Professional Psychology: The Good, The Bad, and The Ugly
By John Caccavale, Ph.D.

The Good

Professional psychology is a wonderfully stimulating and socially necessary profession. As the Elizabeth Barrett Browning poem goes, “How do I love thee? Let me count the ways.” Psychologists are healthy skeptics. Almost every day another article is published about the over-prescribing of psychotropic and other classes of medications. For example, more than one primary care physician has unwisely prescribed highly sedative antipsychotic medications for patients complaining of sleep issues. Daily, consumers are bombarded by television and magazine ads promoting antipsychotic medications for depression. Besides the questionable value-to-risk ratio when medications are over-prescribed, much of this type of prescribing is not supported by any acceptable scientific studies. Psychologists inherently know this.

Psychologists are trained to avoid “shotgun” diagnoses or the utilization of questionable therapies. We are more focused upon what we are doing in relation to the problem presented. We are focused on specifics and the most up-to-date evidence. We know that applying this mindset to prescribing will promote a more limited use of medications and reduce over-prescribing. This is another way in which psychologists can be differentiated from other prescribing professionals. This is one way of that makes psychologists important contributors to healthcare. This is also a reason to support prescribing privileges for psychologists.

The Psychological Mindset

I think being a psychologist requires a particular mindset about even the most inconsequential things to which we are exposed. Being a psychologist requires that we look at behavior unconventionally. Our judgments are not about what is good or what is bad. It’s all about consequences. Thinking like a psychologist means we are open to almost anything that concerns behavior. We are the real “inquiring minds need to know” profession. Historically, we are a profession of ideas. This is why therapy can be so important to those experiencing psychological trauma and distress. Therapy is a safe place where all can be explored. Our psychological mindset helps us to control our own biases and beliefs. The good that comes from this is without measurement to those who have benefited from our practice. We are the guardians of acceptance and understanding of the human condition without regard to personal ideology. This is what differentiates us from religion. Right and wrong, good and bad are not part of the psychological mindset.

The Bad

While other professions may experience positive change in the coming years, psychology practice may not be so fortunate. If we do not acknowledge the paradigm shift and identify fully as healthcare providers, we will...
Call for Proposals

The next NAPPP CE Meeting will take place on September 23rd and 24th, 2016. The meeting will take place once again in San Antonio, Texas.

We invite psychologists to submit proposals for presentations. Your proposal can be for an individual presentation or one that is part of a group discussion.

Our experience is that individuals who want to present get their proposals accepted when they submit early on. While there is no cutoff date at this time for proposals, we encourage those interested to do so as early as possible.

Please send your proposal for a presentation to

CE@nappp.org.

Save the Date!
September 23rd and 24th, 2016
become extinct. We can’t have it both ways. We cannot bill insurance companies for delivering healthcare services and then continue to identify and support a profession that was designed for professors and academic institutions. Once we become licensed and enter practice, we become a different species.

The blame that I ascribe to APA and state associations goes to the issue of not being honest with practitioners and academics. APA cannot serve practice interests while also serving academic interests. They do this because they need dues money. They corrupt and distort the true meaning of guild issues so they won’t have to act in our interests thereby mollifying our academic colleagues and keeping them in the fold. I blame APA for not admitting this glaring conflict of interest and illusory perpetuation of “working to serve practitioners.” APA appears to have no problem with their guild issues as long as they collect dues. The model of the “scientist-practitioner” does not now serve the needs of today’s practitioner. We must be able to be knowledgeable in science related issues but we are practitioners first. Physicians do not have this problem. They would never consider themselves to be “scientist-practitioners.” Research and teaching is left to others, practice is their domain and science guides practice but does not control it.

**Psychology and Change**

This does not mean that we, as individual psychologists are without responsibility. The worst thing about being a psychologist is the contradiction that we face regarding change. On the one hand we focus on the importance and ability to change when working with patients. When considering change for ourselves, however, I think that we may be too slow in recognizing what works and what does not. Much of our practice models, for example, are not conducive to the current needs of the healthcare system. Most psychologists remain in a one office, private practice.

For almost forty years most practitioners have resisted forming multi-office practices with other psychologists and healthcare professionals. The deprivation of economic and business education that we never received in graduate school is one reason for this and many psychologists have given in to the academic myth that the practice of psychology is not about business. Consequently, our training programs have become a barrier to our success as a profession. Of course, the lack of economic and business education is not the only problem with present day psychology training.

**Professional Schools Have Ruined Psychology**

When the professional school movement began in California under the vision and leadership of Dr. Nicholas Cummings, many practitioners and students were excited about the possibility that psychology would finally achieve its own domain separate from the almost religious order called Academic Psychology. Our senior colleagues will remember that those of us who sought clinical training were not viewed as “real” psychologists. There are many horror stories regarding the denigration of clinical students.

Unfortunately, as the professional school movement has become the dominant training paradigm for psychology practitioners, what we got away from has morphed into academic dominated training.

Our Psy.D. colleagues, who were and are the vanguard of a much needed change in training, have been betrayed by many of these tuition seeking psych factories. The cost of psychology training has become a significant burden on students and many will barely earn enough income to justify entering our profession. The increasing demands placed on the professional schools by the academics controlling the accrediting functions has caused tuition to increase beyond justification. As a result, the professional schools of psychology are no longer schools of psychology. They have become schools of counseling and counselors in an effort to bolster their revenues.

So, while the training institutions understand the business of training, they still refuse to offer training to help doctoral students understand the business of practice. Needless to say, but I will anyway, flooding the market with so many counselors and psychologists has significantly reduced the quality of practitioners and essentially created a ceiling on income and professional growth. Psychologists are no longer seen as premier healthcare providers but have become indistinguishable from counselors.
This has reduced our recognition as doctoral level providers. I do not think that this is what people signed up for.

**The Ugly**

Unfortunately, over the past several years we have seen professional psychology take a deep slide in public support and perception. APA, along with the silence of state associations, has bruised and beaten psychology practice. Their handling of psychologists participating in the torture of prisoners will take years to undo. The selective application of APA ethics to the active defrauding of practitioners through many years of a phony “mandatory” assessment fee has been truly ugly. However, the most ugly, in my opinion, is the continued resistance to change their behavior while making believe that they are.

There have been so many cover ups and back door manipulations that, as practitioners, only a clinical diagnosis can provide an understanding of such behavior. As clinicians we know that if a person habitually lies and knows they are lying, this behavior is very problematic, to say the least. If that same person believes that lie to be true, that too is very problematic. In both cases we are dealing with a clinical problem, perhaps even psychopathology. Yet, I have heard from some clinicians that, while the behavior of APA is concerning, APA deserves their support. I have heard similar rationalizations from Catholics about clergy child abuse. Ugly things deserve ugly talk. This is our profession and anything and anyone who denigrates the years of hard work involved in becoming a psychologist should taken to task. If not, we become the ugly ones. Clearly these are very judgmental statements but the difference is that we are not providing therapy to APA.

In conclusion, we must all take responsibility for what is good, bad, and ugly in our profession. Fortunately, I still believe that the good overshadows the bad and the ugly. As individual psychologists we have the responsibility to ensure a positive perception of the good that we provide to society. Sometimes this means acknowledging our ugly side.
Depression Treatment Alternatives
By David Reinhardt, Ph.D.

I've reported on many of the physical causes of psychological distress in past issues of The Clinical Practitioner. In this and coming issues I will present specific solutions based on healthcare science from a variety of perspectives.

Depression as a diagnosis is big business. Chemical companies hawk a variety of “me too” drugs with minor differences in beneficial and adverse effects; psychotherapists often believe only talk therapy will do; supplement salesmen claim to have the answers, while a bevy of “complementary and alternative” approaches scream at us from the internet. So, what works?

The NIMH acknowledges, “Many factors may play a role in depression, including genetics, brain biology and chemistry, and life events such as trauma, loss of a loved one, a difficult relationship, an early childhood experience, or any stressful situation.”

Add to these the influences of environmental pollution, invaders including bacteria, mycoplasma, viruses, fungi, and prions, the degradation of the nutritional content of our food, cultural pressures and financial pressures and you have quite a formidable list. With all of these contributors to mood, it seems difficult to support depression as a stand alone diagnosis.

Depression treatment is discussed in our earliest recorded health writings. The early Chinese, Egyptian, Indian and Mesopotamian healers developed mind-body treatment protocols thousands of years ago that were far less dualistic that is practiced in the US today.

A couple of years ago I was in Germany and stopped by a pharmacy to discuss the types of conflicts which NAPPP and TCP try to address in practice. The pharmacist was a wizened likeness to one of the Smith Brothers (of cough drop fame) with a knowing and peaceful air. When asked about power conflicts between allopathic physicians and pharmacists he replied, in somewhat broken English, “Those people don’t bother us. They’ve been around since the mid-eighteen hundreds. We’ve been treating people for thousands of years.”

Research in holistic treatments did not stop with the rise of single purpose dualistic psychotropics. Chinese, Ayurvedic, and Western Herb* research continues. The pharmaceutical representatives discourage use of natural substances and holistic health and call it unscientific. Information posted in TCP, the scientific journals (as opposed to drug journals) and the popular press demonstrate that chemical companies’ claims are weak to non-existent.

*A note about herbal treatments: Herbal treatments do not isolate a single chemical compound from an herb proven to be effective or a particular issue, but rather treat using the whole substance. Herbology is a step between pharmaceuticals and nutritional treatment. Herbal treatments are much less concentrated and take much higher doses. Adverse effects are quite rare.

Counterfeiting of pharmaceuticals is quite common, and counterfeiting of herbal supplements is possibly even more common. Basic nutrients such as minerals and synthetically produced vitamins and amino acids are generally reliable, even from on-line suppliers.

I buy minerals, vitamins and amino acids on-line from Vitacost.com and other retailers and consider them reliable for these types of products. I am wary of herbal supplements from health food stores and vitamin shops, but do trust the products of Life Extension Foundation, (lef.org) as being pure and well researched. For Ayurvedic herbs I trust LEF and Himalaya Herbal Healthcare (himalayausa.com). Some of the products of both LEF and Himalaya brands can
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often be found in large health food stores.

I use and recommend Evergreen Herbs for Chinese herbs and formulas. Evergreen is a professional-only line of both traditional and modern Chinese formulas that incorporate current research. Evergreen uses High Performance Liquid Chromatography (HPLC) and Thin Layer Chromatography (TLC) to test all of their products for authenticity and purity. I have arranged with Evergreen to supply their products to our professionals through my office and website CenterforHealthScience.com (CHS), and will consult with our readers at no charge to help pick the right formula for your patients. Healthcare professionals will receive 10% off retail. Please call me at 714-886-9026 for help registering as a professional provider and for help selecting Evergreen products.

Traditional Chinese Medicine

Traditional Chinese Medicine (TCM), Ayurveda, and Buddhist Medicine all see depression as a disturbance of both mind and body. They call for changes in lifestyle, nutrition and spiritual counseling, and utilize (to a greater or lesser extent) specific herbs, acupuncture and physical manipulation chosen to fit the patient’s symptoms, diagnosis, and the practitioner’s treatment principles.

TCM uses 5-Element system to understand depressive symptoms. Each element is associated with a particular strength, weaknesses, color, sound, etc. Three common 5-Element types in depression are Earth, Water, and Wood. Earth types can’t keep up. They often experience digestive deficiency, become tired and overwhelmed easily, and are prone to worry and weight gain. They become depressed as a result of deficiency. Water types have deficiencies in their ‘root’ energy. This is most associated with old age, or extreme chronic illness. Wood types get depressed because they are all bunched up. They are easy to anger. When anger is focused inward, it turns into depression. They are irritable, have short tempers, and tend to be skinnier than the Earth type. Wood types become depressed as a result of stagnation. They are easy to anger. When anger is focused inward, it turns into depression. They are irritable, have short tempers.

In looking at Patterns of Disharmony, the most important thing to remember is that organs in Chinese medicine are not the same as their western anatomical counterparts. If you have a Pattern of Disharmony affecting your “Liver Qi” or your “Heart Yin”, it is highly unlikely that anything is wrong with your western liver or heart. They capitalize the first letter of the Chinese medicine organs to make the distinction.

