Surman noted the following:

- Contraindications to the use of hypnosis include the unwillingness of the subject, the inexperience of the hypnotist, and a history of paranoia.
- Hypnosis can be used in systematic desensitization, covert sensitization, cognitive-behavioral therapy, post-noxious desensitization, memory retrieval, and habit control.
- Hypnosis is an event or ritual between a hypnotist and hypnotic subject, in which both agree to use suggestion to bring about a change in perception or behavior.
- Hypnosis depends on dissociation, imaginative ability, motivation of the subject, and the relationship between a hypnotist and a subject.
- Levels of hypnotizability tend to fall on a bell-shaped curve.

## SPIRITUALITY AND ILLNESS

**Gregory Fricchione, M.D.**

Dr. Fricchione provided a comprehensive overview of spirituality and its relationship to physiological changes and health and focused on the interplay between separation-attachment and illness. The impact of an awareness of such models of understanding on the practice of medicine and on clinical care was also emphasized. Dr. Fricchione noted:

- Illness recapitulates all previous developmental stages.
- Illness raises the possibility of separation from life and loved ones.
- Spirituality emerges from our unique ability to contemplate and affectively experience the meaning of separation and attachment.



- \* A patient's communion with family, friends, doctors, nurses, and other staff, along with religious observances, sacraments, prayers, contemplation, and meditation all facilitate attachment solutions to the separation problem of others.
- \* Allostasis is the ability to successfully adapt to life's demands through change.
- \* Allostatic loading is the physiologic wear and tear on the organism when adaptive responses to challenge lie chronically outside of normal ranges.

## **BOTANICAL APPROACHES TO ANXIETY**

**Jonathan Davidson, M.D.**

Dr. Davidson eloquently discussed concepts related to the use of botanicals for the treatment of anxiety. Specific features that were discussed included:

- \* Anxiolytic botanicals with purported psychoactive effects include St. John's wort, Kava, Valerian, Melissa, Passiflora, Gotu kola, and Rhodiola.
- \* Kava inhibits diazepam binding and causes reversible MAO-B inhibition.
- \* Valerian has dose-related sedative effects and has effects on muscular relaxation; it does not act via the benzodiazepine receptor.
- \* Short-term sleep increases over time with Valerian.

## **MELATONIN FOR INSOMNIA/JET LAG**

**Irina Zhdanova, M.D., Ph.D.**

Dr. Zhdanova presented a comprehensive talk that highlighted the presumed mechanisms of action of melatonin. Key features of the presentation included:

- \* Melatonin (N-acetyl-5-methoxytryptamine) is a phylogenetically primitive molecule found in unicellular organisms, plants, and vertebrates.
- \* In vertebrates, the main source of melatonin is the pineal gland.
- \* The rhythm of melatonin secretion depends on a periodic signal from the suprachiasmatic nucleus (SCN) of the hypothalamus, the master biological clock.
- \* Melatonin production occurs only at night and is suppressed by nighttime light exposure.
- \* L-tryptophan is the precursor for melatonin synthesis.

- \* Inactivation of melatonin occurs in the liver.
- \* The onset of melatonin secretion correlates with the onset of evening sleepiness.
- \* Melatonin administration can produce a shift in circadian phase of SCN activity, either advancing or delaying its onset.
- \* Melatonin treatment increases sleepiness (within 30 minutes).
- \* Tolerance to melatonin does not occur after one month.
- \* Melatonin in doses of 0.1 - 0.3 mg typically induces physiological serum melatonin levels.
- \* Doses higher than 0.3 mg typically do not further increase the effects of melatonin.
- \* Side effects of melatonin include disruption of the circadian system, lower body temperature, and increase the sensitivity of photoreceptors to light.

## **INOSITOL FOR PANIC, OCD, AND DEPRESSION**

**Prepared by A. Eden Evins, M.D.**

**Lecture by David Mischoulon, M.D., Ph.D.**

Dr. Evins systematically reviewed the role of inositol in neuronal function. Her discussion highlighted function at the cellular level and prepared the audience for advances in the field. Details of her presentation included:

- \* Inositols are natural isomers of glucose that are present in common foods.
- \* Dietary inositol is incorporated into neuronal cell membranes and serves as a metabolic precursor in G protein-coupled receptors throughout the body.
- \* Myoinositol (MI) is the most abundant isomer in the mammalian CNS; it helps regulate cellular responses to external stimuli and nerve transmission.
- \* The ability of a cell to maintain adequate concentrations of MI is crucial to the maintenance and efficiency of signaling.
- \* Altered inositol metabolism has been implicated in many psychiatric disorders.
- \* CSF MI levels are low in depression.
- \* Oral inositol can raise CSF inositol levels by 70%.



- \* Results of small preliminary trials suggest that inositol may have therapeutic effects in the spectrum of illnesses (e.g., depression, panic disorder, OCD, and bipolar disorder) responsive to SSRIs and mood-stabilizers.
- \* There is substantial evidence for a role of inositol in the mechanism of action of lithium, valproate, and carbamazepine.