TCM practitioners utilize herbal formulas and acupuncture to restore Harmony. Most practitioners see liver qi stagnation as the main cause of depression. This become obvious when treating depression found during premenstrual syndrome or menopause, where a formula like Chai Hu Shu Gan Tang is quite effective. In depressive-anxiety disorders, marked by depression and sadness coexisting with anxiety and insomnia, the formula Jia Wei Xiao Yao San is used. This very old remedy is called “the happy pill” and “China’s natural Prozac” by practitioners because of its well-known antidepressant effect. Modern Chinese Herbal Medicine reflects empirical evidence from the past with recent science.

Recent studies suggest that acupuncture has the most immediate effect and may be the treatment of choice, especially when combined with psychotherapy, herbal or drug therapy. Acupuncture treatment for depression focuses on circulating the Qi and balancing the flow of energy to relieve specific symptoms.

Evergreen offers Chai Hu Shu Gan Tang (called Bupleurum & Cyperus Combination), available through CHS for $21.35 for 100 capsules. Jia Wei Xiao Yao San is called Bupleurum & Peony Formula, available through CHS for $20.35 for 100 capsules.

Evergreen offers a modern Chinese formula for depression called Shine, which is available from CHS for $25.39 for 100 capsules. Shine contains St. John’s wort and must not be used concurrently with serotonin-altering antidepressants.

Ayurveda

Ayurveda has historical roots in India. It significantly developed during the Vedic period (1500 to 500 BC) and was one of the roots of healing under Buddhism and Jainism. Humoral balance is emphasized, and suppressing natural urges is considered unhealthy and claimed to lead to illness. Ayurveda names three elemental substances, the doshas (called Vata, Pitta and Kapha), and states that a balance of the doshas results in health, while imbalance results in disease.

According to Ayurveda, symptoms of depression and
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anxiety are triggered by excessive mental and physical stress, or disruptions of natural biological rhythms. Depressive symptoms arise and are reflected in imbalance in the three doshas, Vata, Pitta, and Kapha, as well as a lack of awareness of one’s deeper, inner Self.

Most depression is considered a Kapha imbalance that is the culmination of repression of Vata and then Pitta. Initially the brain’s electrochemistry has an erratic overreaction (vata imbalance), which triggers a loss of enzymatic activity in the metabolism (pitta imbalance). Kapha responds by trying to glue everything down, bringing about heaviness, darkness, and stagnation that the mind-body interprets as the negative message of hopelessness and depression. In other words, because of specific etiological factors, vata from the colon, pitta from the intestine, or kapha from the stomach enters the general circulation and lodges in the nervous system, interferes with normal functioning of the mind and nervous system, and causes depression.

Sometimes depression is a pitta disorder. Allergies and the breakdown in metabolic processes they lead to can also disturb brain chemistry. This can cause dramatic mood swings, with depression as one of the consequences. Vata imbalance also can cause depression.

In Ayurveda, a weak Sadhaka Agni, that inner fire which is responsible for ‘digesting’ or processing emotions. We can strengthen our Sadhaka Agni and alleviate depression by lifestyle and dietary choices: (from Spirituality & Health, Treating Depression with Ayurveda)

“Practice detachment. According to the Tibetan Buddhist Canon, the Buddha said, “Attachment is the root of suffering.” Since everything on this earthly plane is continually changing – to be attached to any one thing is constant torture. Realize that nothing stays the same – and see the beauty in that.

Rise with the sun and sleep with the moon. We all know the harmful effects of not getting proper sleep. However, it’s not just about getting copious amounts of sleep – that can weaken Sadhaka Agni too.

Align your body to the circadian rhythms in nature. It’s really simple, let the sunlight be your alarm clock and let the moon be your night light...and head to bed.

Eat sattvic and some rajastic foods. In Ayurveda, depression correlates with a Kapha imbalance. The Kapha dosha, or ‘mind-body constitution’, is associated with water and earth and its qualities are slow, stable, damp, soft and heavy.

Eating a plant-based diet filled with organic produce that has lots of prana (life-force energy) can help. These fresh whole foods are unpackaged, uncanned, unprocessed, organic, non-gmo and created in nature (not a laboratory). Soaked nuts and seeds, avocados and coconuts are of particular importance.”

Particular herbs are considered effective for depression:

Ashwagandha (Withania somnifera, winter cherry) is considered one of the most important Ayurvedic herbs for promoting balance. It is commonly used to prevent anxiety and also shows promise for relieving insomnia and stress-induced depression. Ashwagandha can significantly reduce cortisol concentrations and the immunosuppressive effect of stress. LEF carries a reliable ashwagandha extract which you can view here: Ashwagandha

Brahmi (Bacopa monnieri, pennywort) Brahmi is used for Alzheimer’s disease, improving memory, anxiety, attention deficit–hyperactivity disorder (ADHD), allergic conditions, irritable bowel syndrome, and as a general tonic to fight stress. People also take brahmi to treat backache, hoarseness, mental illness, epilepsy, joint pain, and sexual performance problems in both men and women. Brahmi might increase certain brain chemicals that are involved in thinking, learning, and memory. Some research suggests that it might also protect brain cells from chemicals involved in Alzheimer’s disease. Bacopa extract is considered safe for adults when taken by mouth appropriately and short-term, up to 12 weeks. Common side effects include increased bowel movements, stomach cramps, nausea, dry mouth, and fatigue. There is not enough reliable information about the safety of taking Bacopa if pregnant or breast-feeding. LEF carries a reliable Brahmi extract which can be viewed here: Bacopa

Ayurveda has contributed saffron and curcumin to the Pharmacopoeia of naturopathic medicine. See discussion below.

Orthomolecular Medicine

An orthomolecular approach to depression looks
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at biochemical imbalances. The approach seeks to uncover any nutritional deficiencies. Orthomolecular treatment also looks at possible food allergies and toxins, with a focus on sugars, dairy products and wheat. Most recent research supports a link between depressive and other psychological symptoms and inadequate methylation, a process by which methyl groups are added to DNA, which modifies the function of the DNA. In mood and behavior disorders, investigators have found genetic polymorphisms that disrupt folic acid pathways. These patients have a greater need for folic acid supplementation. High homocysteine levels are an excellent indication of B12 and folic acid deficiency status. Depressed patients with low folic acid levels that do not respond well to antidepressants often, improve significantly with folic acid supplementation. High B12 levels are similarly associated with improved outcome in depression. Orthomolecular approaches are, by their nature, generally lacking in adverse effects; the body excretes excess levels of these nutrients. As with all approaches, it is important to monitor response, particularly when using higher than standard doses of B6, which may lead to agitation.

A typical supplement approach to depression may include zinc, B Vitamins (particularly B3, B6, Folate, B12), omega 3 fatty acids, and Vitamin C. Specific gene polymorphisms require individualized treatment by an orthomolecular specialist.

Western Naturopathic Medicine

Naturopathic medicine differs from allopathic (conventional) medicine in that it tends to trust the human body’s ability to heal itself. The naturopath’s job is to discover how the body is not functioning properly and then to find natural products and procedures that can be used to strengthen the immune system, fight off disease, restore the balance of biochemicals in the body, and otherwise restore the body to good health. Naturopaths use nutritional and herbal supplements, dietary changes, lifestyle modifications, exercise, aromatherapy, acupuncture, massage, and relaxation therapy.

The treatment selected by a naturopathic practitioner for depression depends on the causes of the condition. A common cause of depression is one’s diet: the intake of too much of some foods and too little of others. Some individuals are allergic to certain foods—gluten, for example—that may cause symptoms of depression.

Another common cause of depression is lack of adequate amounts of vitamins and minerals in one’s diet. Treatment in such cases consists of nutritional supplements, especially the B vitamins (thiamine, riboflavin, pyridoxine, folic acid, and B12), vitamin C, iron, zinc, potassium, magnesium, and selenium.

Herbal supplements may also be helpful in relieving the symptoms of depression. Among the most popular herbs a naturopath will suggest for this purpose are chaste tree (Vitex agnus castii), coleus (Coleus forskohlii), passionflower (Passiflora incarnata), sage (Salvia officinalis), skullcap (Scutellaria lateriflora), and St. John’s wort (Hypericum perforatum). Other non-herbal supplements are also known to affect mental and emotional moods and may be helpful in treating the symptoms of depression. Two common examples are the amino acids S-adenosyl methionine (SAMe) and 5-hydroxytryptophan (5-HTP).

SAMe: This dietary supplement is a synthetic form of a chemical that occurs naturally in the body. S-Adenosyl methionine is made from adenosine triphosphate (ATP) and methionine. Several clinical studies show that taking SAMe is more effective than placebo. According to The US Library of Medicine, “antidepressants are important causes of drug induced liver injury accounting for 2% to 5% of clinically apparent cases.” (http://livertox.nih.gov/Antidepressants.htm) Rather than harming your liver, SAMe has been shown to combat liver disease and arthritis pain. Practice guidelines from the American Psychiatric Association suggest SAMe as a potential alternative to conventional antidepressants for patients with major depression who are interested in using alternative therapies. In Europe, the liver is considered a significant influencer of mood. SAMe is used as a prescription drug in Europe to treat depression, possibly due to its liver healing properties. SAMe has also been studied for its potential anti-inflammatory and pain-relieving effects.

SAMe plays a role in the immune system, maintains cell membranes, and helps produce and break down brain chemicals, such as serotonin, melatonin, and dopamine. It works with vitamin B12 and folate (vitamin B9). Being deficient in either vitamin B12 or folate may reduce levels of SAMe in your body.

SAMe is available over the counter. LEF carries a reliable 400 mg dose of SAMe which can be viewed here: SAMe
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St. John’s Wort: St. John’s Wort has been extensively studied and is commonly prescribed by psychiatrists in several countries and is listed as a treatment for depression in the German Commission E monographs. The Cochrane Collaboration has found, “The available evidence suggests that the Hypericum extracts tested in the included trials a) are superior to placebo in patients with major depression; b) are similarly effective as standard antidepressants; and c) have fewer side-effects than standard antidepressants.”

Taking St. John’s wort extracts has been shown to improve mood, decrease anxiety and somatic symptoms, and decrease insomnia related to mild to severe major depression. It is proposed that the mechanism of action of St. John’s wort is due to the inhibition of reuptake of certain neurotransmitters. It is believed to induce noncompetitive reuptake inhibition of monoamines (specifically, dopamine, norepinephrine, and serotonin), GABA, and glutamate when they activate this ion channel.

St John’s wort is generally well tolerated, with an adverse effect profile similar to placebo. The NCCIH notes that combining St John’s wort with certain prescription antidepressants can lead to a “potentially life-threatening increase of serotonin.” As with synthetic antidepressants, consumption of St. John’s wort is discouraged for those with bipolar disorder. There is concern that people with bipolar depression taking St. John’s wort may be at a higher risk for mania. Commonly reported adverse effects include gastrointestinal symptoms (nausea, abdominal pain, loss of appetite, and diarrhea), dizziness, confusion, fatigue, sedation, dry mouth, restlessness, and headache. St John’s wort also decreases the levels of estrogens, such as estradiol, by speeding up its metabolism, and should not be taken by women on contraceptive pills as it upregulates the CYP3A4 cytochrome of the P450 system in the liver. St John’s wort is associated with aggravating psychosis in people who have schizophrenia.

Do not use St John’s wort concurrently with an antidepressant. St John’s wort is available over the counter. LEF carries a reliable 600 mg extract of St. John’s wort which can be viewed here: St. John’s Wort

Curcumin: Curcumin is an ingredient of turmeric, used in Indian cooking. Several studies have demonstrated that curcumin possesses antidepressant properties. Curcumin demonstrates neuroprotective action in Alzheimer’s disease, tardive dyskinesia, major depression, epilepsy, and other related neurodegenerative and neuropsychiatric disorders. The mechanism of its neuroprotective action is not completely understood. However, it has been hypothesized to act majorly through its anti-inflammatory and antioxidant properties. Also, it is a potent inhibitor of reactive astrocyte expression and thus prevents cell death. Curcumin also modulates various neurotransmitter levels in the brain.

Turmeric is generally safe. It can cause nausea and diarrhea, especially in high doses or after long-term use. It might also pose a risk of ulcers in high doses. Curcumin is poorly absorbed and, as a supplement, often mixed with piperine (a black pepper derivative) to increase absorption. The best absorption is obtained when mixed with a carrier oil, such in Life Extension Foundation’s Super Bio-curcumin. To view the LEF product click here: Super Bio-curcumin A particularly effective approach is to mix curcumin with butter, for use as a spread on toast!

Saffron: Saffron was historically used for depression in Persian traditional medicine. Saffron is derived from the flower of Crocus sativus, a native of Greece or Southwest Asia. Clinical research shows that taking saffron orally seems to improve symptoms of major depression after 6 weeks of treatment. It has shown similar efficacy to fluoxetine 10 mg twice daily in patients with mild-to-moderate depression after 6 weeks of treatment. Some clinical research shows that patients 55 years and older with dementia and probable Alzheimer’s disease treated with saffron orally have comparable cognitive and clinical outcomes to patients receiving conventional therapy with donepezil (Aricept®) 10 mg/day orally after 22 weeks of treatment. Saffron significantly improves symptoms of PMS after two menstrual cycles. Saffron is also used for insomnia, fright, shock, asthma, cough, pertussis, and as an expectorant. Saffron has been shown in limited studies to protect against and reverse adverse sexual effects from antidepressants, and may be used concurrently. Reported adverse effects of saffron are rare but may include nausea, vomiting, and headache. Death has resulted from the ingestion of doses of more than 10 g.
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Saffron is rare and quite expensive, so it is frequently counterfeited. The safest approach is to use saffron as a spice in food. Life extension Foundation (lef.org) is a reliable source for saffron extract. Click here to view their product: Satiereal®

DHEA: DHEA is a metabolic intermediate in the biosynthesis of the androgen and estrogen sex steroids. DHEA also has a variety of potential biological effects in its own right, binding to an array of nuclear and cell surface receptors, and acting as a neurosteroid. DHEA is endogenously produced in the adrenal glands and in the liver and is an important endogenous steroid hormone. In men, DHEA is also secreted by the testes. Additionally, the neurons and glial cells in the brain synthesize minute quantities. DHEA and its sulfate ester, dehydroepiandrosterone sulfate (DHEA-S), are interconvertible. DHEA-S is the storage form of DHEA. Most studies on the use of DHEA for depression support its use for this purpose. Recent research reports that high DHEA levels may be associated with successful treatment of major depression. Early evidence suggests that DHEA may benefit people who have schizophrenia. Some reports have found high DHEA levels in people with schizophrenia, while others found low levels. The effects of DHA alone are unclear. Higher DHEA levels have been linked to better cognitive function (thinking), concentration, and working memory. However, evidence to support the use of DHEA for this purpose are lacking. DHEA is also used for weight loss, adrenal insufficiency, lupus, erectile dysfunction, AIDS/HIV, chronic fatigue syndrome, coronary artery disease, fibromyalgia, blood sugar control and IBS.

Dosing: A DHEAS blood lab should be considered before trying this approach. DHEA is likely safe when taken by mouth in doses that restore normal DHEA and DHEA-S. A dose of 50 milligrams of DHEA taken by mouth daily has been shown to be safe for up to six months. In women, DHEA may cause decreased breast size, a deep voice, increased genital size, irregular periods, oily skin, and unnatural hair growth. In men, DHEA may cause aggression, breast tenderness or enlargement, decreased testes size, and urinary urgency.

Consider a DHEA-S lab test before starting DHEA, and retest periodically. This test may be ordered by your physician, or you may order it without prescription from LEF. Click here for more information: DHEA-S

DHEA is available over the counter. Life Extension Foundation sells different strengths and application types. Click here to view their 25 mg. dose: DHEA

Omega-3 Fatty Acids: Three types of omega-3 fatty acids involved in human physiology are ALA (found in plant oils), EPA, and DHA (both commonly found in marine oils). Common sources of animal omega-3 EPA and DHA fatty acids include fish oils and krill oil. Significant research shows that fish oil can reduce triglyceride levels by 20% to 50%. The prescription form, Lovanza, is FDA approved for treating hypertriglyceridemia.

The EPA component of omega-3s has been found to be effective at depressive symptoms. Some clinical research shows that taking a fish oil supplement orally might reduce the risk of progression from sub-threshold psychosis to full-blown psychotic disorders. Taking EPA orally provides modest improvement in aggressive behavior and depression in women with moderately severe borderline personality disorder. EPA modestly improves the mental state in patients with schizophrenia compared to placebo. Limited evidence supports fish oil use for prevention of restenosis following angioplasty. Cochrane found benefit for asthma in children. Omega 3’s help with atherosclerosis, diabetic neuropathy, dysmenorrhea, hypertension, and rheumatoid arthritis stiffness.

A typical Omega 3 dose (including that recommended for Lovanza) is 3 grams per day, with food. Omega 3’s are available by prescription as Lovaza for about $170 per month. Essentially identical Omega 3’s are available over the counter at nearly all supermarkets, drug and health food stores. The most popular LEF product can be found here: Omega 3

Natural approaches to treating depression are typically quite safe but should be used carefully to avoid “polypharmacy” that could lead to serotonin syndrome. Most states allow appropriately trained psychologists to discuss psychotropics and non-pharmaceuticals as well. It can be argued that this type of discussion is an important part of psychological treatment. The failure of a Psychologist to consider alternative approaches may be no different than the psychiatrist’s acceptance of the dualism of ordering a psychotropic without also ordering psychotherapy.
Ed: Why in TCP? Omerga 3’s and other fatty acids have been shown to have substantial effects on mood and cognition.

Organic milk and meat contain around 50% more beneficial omega-3 fatty acids than conventionally produced products, new research has shown.

Key findings:
- both organic milk and meat contain around 50% more beneficial omega-3 fatty acids than conventionally produced products
- organic meat had slightly lower concentrations of two saturated fats (myristic and palmitic acid) that are linked to an increased risk of cardiovascular disease
- organic milk contains 40% more conjugated linoleic acid (CLA)
- organic milk contains slightly higher concentrations of iron, Vitamin E and some carotenoids
- conventional milk contained 74% more of the essential mineral iodine and slightly more selenium

In the largest systematic reviews of their kind, an international team of experts led by Newcastle University, UK, has shown that both organic milk and meat contain around 50% more beneficial omega-3 fatty acids than conventionally produced products.

Analysing data from around the world, the team reviewed 196 papers on milk and 67 papers on meat and found clear differences between organic and conventional milk and meat, especially in terms of fatty acid composition, and the concentrations of certain essential minerals and antioxidants.

Publishing their findings today in the British Journal of Nutrition, the team say the data show a switch to organic would go some way towards increasing our intake of nutritionally important fatty acids.

Chris Seal, Professor of Food and Human Nutrition at Newcastle University explains:

“Omega-3s are linked to reductions in cardiovascular disease, improved neurological development and function, and better immune function.

“Western European diets are recognized as being too low in these fatty acids and the European Food Safety Authority (EFSA) recommends we should double our intake.

“But getting enough in our diet is difficult. Our study suggests that switching to organic would go some way towards improving intakes of these important nutrients.”

**Western European diets are too low in omega-3 fatty acids**

The systematic literature reviews analyzed data from around the world and found that organic milk and meat have more desirable fat profiles than conventional milk and meat.

Most importantly, a switch from conventional to organic would raise omega-3 fat intake without increasing calories and undesirable saturated fat. For example, half a liter of organic full fat milk (or equivalent fat intakes from other dairy products like butter and cheese) provides an estimated 16% (39 mg) of the recommended, daily intake of very long-chain omega-3, while conventional milk provides 11% (25 mg).

Other positive changes in fat profiles included lower levels of myristic and palmitic acid in organic meat and a lower omega-3/omega-6 ratio in organic milk. Higher levels of fat soluble vitamins such as vitamin E and carotenoids and 40% more CLA in organic milk were also observed.

The study showed that the more desirable fat profiles in organic milk were closely linked to outdoor grazing and low concentrate feeding in dairy diets, as prescribed by organic farming standards.

The two new systematic literature reviews also describe recently published results from several mother and child cohort studies linking organic milk, dairy product and vegetable consumption to a reduced risk of certain
Benefits of organic on the brain

diseases. This included reduced risks of eczema and hypospadias.

Newcastle University’s Professor Carlo Leifert, who led the studies, said:

“People choose organic milk and meat for three main reasons: improved animal welfare, the positive impacts of organic farming on the environment, and the perceived health benefits. But much less is known about impacts on nutritional quality, hence the need for this study.

“Several of these differences stem from organic livestock production and are brought about by differences in production intensity, with outdoor-reared, grass-fed animals producing milk and meat that is consistently higher in desirable fatty acids such as the omega-3s, and lower in fatty acids that can promote heart disease and other chronic diseases.”

Avoiding iodine over- and under-supply from milk is a challenge

The study also found 74% more iodine in conventional milk which is important information, especially for UK consumers, where iodized table salt is not widely available.

Iodine is low in most foods, except seafood, and the World Health Organisation (WHO) recommends Iodine fortification of table salt to address this. Iodine fortification of cattle feeds is also widely used to increase iodine concentrations in both organic and conventional milk.

Gillian Butler, co-author and senior lecturer in animal nutrition at Newcastle University, explains:

“There is a relatively narrow margin between dietary Iodine deficiency (<140 µg/day) and excessive intakes (> 500 µg/day) from our diet which can lead to thyrotoxicosis.

“Optimising iodine intake is therefore challenging, since globally there seems to be as much concern about excessive rather than inadequate intake.”

In the USA, China, Brazil and many European countries, where Iodine fortified salt is widely used, elevated levels of iodine in milk may increase the risk of excessive intake for individuals with high dairy consumption. For this reason the European Food Safety Authority (EFSA) has proposed a reduction in the permitted level of iodine in cattle feed from 5 to 2 mg iodine per kg of feed.

However, in the UK, where iodized salt is not widely available, the population relies more on milk and dairy products for adequate iodine supply. National Diet and Nutrition Survey data (NDNS) suggest that milk and dairy products supply between 31-52% of iodine in the UK diet.

The daily recommended intake of iodine in the UK is 140 µg/day and just over half comes from dietary sources other than milk/dairy products. Based on results from the study, half a litre of milk would provide 53% of and 88% of the daily recommended intake from organic and conventional milk respectively. However, pregnant and breastfeeding women have a higher iodine requirement (250 µg/day) and are therefore more at risk of iodine deficiency, which could affect neurological development in babies.

Further evidence of the health benefits of organic food

The work builds on a previous study by the team – involving experts from the UK, US, France, Italy, Switzerland, Norway and Poland – investigating the composition of organic and conventionally-grown crops.

This previous study – also published in the British Journal of Nutrition – showed that organic crops and crop-based foods are up to 60% higher in a number of key antioxidants than conventionally-grown crops and contained less of the toxic metal cadmium.

“We have shown without doubt there are composition differences between organic and conventional food. Taken together, the three studies on crops, meat and milk suggest that a switch to organic fruit, vegetables, meat and dairy products would provide significantly higher amounts of dietary antioxidants and omega-3 fatty acids,” concludes Professor Leifert.

“We need substantially more, well designed studies and surveys before we can accurately estimate composition differences in meat from different farm animals and for many nutritionally important compounds (vitamins, minerals, toxic metal and pesticide residues), as there is currently too little data to make comparisons.

“However, the fact that there are now several mother and child cohort studies linking organic food
Benefits of organic on the brain

consumption to positive health impacts shows why it is important to further investigate the impact of the way we produce our food on human health.

The authors highlight that only a small number of studies have been carried out comparing organic and non-organic meat, and that even significant results may still carry a high level of uncertainty.

Newcastle University New release 2/12/16, based on 2 studies appearing in British Journal of Nutrition, February 2016

Omega-3 fatty acids in the treatment of psychiatric disorders.

The importance of omega-3 fatty acids for physical health is now well recognized and there is increasing evidence that omega-3 fatty acids may also be important to mental health. The two main omega-3 fatty acids in fish oil, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) have important biological functions in the CNS. DHA is a major structural component of neuronal membranes, and changing the fatty acid composition of neuronal membranes leads to functional changes in the activity of receptors and other proteins embedded in the membrane phospholipid. EPA has important physiological functions that can affect neuronal activity. Epidemiological studies indicate an association between depression and low dietary intake of omega-3 fatty acids, and biochemical studies have shown reduced levels of omega-3 fatty acids in red blood cell membranes in both depressive and schizophrenic patients. Five of six double-blind, placebo-controlled trials in schizophrenia, and four of six such trials in depression, have reported therapeutic benefit from omega-3 fatty acids in either the primary or secondary statistical analysis, particularly when EPA is added on to existing psychotropic medication. Individual clinical trials have suggested benefits of EPA treatment in borderline personality disorder and of combined omega-3 and omega-6 fatty acid treatment for attention-deficit hyperactivity disorder. The evidence to date supports the adjunctive use of omega-3 fatty acids in the management of treatment unresponsive depression and schizophrenia. As these conditions are associated with increased risk of coronary heart disease and diabetes mellitus, omega-3 fatty acids should also benefit the physical state of these patients. However, as the clinical research evidence is preliminary, large, and definitive randomized controlled trials similar to those required for the licensing of any new pharmacological treatment are needed. Drugs. 2005;65(8):1051-9.