## GLYCINE AND OTHER NATURAL AGENTS FOR PSYCHOTIC DISORDERS

Donald C. Goff, M.D.

Dr. Goff calmly and comprehensively discussed the role of glycine in psychotic disorders. He reviewed the physiology and biochemistry of these interactions and laced his talk with numerous little known, but clinically important facts. Some of these included the following:

- \* Dietary supplements used in schizophrenia include amino acids, folate, and omega-3-fatty acids.
- \* Folate is inversely correlated with CGI and PANSS total scores in schizophrenia.
- \* Elevated homocysteine levels are associated with CAD, CVA, and Alzheimer's disease.
- \* There is spectroscopic evidence of an altered phospholipid composition in frontal and temporal cortex.
- \* Outcomes in schizophrenia correlate with relative amounts of unsaturated/saturated fatty acids.
- \* Intake of polyunsaturated fatty acids correlates with the severity of psychiatric symptoms.
- \* Glycine (40-60 g/day) and D-serine may be effective when added to antipsychotics other than clozapine.
- \* Folate supplementation (10 mg/day) may improve symptoms in some schizophrenic patients and lower homocysteine levels.
- \* Essential fatty acids may improve symptoms in schizophrenia.

## GINKGO BILOBA, GALANTAMINE, GH, AND DHEA FOR DEMENTIA

David Mischoulon, M.D., PhD.

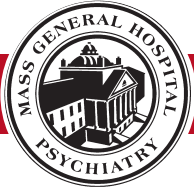
Dr. Mischoulon, one of the course directors for this course, provided a comprehensive overview of several products for the treatment of dementia. Among the facts he presented were:

- \* Cholinesterase inhibitors used for the treatment of Alzheimer's disease include Galantamine, Tacrine, Donepezil, Rivastigmine, and Eptastigmine.
- \* Galantamine is a competitive reversible inhibitor of acetylcholinesterase; optimal results are found with use of 16-24 g/day given in B.I.D. doses.
- \* Galantamine is metabolized via CYP P450 2D6 and 3A4; it's clearance is decreased by fluoxetine, fluvoxamine, paroxetine, quinidine, and cimetidine.
- \* Galantamine overdose can result in low blood pressure, respiratory depression, and effects at the neuromuscular junction.
- \* Ginkgo can delay progression of dementia of the Alzheimer's type by 6-12 months and improve memory, abstract thinking, learning capacity, and non-REM sleep.
- \* Active components of ginkgo include flavonoids and terpenelactones; suggested doses are 120-240 mg/day.
- \* Side effects of ginkgo include mild GI upset, headache, irritability, dizziness, and seizures.
- \* DHEA (dehydroepiandrosterone) enhances memory, has antidepressant properties, and prevents corticosteroid neurotoxicity.
- \* Higher DHEA correlates with improved psychosocial function.
- \* DHEA side effects include acne, irritability, insomnia, headache, menstrual irregularity, and palpitations.
- \* Growth hormone is synthesized and secreted in a pulsatile fashion from the anterior pituitary.
- \* Early treatment with human growth hormone from cadavers caused Creutzfeldt-Jacob (CJ) disease.
- \* Adverse effects of growth hormone include diabetic retinopathy, CJ disease, gynecomastia, fatigue, joint soreness, intracranial hypertension, pancreatitis, and transplant rejection.

## NATURAL REMEDIES FOR DRUG AND ALCOHOL DEPENDENCE

Scott E. Lukas, Ph.D.

Dr. Lukas provide and elegant review of alcohol and drug dependence. He provided numerous clinical pearls and facts. Among those were the following:



- \* GHB (gamma hydroxybutyrate) induces relaxation and tranquility with little or no hangover; it also has some success in reducing the manifestations of alcohol-withdrawal syndrome.
- \* Kava acutely increases well being but does not decrease inhibitions like alcohol; it does reduce anxiety.
- \* Valerian has been shown to treat stress and reduce anxiety.
- \* Citicholine may reduce the consequences of drug use (e.g., tobacco, amphetamine, and opiates).
- \* Ibogaine is a hallucinogenic indole alkaloid derived from *Tabernanthe iboga*; it reduces opiate and stimulant self-administration in animal models.

## **NATURAL MEDIATIONS FOR MANAGEMENT OF SEXUAL DYSFUNCTION: MACA, GINSENG, GINKGO, AND YOHIMBINE**

Christina M. Dording, M.D.

Dr. Dording presented a comprehensive review of the effects of natural medications on sexual dysfunction and punctuated her talk with a bevy of facts. Some of these included the following:

- \* Organic causes of erectile dysfunction include those related to vascular, neurogenic, and hormonal etiologies, as well as those related to injuries to the penis and the use of medications.
- \* Sexual dysfunction may also result from depression, anxiety, alcohol and substance abuse, psychosis, dysfunctional relationships, and medications.
- \* The more one specifically asks patients about sexual dysfunction, the more likely one is to hear about sexual dysfunction.
- \* Patients are often reluctant to tell their physician about sexual dysfunction because of concerns that the clinician would dismiss their concerns, because of fear of embarrassment, and because they thought there would be no medical treatment.
- \* Strategies commonly used to manage sexual dysfunction include the addition of bupropion to the regimen, a switch from one psychotropic to another, taking drug holidays, or adding sildenafil or cyproheptadine.
- \* Patients receiving sildenafil significantly improve their sexual function.