Essential fatty acids and the brain: possible health implications

Linoleic and a-linolenic acid are essential for normal cellular function, and act as precursors for the synthesis of longer chained polyunsaturated fatty acids (PUFAs) such as arachidonic (AA), eicosapentaenoic (EPA) and docosahexaenoic acids (DHA), which have been shown to partake in numerous cellular functions affecting membrane fluidity, membrane enzyme activities and eicosanoid synthesis. The brain is particularly rich in PUFAs such as DHA, and changes in tissue membrane composition of these PUFAs reflect that of the dietary source. The decline in structural and functional integrity of this tissue appears to correlate with loss in membrane DHA concentrations. Arachidonic acid, also predominant in this tissue, is a major precursor for the synthesis of eicosanoids, that serve as intracellular or extracellular signals. With aging comes a likely increase in reactive oxygen species and hence a concomitant decline in membrane PUFA concentrations, and with it, cognitive impairment. Neurodegenerative disorders such as Parkinson’s and Alzheimer’s disease also appear to exhibit membrane loss of PUFAs. Thus it may be that an optimal diet with a balance of n-6 and n-3 fatty acids may help to delay their onset or reduce the insult to brain functions which these diseases elicit.

International Journal of Developmental Neuroscience Volume 18, Issues 4–5, 1
Featured Products...For Depressive Symptoms

Chinese medicine interprets depressive symptoms to be caused by prolonged stagnation of qi, blood, dampness or food. Evergreen offers 3 formulas designed to break up stagnation and provide relief.

**Evergreen Shine™**
A modern adaptation of a Traditional Chinese Formula. **Shine™** is formulated to specifically treat depressive symptoms with low energy, prolonged sadness or irritability and lack of interest in daily activities. This formula contains St. John’s wort, proven to be much safer and no less effective than SSRIs. This product should not be taken concurrently with SSRIs or other serotonin enhancers.

**Evergreen Bupleurum & Peony Combination**
One of the most widely prescribed formulas in American TCM clinics, Jia Wei Xiao Yao San is a classic formula that in Chinese terms, soothes the liver, strengthens the spleen and blood, and clears heat. Symptoms may include depression, irritability, vertigo/dizziness, anxiety, restlessness and insomnia. Contains no St. John’s wort and may be used concurrently with pharmaceutical antidepressants.

**Evergreen Bupleurum & Cyerus Combination**
One of the most commonly used and respected TCM formulas. This classic formula, *(Chai Hu Shu Gan Tang)* has been used for over 600 years to treat Liver Qi stagnation associated with depressive symptoms. This is a cooler formula than Bupleurum & Peony combination *(Jia Wei Xiao Yao San)* and is particularly effective when irritability is present. May be used concurrently with pharmaceutical antidepressants.

**Why Evergreen?** Evergreen Herbs use the best of modern technology to bring the essence of traditional Chinese herbology to mainstream America. Evergreen pharmaceutical-grade, full-spectrum extracts are your assurance of correct species and maximum potency. Evergreen’s herbs are tested with HPLC for qualitative and quantitative analysis.

Statements contained herein have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat and cure or prevent disease. Information provided by CHS is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice.
In March 2015 a group of academics, patients, and relatives published an opinion piece in a national newspaper in the Netherlands, proposing that we drop the “essentially contested” term “schizophrenia,” with its connotation of hopeless chronic brain disease, and replace it with something like “psychosis spectrum syndrome.”

We launched two websites (www.schizofreniebestaatniet.nl/english/ and www.psychosenet.nl) aimed at informing the public about the nature of psychotic illness and helping patients deal with pervasive, unscientifically pessimistic, organic views of their symptoms. The timing was no coincidence.

Several recent papers by different authors have called for modernized psychiatric nomenclature, particularly regarding the term “schizophrenia.” Japan and South Korea have already abandoned this term.

The classification of mental disorders, as laid down in ICD-10 (International Classification of Diseases, 10th revision) and DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, fifth edition), is complicated, particularly psychotic illness.

Currently, psychotic illness is classified among myriad categories, including schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, brief psychotic disorder, depression/bipolar disorder with psychotic features, substance induced psychotic disorder, and psychotic disorder not otherwise classified. Categories such as these do not represent diagnoses of discrete diseases, because these remain unknown; rather, they describe how symptoms can cluster, to allow grouping of patients.

This elegant solution allows clinicians to say, for example, “You have symptoms of psychosis and mania, and we classify that as schizoaffective disorder. If your psychotic symptoms disappear we may reclassify it as bipolar disorder. If, on the other hand, your mania symptoms disappear and your psychosis becomes chronic, we may re-diagnose it as schizophrenia.”

“That is how our classification system works. We don’t know enough to diagnose real diseases, so we use a system of symptom based classification. The DSM-5 does this differently than ICD-10—but that does not matter, because it’s only a classification.”

If everybody agreed to use the terminology in ICD-10 and DSM-5 in this fashion, there would be no problem. However, this is not what is generally communicated, particularly regarding the most important category of psychotic illness: schizophrenia.

The American Psychiatric Association, which publishes the DSM, on its website describes schizophrenia as “a chronic brain disorder,” and academic journals describe it as a “debilitating neurological disorder,” a “devastating, highly heritable brain disorder,” or a “brain disorder with predominantly genetic risk factors.”

Current language suggests discrete disease

This language is highly suggestive of a distinct, genetic brain disease. Strangely, no such language is used for other categories of psychotic illness (schizophreniform disorder, schizoaffective disorder, delusional disorder, brief psychotic disorder, and so on). In fact, even though they constitute 70% of psychotic illness morbidity (only 30% of people with psychotic illness have symptoms that meet the criteria for schizophrenia), these other categories tend be ignored in the academic literature (see box) and on websites of professional bodies. They are certainly not referred to as brain disorders or similar. It’s as if they don’t exist.

What remains is the paradox that 30% of psychotic illness morbidity is portrayed as a discrete brain disease; the other 70% of the morbidity is communicated only in classification manuals.

Psychosis susceptibility syndrome

Scientific evidence indicates that the different psychotic categories can be viewed as part of the same spectrum syndrome, with a lifetime prevalence of 3.5%,10 of which “schizophrenia” represents the minority (less than a third) with the poorest outcome, on average. However, people with this psychosis
spectrum syndrome—or, as patients have recently suggested, psychosis susceptibility syndrome6—display extreme heterogeneity, both between and within people, in psychopathology, treatment response, and outcome.

The best way to inform the public and provide patients with diagnoses, therefore, is to forget about “devastating” schizophrenia as the only category that matters and start doing justice to the broad and heterogeneous psychosis spectrum syndrome that really exists.

ICD-11 should remove the term “schizophrenia.”

BMJ 2016;352:i375

Bipolar disorder is not uncommon, is associated with high disability and risk of suicide, often presents with depression, and can go unrecognized. To determine the prevalence of unrecognized bipolar disorder among those prescribed antidepressants for depressive or anxiety disorder in UK primary care; whether those with unrecognized bipolar disorder have more severe depression than those who do not; and the accuracy of a screening questionnaire for bipolar disorder, the Mood Disorder Questionnaire (MDQ), in this setting, an observational primary care study of patients on the lists of 21 general practices in West Yorkshire aged 16–40 years and prescribed antidepressant medication was conducted. Participants were recruited using primary care databases, interviewed using a diagnostic interview, and completed the screening questionnaire and rating scales of symptoms and quality of life.

The prevalence of unrecognized bipolar disorder was 7.3%. Adjusting for differences between the sample and a national database gives a prevalence of 10.0%. Those with unrecognized bipolar disorder were younger and had greater lifetime depression. The predictive value of the MDQ was poor.

Conclusions: Among people aged 16–40 years prescribed antidepressants in primary care for depression or anxiety, there is a substantial proportion with unrecognized bipolar disorder. When seeing patients with depression or anxiety disorder, particularly when they are young or not doing well, clinicians should review the life history for evidence of unrecognized bipolar disorder. Some clinicians might find the MDQ to be a useful supplement to non-standardized questioning.

Br J Gen Pract. 2016 Feb;66(643):e71-7

Ed: The Mood Disorder Questionnaire (reproduced below) determined 7.3% of this sample of antidepressant users had bipolar disorder, and adjusted this ratio to 10% against a “national database.” They cited risks of suicide and disability. The authors also state that “The predictive value of the MDQ was poor,” presumably because it came up with a lower ratio, but recommended its use. Could the actual issue be the suicide risk associated with use of “anti”depressants, and overprescribing of them?

Unrecognised bipolar disorder among UK primary care patients prescribed antidepressants:
**New onset executive function difficulties at menopause: a possible role for lisdexamfetamine.**

Reports of cognitive decline, particularly in the domains of executive functions (EFs), are common among menopausal women. This study aims to determine the impact of the psychostimulant lisdexamfetamine (LDX) on subjective and objective cognitive function among menopausal women who report new-onset EF complaints. Thirty-two healthy perimenopausal and early postmenopausal women experiencing mid-life-onset executive function difficulties as measured using the Brown Attention Deficit Disorder Scale (BADDs) were administered LDX 40-60 mg/day for 4 weeks in this double-blind, placebo-controlled, cross-over study. Diagnosis of lifetime ADHD was exclusionary. BADDs total and subscale scores and performance on verbal memory and working memory tasks were outcomes of interest.

Analyses revealed a significant effect of LDX treatment over placebo for total BADDs scores (p=0.0001) and for four out of the five BADDs subscales (all p<0.004). LDX treatment also resulted in significant improvement in delayed paragraph recall (p=0.018), but there was no significant effect of treatment on other cognitive measures. Systolic blood pressure (p=0.017) and heart rate increased significantly (p=0.006) when women were on LDX but remained, on average, within the normal range.

Conclusions: LDX 40-60 mg/day was well tolerated and improved the subjective measures of executive function as well as objective measures of delayed verbal recall in this sample of healthy menopausal women.

**Association of Proton Pump Inhibitors With Risk of Dementia**

Medications that influence the risk of dementia in the elderly can be relevant for dementia prevention. Proton pump inhibitors (PPIs) are widely used for the treatment of gastrointestinal diseases but have also been shown to be potentially involved in cognitive decline. To examine the association between the use of PPIs and the risk of incident dementia in the elderly, we conducted a prospective cohort study using observational data from 2004 to 2011, derived from the largest German statutory health insurer, Allgemeine Ortskrankenkassen (AOK). Data on inpatient and outpatient diagnoses (coded by the German modification of the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision) and drug prescriptions (categorized according to the Anatomical Therapeutic Chemical Classification System) were available on a quarterly basis. Data analysis was performed from August to November 2015.

A total of 73,679 participants 75 years of age or older and free of dementia at baseline were analyzed. The patients receiving regular PPI medication (n=2950; mean [SD] age, 83.8 [5.4] years; 77.9% female) had a significantly increased risk of incident dementia compared with the patients not receiving PPI medication (n=70729; mean [SD] age, 83.0 [5.6] years; 73.6% female) (hazard ratio, 1.44 [95% CI, 1.36-1.52]; P<.001).

Conclusions: The avoidance of PPI medication may prevent the development of dementia. This finding is supported by recent pharmacoepidemiological analyses on primary data and is in line with mouse models in which the use of PPIs increased the levels of ß-amyloid in the brains of mice. Randomized, prospective clinical trials are needed to examine this connection in more detail.
Science Notes- Drugs

Ed: Western Medicine has a problem. Vitamin B12 deficiency has been very well demonstrated to result in dementia. PPIs have been well demonstrated to result in B12 deficiency. “Almost half of elderly residents in nursing homes who are prescribed proton pump inhibitors (PPIs) are receiving them without an evidence-based indication, according to a large database study presented here at Digestive Disease Week (DDW) 2015” (see abstract which follows). Physicians are hard pressed to find time to do any professional reading. I’ve rarely seen a physician in my hospitals’ reference libraries, and when they do it typically is to read one of the major drug sales magazines such as JAMA, shown in study after study to be extremely biased. That this PI study was published is great, even though it is very old news. How can this system be improved? I suggest the following: 1. Government funding of scientific journals, or as a minimum require free distribution of all studies funded even partially with government money. 2. Require meaningful continuing education for health professionals, rather than the drug presentations which now are the norm. 3. Require physician training programs to include at least a minimum of one class in statistics and study design, so physicians can understand what they are looking at. 4. Increase the course requirements for physician training to include an unbiased course in holistic health, and increase the nutrition requirement beyond the one semester class now taught.

Many Nursing Home Residents Receive PPIs Inappropriately

Almost half of elderly residents in nursing homes who are prescribed proton pump inhibitors (PPIs) are receiving them without an evidence-based indication, according to a large database study presented here at Digestive Disease Week (DDW) 2015. Of 1.5 million nursing home residents, 355,600 received at least one PPI. The main reason seemed to be for chronic cough, for which evidence of efficacy is lacking, said Pratik Rane, a doctoral candidate in the Pharmaceutical Health Outcomes and Policy program at the University of Houston, in Texas…”Physicians were cautious in prescribing PPIs without an indication for patients with osteoporosis in the current study,” Rane observed. They were also less likely to be prescribed to patients receiving a selective serotonin reuptake inhibitor (OR, 0.83). However, this is a group that is at increased risk for upper gastroesophageal reflux disease. “Recent evidence supports the use of PPIs to limit such risk,” he explained...

Especially troubling is the high use of PPIs for chronic cough, said Rane. “PPIs could possibly be prescribed for underlying laryngopharyngeal reflux disease. There’s a need for more evidence on their use for chronic cough due to acid reflux.”


Ed: I was successful at reducing PPI use in several skilled nursing facilities through a combination of staff training and physician challenges, coupled with easy to implement care and environmental interventions. These interventions should be in the Psychologist’s grab bag of tools, working with all patients: 1. Do NOT lay down to nap after a meal or snack. Keep the upper body elevated, go for a walk, participate in an activity for at least 1/2 hour after eating. 2. Expose yourself to food smells, provide olfactory stimulation 15 to 30 minutes before meals. This is vital in sterile nursing home environments, but also at home for those eating leftovers, frozen or delivered meals. This will allow more timely release of gastric secretions, better mixing, reduced reflux, and will stimulate appetite for marasma (failure to thrive). Some nursing homes have bread makers at the nursing station, which are timed to bake 1/2 hour before meals. Others place a crock pot with hot peppermint tea on a cart and roll it past and into rooms. Otis Spunkmeyer offers a free cookie oven and merchandising program for businesses that want to offer freshly baked cookies in their facility. This has proven amazingly and inexpensively effective in my facilities.

Reducing Antipsychotic Medications in Elderly Patients is Associated With Fewer Falls

Reducing the dosages of antipsychotic medications prescribed to geriatric patients may help lower the rate of falls in this patient population, according to a prospective study presented here on February 23 at the 45th Annual Meeting of the Society of Critical Care Medicine (SCCM). Frederick B. Rogers, MD, MS, Lancaster General Hospital, Lancaster, Pennsylvania, and colleagues instituted a fall-prevention medication-intervention program to reduce dosages of antipsychotic medications in patients at a local geriatric living facility, beginning in January 2014.

The investigators found that the rate of falls decreased from 9.4% pre-intervention to 7.6% post-intervention (P = .04).
Medication reductions were determined on an individual basis, under the discretion of an in-house pharmacist and medical director, for all residents receiving antipsychotics. Linear-trend tests assessed fall rates (total falls/total residents) from 2013 to 2014 (pre-intervention), and were compared with fall rates from 2014 to 2015 (post-intervention). During the study period (2013–2015), no statistically significant changes in living facility demographics were observed.

While Dr. Rogers feels that “patients should be receiving medication dosages that adequately combat their symptoms,” these results, he noted, indicate that antipsychotic medications place geriatric patients at an increased risk for falls.

Caregiver medication reviews and reductions in antipsychotic medications are crucial to reducing falls, the investigators concluded.

The incidence of falls among individuals 65 years and older is approximately 30%. In all, 20% to 30% of these falls result in moderate to severe injuries.

Society of Critical Care Medicine Feb. 24, 2016

**Nonpharmacologic Versus Pharmacologic Treatment of Adult Patients With Major Depressive Disorder: A Clinical Practice Guideline From the American College of Physicians**

The American College of Physicians (ACP) developed this guideline to present the evidence and provide clinical recommendations on the comparative effectiveness of treatment with second-generation antidepressants versus nonpharmacologic treatments for major depressive disorder in adults.

Methods: This guideline is based on a systematic review of published, English-language, randomized, controlled trials from 1990 through September 2015 identified using several databases and through hand searches of references of relevant studies. Interventions evaluated include psychotherapies, complementary and alternative medicines (including acupuncture, ω-3 fatty acids, S-adenosyl-l-methionine, St. John’s wort [Hypericum perforatum]), exercise, and second-generation antidepressants. Evaluated outcomes included response, remission, functional capacity, quality of life, reduction of suicidality or hospitalizations, and harms. The target audience for this guideline includes all clinicians, and the target patient population includes adults with major depressive disorder. This guideline grades the evidence and recommendations using ACP’s clinical practice guidelines grading system.

Recommendation: ACP recommends that clinicians select between either cognitive behavioral therapy or second-generation antidepressants to treat patients with major depressive disorder after discussing treatment effects, adverse effect profiles, cost, accessibility, and preferences with the patient (Grade: strong recommendation, moderate-quality evidence).

Ann Intern Med. Published online February 9, 2016

Ed: Congratulations to the ACP for finally recognizing the truth about “anti”depressants. The lead author of this guideline, Amir Qaseem, told Medscape, “Physicians may be surprised to learn CBT is as effective as antidepressants. They are often more likely to recommend antidepressants first because prescribing medication does not require finding a provider and lining up services and meetings, as CBT does, and because the scope of what is involved with therapy may be unclear to primary care physicians, he said. But the trade-off may be the potential for more adverse effects. ‘[SGAs] tend to have more harms,’ he explained, including headaches, insomnia, constipation, diarrhea, sexual dysfunction, dizziness, and drowsiness. The guidelines also note that harms associated with SGAs are probably underrepresented in the trials studied. The guidelines also note that harms associated with SGAs are probably underrepresented in the trials studied. The guidelines are in line with American Psychiatric Association guidelines on major depressive disorder from 2010, which also showed that CBT and SGAs are similarly effective, said Laura Fochtmann, MD, MBI, professor of psychiatry, pharmacological sciences, and biomedical informatics at Stony Brook University School of Medicine in New York. She told Medscape Medical News there are several factors that should be considered when physicians talk with their patients about which to choose: whether there is a trained CBT provider in the patient’s vicinity, whether the patient is covered by insurance for the service and whether the available provider accepts the insurance, whether the patient can get appointments in evening hours, and what the patient prefers.

“There are all sorts of barriers to psychotherapies that aren’t present with medications,” she said. “It is sometimes seen as an easier option to take medication.” She noted that this may have led to the prevalence of medication over therapy, “even though we’ve known for quite
### Science Notes- Drugs

a while that they were equally efficacious.”

Interestingly, these people continue to use wording such as “anti”depressants “ tend to have more harms.” What harms are they referring to for therapy? Therapy DOES NOT cause worsening of depression in 8% of recipients. Therapy DOES NOT cause sexual dysfunction in apparently everyone, significantly so in about 1/3 of recipients, and does not cause failed relationships. Therapy DOES NOT cause weight changes, nausea, and headaches.

### Alternate Approaches

#### Higher brain BDNF gene expression is associated with slower cognitive decline in older adults

We tested whether brain-derived neurotrophic factor (BDNF) gene expression levels are associated with cognitive decline in older adults. Five hundred thirty-five older participants underwent annual cognitive assessments and brain autopsy at death. BDNF gene expression was measured in the dorsolateral prefrontal cortex. Linear mixed models were used to examine whether BDNF expression was associated with cognitive decline adjusting for age, sex, and education. An interaction term was added to determine whether this association varied with clinical diagnosis proximate to death (no cognitive impairment, mild cognitive impairment, or dementia). Finally, we examined the extent to which the association of Alzheimer disease (AD) pathology with cognitive decline varied by BDNF expression.

Higher brain BDNF expression was associated with slower cognitive decline (p < 0.001); cognitive decline was about 50% slower with the 90th percentile BDNF expression vs 10th. This association was strongest in individuals with dementia. The level of BDNF expression was lower in individuals with pathologic AD (p = 0.006), but was not associated with macroscopic infarcts, Lewy body disease, or hippocampal sclerosis. BDNF expression remained associated with cognitive decline in a model adjusting for age, sex, education, and neuropathologies (p < 0.001). Furthermore, the effect of AD pathology on cognitive decline varied by BDNF expression such that the effect was strongest for high levels of AD pathology (p = 0.015); thus, in individuals with high AD pathology (90th percentile), cognitive decline was about 40% slower with the 90th percentile BDNF expression vs 10th.

#### Is basic science disappearing from medicine?
The decline of biomedical research in the medical literature

Explosive growth in our understanding of genomics and molecular biology have fueled calls for the pursuit of personalized medicine, the notion of harnessing biologic variability to provide patient-specific care. This vision will necessitate a deep understanding of the underlying pathophysiology in each patient. Medical journals play a pivotal role in the education of trainees and clinicians, yet we suspected that the amount of basic science in the top medical journals has been in decline. We conducted an automated search strategy in PubMed to identify basic science articles and calculated the proportion of articles dealing with basic science in the highest impact journals for 8 different medical specialties from 1994 to 2013. We observed a steep decline (40–60%) in such articles over time in almost all of the journals examined. This rapid decline in basic science from medical journals is likely to affect practitioners’ understanding

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<th>BDNF expression vs 10th.</th>
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<td>Conclusions: Higher brain BDNF expression is associated with slower cognitive decline and may also reduce the deleterious effects of AD pathology on cognitive decline.</td>
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<td>Neurology, 2016; DOI: 10.1212/WNL.0000000000002387</td>
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Ed:”BDNF acts on certain neurons of the central nervous system and the peripheral nervous system, helping to support the survival of existing neurons, and encourage the growth and differentiation of new neurons and synapses. In the brain, it is active in the hippocampus, cortex, and basal forebrain—areas vital to learning, memory, and higher thinking. It is also expressed in the retina, motor neurons, the kidneys, saliva, and the prostate.” (WIKI) Decreased expression of BDNF has been linked to schizophrenia, memory development, depression, epilepsy, Alzheimer’s, drug addiction, obesity, eczema and post-chemotherapy cognitive impairment.

BNDF synthesis is increased by both resistance and aerobic exercise, intermittent fasting, and sun exposure. It is inhibited by sugar and saturated fat intake. Supplements which may help to increase BDNF include niacin, curcumin, green tea, omega 3 fatty acids, and resveratrol.
of and interest in the basic mechanisms of disease and therapy. In this Life Sciences Forum, we discuss why this decline may be occurring and what it means for the future of science and medicine.

The FASEB Journal, 2015; 30 (2): 515

Ed: Healthcare is not approached as a science by most allopaths, but rather as an “art.” Unfortunately, medical students are not taught statistics or study design, but rather are encouraged to fill the math prerequisite with calculus (Harvard Medical School, on the web). As this study shows, “medical” journals, for the most part, are marketing organs for chemical companies.

Usual Care for Adolescent Depression From Symptom Identification Through Treatment Initiation

Published guidelines describing effective adolescent depression care in primary care settings include screening, assessment, treatment initiation, and symptom monitoring. It is unclear the extent to which these steps are documented in patient health records. To determine rates of appropriate follow-up care for adolescents with newly identified depression symptoms in 3 large health systems, an analysis was conducted from March to September 2014, structured data retrospectively extracted from electronic health records were analyzed for 3 months following initial symptom identification to determine whether the patient was followed up and, if so, whether treatment was initiated and/or symptoms were monitored. Records were collected from 2 large health maintenance organizations in the western United States and a network of community health centers in the Northeast. The study group included adolescents (N=4612) with newly identified depression symptoms, defined as an elevated score on the Patient Health Questionnaire (=10) and/or a diagnosis of depression.

Rates of treatment initiation, symptom monitoring, and follow-up care documented within 3 months of initial symptom identification were identified. Among the 4612 participants, the mean (SD) age at index event was 16.0 (2.3) years, and 3060 were female (66%). Treatment was initiated for nearly two-thirds of adolescents (79% of those with a diagnosis of major depression; n=1023); most received psychotherapy alone or in combination with medications. However, in the 3 months following identification, 36% of adolescents received no treatment, 68% did not have a follow-up symptom assessment, and 19% did not receive any follow-up care.