- \* Yohimbine, an FDA-approved drug, is a pre-synaptic alpha-2-adrenergic antagonist with a short half-life (35 minutes) that can induce panic attacks but can reduce complaints of sexual dysfunction.
- \* Side effects of yohimbine include anxiety, agitation, dizziness, headache, hypertension, GI upset, and panic attacks.
- \* Ginkgo biloba has effects on platelet activating factor, serotonin, monoamine oxidase, acetylcholine, and nitric oxide.
- \* Side effects of ginkgo include headache, GI disturbance, and easy bruisability.
- \* Adverse effects of ginseng include hypertension, nervousness, insomnia, vomiting, headache, and epistaxis.

## **NATURAL MEDICATIONS FOR MANAGEMENT OF WEIGHT GAIN**

Anne E. Becker, M.D., Ph.D.

Dr. Becker comprehensively reviewed the use of natural remedies for eating disorders and presented an abundance of research data on therapeutic trials. She also underscored the importance of several concepts in the treatment of eating-disordered patients. Facts from her presentation included:

- \* Obesity is the second leading cause of death in this country.
- \* An estimated 17 million (7%) Americans use non-prescription weight-loss products, including 8% of normal-weight women.
- \* Ideal body weight can be estimated from the formula:  $IBW = 100 \text{ pounds} + 5 \text{ pounds/inch above 5 feet} \pm 10\%$  (for females) and  $IBW = 106 \text{ pounds} + 6 \text{ pounds/inch above 5 feet} \pm 10\%$  (for males).
- \* An ideal body weight below 60% is associated with an increased risk for mortality.
- \* Up to 50% of eating disorder cases go undetected in clinical settings.
- \* Purging behaviors may include the use of syrup of ipecac, laxatives, enemas, diuretics, stimulants, as well as vomiting.
- \* Non-purging behaviors to lose weight include compulsive exercise and fasting.



- \* Medical causes of being overweight include Cushing's syndrome, hypothyroidism, hyperinsulinemia, polycystic ovarian syndrome, depression, and the use of psychotropics.
- \* Mortality rates increase with a BMI over 23 kg/m<sup>2</sup>.
- \* Very low calorie diets must be medically monitored.
- \* Several types of surgical procedures (e.g., gastric bypass, vertical banded gastroplasty) are effective approaches for severe obesity.
- \* Acupuncture has been suggested as a treatment for obesity.
- \* While several studies have shown that ephedra/caffeine preparations help individuals reduce weight, serious adverse effects have been associated with their use.
- \* Controlled studies of pyruvate, green tea extracts, glucomannan, and other preparations have shown some efficacy in obesity treatment.
- \* Some promise, without clear efficacy in controlled studies has been seen with acupuncture, red pepper, Oolong tea, and caffeine for weight reduction.
- \* Likely results of no treatment and available treatments, and the risks and benefits of each, should be discussed.
- \* Exceptions to the requirement of informed consent include involvement in an emergency situation, or where an individual is incompetent.
- \* Minors (except for emancipated minors, mature minors and by statute) are considered incompetent in decision making.
- \* A malpractice claim may still be filed when a FDA-approved medication is prescribed.
- \* Protection against legal action rests on documentation of evidence that the treatment employed was safe and similar to the practice in the community.
- \* Most errors do not result in a suit.
- \* A high patient volume and attenuated relationships increase the risk of a suit.
- \* The physician's duty to the patient involves knowledge, skill, and care.
- \* A physician may prescribe any FDA-approved medication for any purpose, which the physician believes, is appropriate. However, the more unconventional the treatment, the more thoughtful and thorough the documentation and discussion should be.
- \* Good clinical care is good risk management.

## LEGAL/ETHICAL ISSUES IN THE USE OF ALTERNATIVE REMEDIES

Ronald Schouten, J.D., M.D.

Dr. Schouten noted that many physicians at one time or another are concerned about the possibility that they will be accused of wrongdoing. He identified the necessary elements of malpractice claims (i.e., duty, dereliction, direct causation, and damages) and reviewed the principles and elements of informed consent (e.g., the nature of diagnosis, treatment options, expected benefits, risks involved, alternative treatments, and prognosis with or without treatment). Dr. Schouten also highlighted several facts.

- \* Informed consent is a process by which one individual agrees to allow another individual to intrude upon his bodily integrity where the agreeing party is competent to consent and the consent is given voluntarily with a reasonable degree of knowledge of the situation.
- \* During discussion of informed consent the benefits can reasonably expect from the proposed treatment should be reviewed as well as the nature and probability of material risks.