Further, 40% of adolescents prescribed antidepressant medication did not have any documentation of follow-up care for 3 months. Younger age (ages 15-17 years) and ages 18-20 years, more severe initial symptoms, and receiving a diagnosis (major depression/dysthymia and unspecified depression/adjustment disorder were significantly associated with treatment initiation. Differences in rates of follow-up care were evident between sites, suggesting that differences within health systems may also affect care received.

Conclusions: Most adolescents with newly identified depression symptoms received some treatment, usually including psychotherapy, within the first 3 months after identification. However, follow-up care was low and substantial variation existed between sites. These results raise concerns about the quality of care for adolescent depression.

JAMA Pediatrics 2016.

Temporal Cognitive Decline Associated With Exposure to Infectious Agents in a Population-based, Aging Cohort.

Numerous cross-sectional studies have related exposure to neurotropic infectious agents with cognitive dysfunction in older adults, however, the temporal sequence is uncertain.

In a representative, well-characterized, population-based aging cohort, we determined whether the temporal trajectories of multiple cognitive domains are associated with exposure to cytomegalovirus (CMV), Herpes Simplex virus, type 1 (HSV-1), Herpes Simplex virus, type 2 (HSV-2), or Toxoplasma gondii (TOX). Complex attention, executive functions, memory, language, and visuospatial function were assessed annually for 5 years among consenting individuals. Study entry IgG antibody titers indexing exposure to each infectious agent were examined in relation to slopes of subsequent temporal cognitive decline using multiple linear regressions adjusted for potential confounders.

The IgG levels for HSV-2 were significantly associated with baseline cognitive domain scores (N=1022 participants). Further, the IgG levels for HSV-2, TOX, and CMV, but not HSV-1 were significantly associated with greater temporal cognitive decline that varied by type of infection.

Conclusions: Exposure to CMV, HSV-2, or TOX is as-
associated with cognitive deterioration in older individuals, independent of general age-related variables. An increased understanding of the role of infectious agents in cognitive decline may lead to new methods for its prevention and treatment.


Ed: There is no effective treatment to remove viruses from the body. Viruses play a major role in mental health and other disorders, including schizophrenia and depression. CMV, a member of the herpes family, is very common, affecting over half of the population. It can cause microcephaly in babies, just as the current Zika scare. It is strongly linked to hypertension. Viruses often lie dormant within the nervous system causing no problems, emerging periodically to cause a variety of symptoms, such as shingles, HTN and other issues. It is during this active phase that antiviral pharmaceuticals and botanicals can help by blocking viral replication. This leads to suppression, but not cure. Natural approaches to virus control include zinc (lozenges and topical creams), lauric acid (from coconut, Lauracodin®), pau d’arco (from a rain forest tree), echinacea, garlic, elderberry and oregano. Selection of an appropriate botanical should be based on type of infection.

The Role of Curcumin Administration in Patients with Major Depressive Disorder: Mini Meta-Analysis of Clinical Trials

Major depression is a common, recurrent, and chronic disease that negatively affects the quality of life and increases the risk of mortality. Several studies have demonstrated that curcumin, the yellow-pigmented substance of the turmeric, possesses antidepressant properties. The aim of this review is to meta-analytically assess the antidepressant effect of curcumin in patients with major depressive disorders. We extensively searched the literature until August 2015. The random-effect model was used to calculate the pooled standardized difference of means (SMD). Subgroup analyses were also performed to examine the effect of different study characteristics on the overall model. Six clinical trials met the inclusion criteria. Overall, curcumin administration showed a significantly higher reduction in depression symptoms [SMD=-0.34; 95% CI=-0.56, -0.13; p=0.002]. Subgroup analyses showed that curcumin had the highest effect when given to middle-aged patients (SMD=-0.36; 95% CI=-0.59, -0.13; p=0.002), and at higher doses (SMD=-0.36; 95% CI=-0.59, -0.13; p=0.002).

Conclusions: We conclude that there is supporting evidence that curcumin administration reduces depressive symptoms in patients with major depression.

Phytotherapy Research 27 NOV 2015

Attention-deficit/hyperactivity disorder developmental trajectories related to parental expressed emotion.

In the transition from childhood to adolescence, attention-deficit/hyperactivity disorder (ADHD) developmental trajectories diverge. Family environment, as indexed by parental expressed emotion, may moderate these trajectories. 388 children with ADHD and 127 controls were assessed using multi-informant, multi-method diagnostic procedures at up to 3 time points 1 year apart in an accelerated longitudinal design spanning ages 7–13 years. Latent-class growth analysis was used to identify developmental trajectories for parent- and teacher-rated ADHD and oppositional-defiant disorder (ODD) symptoms within the ADHD sample. Parental expressed emotion, criticism, and emotional overinvolvement were coded from a 5-min speech sample at 2 time points, 1 year apart, for 208 of these children and compared among ADHD trajectory groups. Results: Parent-rated hyperactivity yielded a 4-class trajectory solution in latent-class growth analysis; teacher-rated inattention yielded a 3-trajectory solution. Teacher-rated ODD also yielded 3-trajectory solution. A parent-rated high persistent hyperactive group was more likely than the other ADHD groups to have parents with stable high criticism (34.6%, p < .001), with ODD symptoms controlled. A teacher-identified high ODD-worsening group was more likely to experience high criticism, particularly the initial time point; (87.5%, p < .001), with hyperactivity controlled. Parental criticism, an index of the family environment, is uniquely associated with divergent developmental trajectories among children with ADHD in addition to those associated with ODD symptoms.

Conclusions: For many children, ADHD symptoms decrease as they transition to adolescence. Family environmental factors, such as parental criticism, may help explain for whom symptom remission is less likely.

Journal of Abnormal Psychology, Vol 125(2), Feb 2016,
MAP training: combining meditation and aerobic exercise reduces depression and rumination while enhancing synchronized brain activity

Mental and physical (MAP) training is a novel clinical intervention that combines mental training through meditation and physical training through aerobic exercise. The intervention was translated from neuroscientific studies indicating that MAP training increases neurogenesis in the adult brain. Each session consisted of 30 min of focused-attention (FA) meditation and 30 min of moderate-intensity aerobic exercise. Fifty-two participants completed the 8-week intervention, which consisted of two sessions per week. Following the intervention, individuals with major depressive disorder (MDD; n=22) reported significantly less depressive symptoms and ruminative thoughts. Typical healthy individuals (n=30) also reported less depressive symptoms at follow-up. Behavioral and event-related potential indices of cognitive control were collected at baseline and follow-up during a modified flanker task. Following MAP training, N2 and P3 component amplitudes increased relative to baseline, especially among individuals with MDD. These data indicate enhanced neural responses during the detection and resolution of conflicting stimuli. Although previous research has supported the individual beneficial effects of aerobic exercise and meditation for depression, these findings indicate that a combination of the two may be particularly effective in increasing cognitive control processes and decreasing ruminative thought patterns.

Translational Psychiatry, 2016; 6 (2): e726.

High educational performance is a distinctive feature of bipolar disorder: a study on cognition in bipolar disorder, schizophrenia patients, relatives and controls

Schizophrenia is associated with lower intelligence and poor educational performance relative to the general population. This is, to a lesser degree, also found in first-degree relatives of schizophrenia patients. It is unclear whether bipolar disorder I (BD-I) patients and their relatives have similar lower intellectual and educational performance as that observed in schizophrenia. This cross-sectional study investigated intelligence and educational performance in two outpatient samples [494 BD-I patients, 952 schizophrenia spectrum (SCZ) patients], 2231 relatives of BD-I and SCZ patients, 1104 healthy controls and 100 control siblings. Mixed-effects and regression models were used to compare groups on intelligence and educational performance.

BD-I patients were more likely to have completed the highest level of education (odds ratio 1.88, 95% confidence interval 1.66–2.70) despite having a lower IQ compared to controls (β = -9.09, s.e. = 1.27, p < 0.001). In contrast, SCZ patients showed both a lower IQ (β = -15.31, s.e. = 0.86, p < 0.001) and lower educational levels compared to controls. Siblings of both patient groups had significantly lower IQ than control siblings, but did not differ on educational performance. IQ scores did not differ between BD-I parents and SCZ parents, but BD-I parents had completed higher educational levels.

Conclusions Although BD-I patients had a lower IQ than controls, they were more likely to have completed the highest level of education. This contrasts with SCZ patients, who showed both intellectual and educational deficits compared to healthy controls. Since relatives of BD-I patients did not demonstrate superior educational performance, our data suggest that high educational performance may be a distinctive feature of bipolar disorder patients.

Psychological Medicine > Volume 46 > Issue 04 >

Randomized controlled trial of group cognitive behavioral therapy compared to a discussion group for co-morbid anxiety and depression in older adults

Co-morbid anxiety and depression in older adults is associated with worse physical and mental health outcomes and poorer response to psychological and pharmacological treatments in older adults. However, there is a paucity of research focused on testing the efficacy of the co-morbid treatment of anxiety and depression in older adults using psychological interventions. Accordingly, the primary objective of the current study was to test the effects of a group cognitive behavior therapy (CBT) program in treating co-morbid anxiety and depression in a sample of older age adults.

A total of 133 community-dwelling participants aged ≥60 years (mean age = 67.35, s.d. = 5.44, male = 59) with both an anxiety disorder and unipolar mood disorder, as assessed on the Anxiety Disorder Interview Schedule (ADIS), were randomly allocated to an 11-week CBT group or discussion group. Participants with Mini-Mental State Examination scores <26 were
excluded. Participants were assessed pre-treatment, post-treatment and at 6 months follow-up on the ADIS, a brief measure of well-being, Geriatric Anxiety Inventory and Geriatric Depression Scale.

Both conditions resulted in significant improvements over time on all diagnostic, symptom and wellbeing measures. Significant group × time interaction effects emerged at post-treatment only for diagnostic severity of the primary disorder, mean severity of all anxiety disorders, mood disorders, and all disorders, and recovery rates on primary disorder.

Conclusions: Group CBT produced faster and sustained improvements in anxiety and depression on diagnostic severity and recovery rates compared to an active control in older adults.

Psychological Medicine / Volume 46 / Issue 04 / March 2016, pp 785-795

Maltreatment in childhood substantially increases the risk of adult depression and anxiety in prospective cohort studies: systematic review, meta-analysis, and proportional attributable fractions

Electronic databases and grey literature from 1990 to 2014 were searched for English-language cohort studies with criteria for depression and/or anxiety and non-recall measurement of childhood maltreatment. Systematic review with meta-analysis synthesized the results. Study quality, heterogeneity, and publication bias were examined. Initial screening of titles and abstracts resulted in 199 papers being reviewed. Eight high-quality articles met eligibility criteria. Population attributable fractions (PAFs) estimated potential preventive impact.

The pooled odds ratio (OR) between any type of maltreatment and depression was 2.03 [95% confidence interval (CI) 1.37–3.01] and 2.70 (95% CI 2.10–3.47) for anxiety. For specific types of maltreatment and depression or anxiety disorders, the ORs were: physical abuse (OR 2.00, 95% CI 1.25–3.19), sexual abuse (OR 2.66, 95% CI 1.88–3.75), and neglect (OR 1.74, 95% CI 1.35–2.23). PAFs suggest that over one-half of global depression and anxiety cases are potentially attributable to self-reported childhood maltreatment. A 10–25% reduction in maltreatment could potentially prevent 31.4–80.3 million depression and anxiety cases worldwide.

Conclusions: This review provides robust evidence of childhood maltreatment increasing the risk for depression and anxiety, and reinforces the need for effective programs and policies to reduce its occurrence.

Psychological Medicine / Volume 46 / Issue 04 / March 2016, pp 717-730.

Attention Bias Modification Treatment in Depressed Adolescents

Adolescents with major depression who performed a computer-based task designed to shift attention from sad to neutral to positive word associations showed reductions in negative attention biases and clinician-rated depressive symptoms. A novel computer-based task, attention bias modification (ABM), designed to shift attention away from negative stimuli, was found to reduce depressive symptoms in adults.

45 adolescents with MDD, were selected from a school population. Adolescents in the active ABM group completed eight sessions (22 minutes each) over a period of two weeks to shift their attention from sad to neutral words. Nine weeks later, they completed four more sessions (30 minutes each) to shift their attention from neutral to positive words, again spread over two weeks. The placebo training had the same tasks, but shifted attention towards neutral and sad words equally often.

The researchers found greater reductions in attention bias score and clinician-rated depressive symptoms for the active ABM group compared with the placebo after the initial two-week training. Moreover, a higher number of participants in active ABM group no longer met diagnostic criteria for MDD compared to participants in the placebo group. After 12 months, the participants in the active ABM group reported even greater reductions in self-reported depressive and anxious feelings.

Based on these findings, the authors concluded that ABM may be a potential treatment tool for mild to moderate adolescent major depression. As most adult depression begins during adolescence, training for adolescents with depression may have far-reaching effects across their entire life.

Elsevier Feb 24, 2016
Dramatic remissions seen in immunotherapy trial of blood cancer patients. Andreas Dettor, @Medical_Xpress

Twenty-seven out of 29 patients with advanced blood cancer who received an experimental, "living" immunotherapy as part of a clinical trial experienced sustained remissions, according to preliminary results of the ongoing study at Fred Hutchinson Cancer Research Center. Some of the patients in the trial, which began in 2013, were originally not expected to survive for more than a few months because their disease had previously relapsed or was resistant to other treatments, said Dr. Stanley Riddell, an immunotherapy researcher and oncologist Fred Hutch. Today, there is no sign of disease. He shared the results on Sunday as part of an update on new adoptive T-cell therapy strategies for cancer at the annual meeting of the American Association for the Advancement of Science in Washington, D.C. Riddell, who has studied how to empower the immune system to effectively treat human disease for more than 25 years, said that progress now being made, underscored by these latest results, is finally making immunotherapy "a pillar of cancer therapy." But, he cautioned, "Much like chemotherapy and radiotherapy, it's not going to be a save-all." Some patients may require other treatments. The trial is designed to test the safety of the latest iteration of an experimental immunotherapy in which a patient’s own T cells are reprogrammed to eliminate his or her cancer. The reprogramming involves genetically engineering the T cells with synthetic molecules called chimeric antigen receptors, or CARs, that enable them to target and destroy tumor cells bearing a particular target. Trial participants include patients with acute lymphoblastic leukemia, non-Hodgkin lymphoma and chronic lymphocytic leukemia. Because T cells can continue to multiply once infused into patients, the therapy does not have to be administered repeatedly, as is the case with chemotherapies that are eventually broken down by and eliminated from the body. And by introducing the CARs into two specific subsets of T cells—an approach pioneered at Fred Hutch—the researchers have achieved more potent and longer-lasting immune responses against tumors.

Gene could help identify psychosis risk in cannabis users. @MINT_psychology

Researchers at the University of Exeter and UCL (University College London) have identified a gene which can be used to predict how susceptible a young person is to the mind-altering effects of smoking cannabis. Researchers at the University of Exeter and UCL (University College London) have identified a gene which can be used to predict how susceptible a young person is to the mind-altering effects of smoking cannabis. The finding could help identify otherwise healthy users who are most at risk of developing psychosis. The research, funded by the Medical Research Council and published in Translational Psychiatry, also show that female cannabis smokers are potentially more susceptible to short-term memory loss than males. Previous studies in this field have looked at people who already have psychosis, but this is the first study to look at healthy people and to examine their acute response - or how the drug affects their minds. Previous research has found a link between the AKTI gene and people who have gone on to develop psychosis. In the new study, Celia Morgan, Professor of Psychopharmacology at the University of Exeter and Professor Val Curran and her team from UCL found that young people with variation in the 'AKTI' gene experienced visual distortions, paranoia and other psychotic-like symptoms more strongly when they were under the influence of cannabis.
one per cent of cannabis users develop psychosis. Although low in number, the impact can be devastating and long lasting. It is known that smoking cannabis daily doubles an individual's risk of developing a psychotic disorder, but it has been difficult to establish who is most vulnerable. Researchers have previously found a high prevalence of one variant of the AKT1 genotype in cannabis users who went on to develop psychosis as a result of their use. This is the first research that shows the link between the same gene and the effects of smoked cannabis in healthy young people.

**Scientists eliminate core symptoms of schizophrenia in mice**

Researchers have successfully disrupted a genetic chain of events in a mouse model of schizophrenia and reversed memory deficits, one of the disorder's most difficult-to-treat symptoms. This discovery—which builds upon decades of early-stage research—could lead to more effective therapies for the cognitive symptoms of schizophrenia, a psychiatric disorder that affects more than 21 million people worldwide. In a paper published today in the Journal Neuron, scientists at Columbia's Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia University Medical Center (CUMC) and the New York State Psychiatric Institute (NYSPI) used a chemical compound to regrow connections between brain cells, or neurons, which in turn restored memory deficits. The abnormal or stunted growth of neurons in the brain's memory centers is a key indicator of schizophrenia. The study was performed in mice with a specific genetic mutation known as the 22q11.2 microdeletion. This mutation, which occurs in one percent of people with schizophrenia, is the single largest genetic risk factor for the disease. "With these findings, we showed that restoring cellular connections reversed memory deficits—a symptom of schizophrenia for which there is no effective treatment," said Joseph Gogos, MD, PhD, a principal investigator at the Zuckerman Institute, professor of physiology and neuroscience at CUMC and a senior author of the paper. "This represents an invaluable new strategy for treating schizophrenia and highlights the critical importance of basic biological research in psychiatric disorders. Understanding how schizophrenia originates in our model lends critical insight into the disorder as a whole, paving the way for improved treatment options that have thus far remained elusive."

**Drink to your Health: A daily glass of wine or bottle of beer may protect against stroke, Parkinson's disease, and cognitive decline, research suggests.**

Studies have observed that small amounts of wine increase levels of high-density lipoprotein (HDL, or “good” cholesterol), and reduce fibrinogen, a protein involved in blood clots. Lower levels of fibrinogen reduce the likelihood of a blood clot, a cause of ischemic stroke. An analysis of data from the long-running, community-based Framingham Heart Study published in the Journal Stroke in 2006 found that wine may protect against atherosclerosis (hardening of the arteries) by raising HDL levels and inhibiting low-density lipoprotein (LDL, or “bad” cholesterol). In adults aged 60 to 69. The National Institutes of Health—AARP Diet and Health Study looked at the association between drinking habits and future risk of Parkinson's disease in more than 300,000 adult men and women aged 50 to 71. The results, published in PLOS ONE in 2013, showed that drinking up to two 12-ounce beers a day was linked to a lower risk of Parkinson's disease. Drinking more than two 12-ounce servings of liquor per day correlated with an increased risk. Researchers speculate that purine, a chemical compound in beer, may combine with ethanol to produce more urate, an acid that devours free radicals, harmful molecules that damage cells and may contribute to aging. Urate has been linked to a lower risk and slower progression of Parkinson's disease. Beer also contains high levels of niacin, or vitamin B3, which has been reported to reduce Parkinson's disease risk. The Rotterdam Study of more than 7,983 people aged 55 and older published in The Lancet in 2002 suggested a link between light to moderate drinking (one to three drinks per day of any type of alcohol) and a reduced risk of dementia in that age group. The Dutch researchers theorized that ethanol could have an effect on cardiovascular risk factors, for example by increasing HDL, inhibiting LDL, thinning blood, or diminishing platelet aggregation. Or, alcohol may trigger acetylcholine, a neurotransmitter involved in learning and memory, in the hippocampus.
looked at 2,215 men and women with an average age of 69 and observed an association between moderate alcohol consumption and better cognitive performance. The results, published in Stroke in 2006, found that women who slipped one drink per week to two drinks per day scored better on cognitive tests than women who never drank. They did not see the same positive association in men.

Neuroscientists reverse autism symptoms Anoo Trafson, @Medical_Xpress

Autism has diverse genetic causes, most of which are still unknown. About 1 percent of people with autism are missing a gene called Shank3, which is critical for brain development. Without this gene, individuals develop typical autism symptoms including repetitive behavior and avoidance of social interactions. In a study of mice, MIT researchers have now shown that they can reverse some of those behavioral symptoms by turning the gene back on later in life, allowing the brain to properly rewire itself. "This suggests that even in the adult brain we have profound plasticity to some degree," says Guoping Feng, an MIT professor of brain and cognitive sciences. "There is more and more evidence showing that some of the defects are indeed reversible, giving hope that we can develop treatment for autistic patients in the future."

Feng, who is the James W. and Patricia Poitras Professor of Neuroscience and a member of MIT's McGovern Institute for Brain Research and the Stanley Center for Psychiatric Research at the Broad Institute, is the senior author of the study, which appears in the Feb. 17 issue of Nature. The paper's lead authors are former MIT graduate student Yuan Mei and former Broad Institute visiting graduate student Patricia Monteiro, now at the University of Coimbra in Portugal. The Shank3 protein is found in synapses—the connections that allow neurons to communicate with each other. As a scaffold protein, Shank3 helps to organize the hundreds of other proteins that are necessary to coordinate a neuron's response to incoming signals. Studying rare cases of defective Shank3 can help scientists gain insight into the neurobiological mechanisms of autism. Missing or defective Shank3 leads to synaptic disruptions that can produce autism-like symptoms in mice, including compulsive behavior, avoidance of social interaction, and anxiety, Feng has previously found. He has also shown that some synapses in these mice, especially in a part of the brain called the striatum, have a greatly reduced density of dendritic spines—small buds on neurons' surfaces that help with the transmission of synaptic signals. In the new study, Feng and colleagues genetically engineered mice so that their Shank3 gene was turned off during embryonic development but could be turned back on by adding tamoxifen to the mice's diet.

Immersive virtual reality helps patients with depression Yvette Brazier, @MINT_psychology

Virtual reality therapy could help treat depression by encouraging people to be easier on themselves and improve their chances of breaking the cycle of depression, says a new study published in the British Journal of Psychiatry Open. A virtual reality scenario could help patients to feel better about themselves. In 2014, 6.6% of American adults experienced at least one bout of major depression. The National Institute of Mental Health (NIMH) defines depression as a "period of 2 weeks or longer during which there is either depressed mood or loss of interest or pleasure and at least four other symptoms that reflect a change in functioning, such as problems with sleep, eating, energy, concentration and self-image." Self-criticism is common among people with depression. Increasing levels of self-compassion appears to help, but some patients find it hard to show compassion toward themselves. A negative self-image can increase an individual's sense of vulnerability and contribute to the persistence of the depression. A team, led by Prof. Chris Brewin of University College London (UCL) Clinical, Educational and Health Psychology department, tried the technique first with healthy volunteers. The researchers then invited 15 patients with depression to try it. They were aged 23-61 years, 10 were men, and five were women. Ten of the patients were taking antidepressants, seven were receiving psychological therapy, seven were waiting for therapy and one had completed a course of therapy. Each session lasted about 8 minutes, and it was repeated once a week for 3 weeks. The process involved a technique known as "embodiment," in which participants wear a virtual reality headset to

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enable them to see from the perspective of a life-size "avatar," or virtual body. As they watched in a mirror, the virtual body moved in the same way as their own body, giving the illusion that it was their body. While embodied in the avatar, participants learned to show compassion toward a distressed virtual child. As they interacted with the child, the figure gradually stopped "crying" and responded positively to the compassion. A few minutes later, the patients were embodied in the virtual child. As the child, they experienced the adult avatar delivering the compassionate words and gestures that they had used previously.

**Experimental drug may limit harmful effects of traumatic brain injury @Medical_Xpress**

A new report by University of Kentucky researcher Linda Van Eldik, PhD, describes an experimental drug candidate that may aid patients with traumatic brain injury (TBI). The article appeared this week in the Journal PLoS One, the world's largest biology journal. According to the Centers for Disease Control and Prevention (CDC), falls, motor vehicle collisions, and assault make up the most common causes of TBI. Symptoms of TBI, which include impaired cognition, memory, and motor control, may be temporary or permanent depending on the severity of the injury. "Following a head injury, the body mobilizes immune cells to respond to the trauma and jump-start the healing process," Van Eldik said. "Although these immune cells help repair the injury, they also cause inflammation that may damage the tissue—a sort of double-edged sword." "Our goal is to find ways to improve the positive effects of the immune system while thwarting the inflammation process that damages tissues," she said. Van Eldik's laboratory identified and began testing the experimental drug MW151 in 2007. In initial testing, MW151 appeared to inhibit the release of the "bad" chemicals that caused inflammation while preserving immune cells' repair capabilities in a form of TBI known as a closed head injury. Further evidence of MW151's effectiveness was manifested in reduced cognitive impairment. The current work described in PLoS One tested MW151 in a second, more serious form of TBI known as mFPI. "We were delighted to see that MW151 is effective in more than one model of TBI," said Adam Bachstetter, PhD, assistant professor in the Spinal Cord & Brain Injury Research Center (SCoBIRc) and the Department of Anatomy & Neurobiology at the University of Kentucky and the lead author for the PLoS One article. "MW151 appears to dampen down the detrimental inflammatory responses without suppressing the normal functions that the cells need to maintain health."

**Diagnoses of Concussions increase by Nearly a Third Over Last Season Ben Shipgal, nytimes.com**

The N.F.L. has taken measures in recent years to detect concussions by placing unaffiliated neuro-trauma consultants on the sideline, adding spotters in the press box and permitting medical personnel to call a timeout if the on-field staff misses a possible head injury. Those advances contributed to the most diagnosed concussions the league has seen in four years, according to data released Friday. But most of those improvements were in place last season, when concussions declined. A year after proclaiming how the incidence had decreased in each of the past three seasons, since 2012, members of the league’s medical community were left to determine what accounted for the spike. According to the N.F.L., players sustained 271 concussions across preseason and regular-season games and practices in 2015, an increase of 31.5 percent from the 206 of 2014, when concussions dropped 10 percent compared with the previous year. In regular-season games, there were 192 reported concussions, a 58.3 percent increase from 2014.

**Brain Boost: For people who have persistent symptoms after a traumatic brain injury, a cognitive training program may help. @NeurologyNow**

A new therapy for people with traumatic brain injury (TBI) shows promise for improving cognitive function, reducing depression and stress, and boosting blood flow to important areas of the brain, according to a small study by researchers at the Center for BrainHealth at the University of Texas in Dallas published online last May in Neuropsychological Rehabilitation. A group of 60 men and women between the ages of 19 and 65 who had sustained at least one TBI were randomly assigned to receive either an educational, Information-based
program about how the brain works or a brain training program called Strategic Memory Advanced Reasoning Training (SMART). SMART teaches participants how to block out irrelevant details, break down and summarize information, and think more creatively. All of the participants were rated as having a mild TBI; 47 were civilians and 13 were veterans. More than two-thirds had sustained the injury at least 10 years earlier, so the researchers didn’t have specifics on their concussion history. All had persistent symptoms such as depression and anxiety. Both programs involved 18 hours of training during 12 group sessions over 12 weeks. The group of 31 patients who received the cognitive training improved their scores on a memory test by more than 30 percent, and their “complex abstraction” scores—their ability to understand big ideas and take-home messages—improved by more than 20 percent. They also reported a 60 percent reduction in symptoms of depression and a 40 percent reduction in symptoms related to posttraumatic stress disorder. In addition, brain imaging showed enhanced blood flow to areas of the brain linked to abstract thinking, cognitive performance, and emotional regulation of stress.

**Brain activity patterns during sleep consolidate memory @Medical_Xpress**

Why does sleeping help? This is the question tackled by new research at the University of Bristol, which reveals how brain activity during sleep sorts through the huge number of experiences we encounter every day, filing only the important information in memory. The new discoveries, made by researchers from Bristol’s Centre for Synaptic Plasticity, provide further evidence for the benefits of a good night’s sleep. This is important because the bad nights of sleep often experienced by both the healthy population, and people with schizophrenia or Alzheimer’s disease, lead to impaired mental function. The findings, published today in the Journal of Sleep Research, put into context in an article in Trends in Neuroscience, show that patterns of brain activity that occur during the day are replayed at fast-forward speed during sleep. This replayed activity happens in part of the brain called the hippocampus, which is our central filing system for memories. The key new finding is that sleep replay strengthens the microscopic connections between nerve cells that are active—a process deemed critical for consolidating memories. Therefore, by selecting which daytime activity patterns are replayed, sleep can sort and retain important information.

**Weed users found to have poorer verbal memory in middle age Morgan Manella, @CNN**

People who smoked weed regularly as teenagers remembered fewer words as they entered middle age, according to a new study published online by JAMA Internal Medicine. Marijuana use is increasingly common among adolescents and young adults in the United States. In fact, a recent survey of high school students found more teens use marijuana than tobacco. One reason: a perception that it’s not harmful. For this study, researchers randomly selected more than 5,000 young adults from 18 and 30 and followed up with them at varying points over 25 years. At the end of the 25 years, there were more than 3,400 participants still in the study. Their cognitive function was measured using standardized tests of verbal memory, processing speed and executive function. They found current marijuana use was associated with poorer verbal memory and processing speed, and lifetime exposure to marijuana was associated with worse performance in all three areas of cognitive function. Although past exposure to marijuana was associated with worse verbal memory, it does not appear to affect other domains of cognitive function. It is unclear whether there are long-term effects on memory from occasional marijuana use earlier in life and whether there is an impact on other areas of cognitive function.

**Prescription sleep medicine linked to motor vehicle collisions in older adults and women @Medical_Xpress**

A recent study by University of Alabama at Birmingham student assistant John Booth, III, and UAB Department of Epidemiology Professor and Vice Chair Gerald McGwin, Ph.D., published in Sleep Medicine linked the use of prescription sleep medicines containing zolpidem among aged drivers and the incidence of motor vehicle collisions. "Due to the side effects of such drugs—including drowsiness upon waking and impaired..."
coordination, current zolpidem users age 50 and older, as well as those who are female, experienced higher rates of MVCs than nonusers,” said Booth, a Ph.D. candidate in UAB’s Department of Epidemiology. “We recommend that health care practitioners consider proposing behavioral treatment before prescribing zolpidem to restore sleep in women and patients over age 50 to reduce the risk of MVCs associated with this prescription drug.” In the overall sample, the unadjusted 5-year motor vehicle collision rate was 46 percent higher for current zolpidem users versus nonusers. More specifically, the unadjusted 5-year motor vehicle collision rate was 65 percent higher for females and 23 percent higher in males who used zolpidem. For those 50 years of age and older, the unadjusted 5-year motor vehicle collision rate was 124 percent higher for zolpidem users compared with nonusers. According to the National Institutes of Health National Center for Complementary and Integrative Health, possible treatment alternatives to sleep medications include relaxation techniques, melatonin supplements, mind and body approaches such as meditation, as well as stimulus control such as consistent sleep schedules, and avoiding caffeine and alcohol.

Norepinephrine involved in stress resilience, vulnerability to depression. Catherine Paddock PhD, @NNMT_psychology new study suggests that norepinephrine – also known as norepinephrine - may influence vulnerability to depression through its effect on dopamine neurons in the brain. The researchers found stopping the neurons from releasing norepinephrine made the animals systematically susceptible to depression when exposed to chronic stress. The new study - the first to find such a link - is the work of researchers from McGill University in Montréal, Canada, who report their findings in the journal Nature Neuroscience. Stressful life events - such as the death of a loved one, serious accident or losing one's job - can trigger major depression, a common mental disorder that is characterized by loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, sadness and poor concentration. Scientists believe a deciding factor in whether traumatic events trigger depression or not is resilience. However, the biology of resilience is somewhat of a mystery and there is still a lot to learn about it. We already know that a small part of the midbrain called the ventral tegmental area (VTA) is rich in dopamine-releasing neurons that play an important role in vulnerability to stress and depression. Inability to release norepinephrine made animals susceptible to depression. By mimicking stressful life events in animal models, the team behind the new study confirmed that increased release of dopamine in the neurons of the VTA corresponds to depression. They then showed how a second type of neuron - that releases norepinephrine and is located in another part of the brain called the locus coeruleus - controls the activity of the dopamine neurons.

Everyday mindfulness linked to healthy glucose levels. David Orenstein, @Medical_Xpress Dispositional, or “everyday” mindfulness is the inherent trait of being aware of one’s present thoughts and feelings. In a new study of 399 people that measured health indicators including dispositional mindfulness and blood glucose, researchers found that those with higher scores for mindfulness were significantly more likely than people with low scores to have healthy glucose levels. The results show an association and do not prove a cause, but they are part of a program led by Brown University where researchers are studying whether interventions that increase mindfulness can improve cardiovascular health. Their overarching hypotheses are that people practicing higher degrees of mindfulness may be better able to motivate themselves to exercise, to resist cravings for high-fat, high-sugar treats, and to stick with diet and exercise regimens recommended by their doctors. The researchers therefore sought to identify factors that might explain the connection they saw between higher mindfulness and healthier glucose levels. Their analysis of the data showed that obesity risk (mindful people are less likely to be obese) and sense of control (mindful people are more likely to believe they can change many of the important things in their life) both contribute to the link. "This study demonstrated a significant association of dispositional mindfulness with glucose regulation, and provided novel evidence that obesity and sense of control may serve as potential mediators of this association," wrote the authors led by Eric Loucks, assistant professor of epidemiology in the Brown University School

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of Public Health. “As mindfulness is likely a modifiable trait, this study provides preliminary evidence for a fairly novel and modifiable potential determinant of diabetes risk.”

To Reduce the Risk of Alzheimer’s, Eat Fish
Nicholas Bakalar, @nytimeswell
Eating seafood is linked to a reduced risk of dementia-associated brain changes in people who carry the ApoE4 gene variant, which increases the risk for Alzheimer’s disease. Eating seafood was not linked to similar changes in those who carried other forms of the ApoE gene. The study, published in JAMA, looked at 286 autopsied brains and also found that eating seafood was linked to increased mercury in the brain, but that mercury levels were not linked to brain abnormalities. After controlling for age, sex, education and other factors, the researchers found that compared with those who ate less seafood, ApoE4 carriers who had one seafood meal or more a week had lower densities of the amyloid plaques and neurofibrillary tangles typical of Alzheimer’s disease. Over all, they had a 47 percent lower likelihood of having a post-mortem diagnosis of Alzheimer’s. Consumption of fish oil supplements was not correlated with pathological brain changes. The lead author, Martha Clare Morris, a professor of epidemiology at Rush University, said that mercury from fish appears to pose little risk for aging people. But, she said, there are studies that show that mercury consumption in pregnancy can cause cognitive problems in babies.

Poor short-term memory linked to inability to ignore distraction
Marianne Meadahl, @MedicalXpress
Simon Fraser University researchers have discovered that differences in people’s working memory capacity correlate with their brain’s ability to actively ignore distraction. Their study was published this week in the journal PNAS. Psychology professor John McDonald and doctoral student John Gaspar led the research team. They used electroencephalogram (EEG) technology, which detects electrical activity in the brain, to study memory and distraction. They found that individuals who perform well on memory tasks were able to suppress distractions. Those who didn’t perform as well couldn’t suppress distractions quickly enough to prevent them from grabbing their attention. “Distraction is a leading cause of injury and death in driving and other high-stake environments, and has been associated with attentional deficits, so these results have important implications,” says McDonald, who holds a Canada Research Chair in Cognitive Neuroscience. Researchers measured participants’ visual working memory limit by having them complete change-detection tasks. “In this task, an individual is shown a series of colored boxes for less than a second and must remember as many boxes as they can. The better they perform on this task, the higher their working memory capacity is (i.e. the more they can remember). To study the neural processes related to suppression, researchers recorded electrical brain signals from electrodes placed on participants’ heads. Using this EEG technology they tracked the neural processing of relevant and irrelevant visual objects while individuals performed attention-demanding visual search tasks. From these, they examined participants’ working memory capacity score with respect to their electrical brain signals, to see if a relationship existed. After examining these memory processes, researchers are now interested in what other processes and behaviors might be associated with these visual-search brain mechanisms, particularly the suppressive mechanism. says Gaspar.
17. In contrast to antidepressants, which causes drug-induced liver injury in 2 to 5% of cases, SAMe has been shown to combat liver disease and arthritis pain. True/false

18. St. John’s Wort has been found to be superior to placebo in patients with major depression, and have fewer side effects compared to standard antidepressants. True/false

19. St. John’s Wort has been shown to improve mood, decrease anxiety and somatic symptoms, and decrease insomnia, and is generally well tolerated, but should not be combined with certain prescription antidepressants because it can lead to a potentially life-threatening increase in serotonin, and is also discouraged for patients with bipolar disorder. True/false

20. Curcumin is an ingredient of turmeric, and is used in Indian cooking, which possesses anti-depressant properties, appears to have neuroprotective action in Alzheimer’s disease, tardive dyskinesia, major depression, and epilepsy, and appears to act majorly through its anti-inflammatory and antioxidant properties, and is generally considered safe. True/false

21. Saffron seems to improve symptoms of major depression after six weeks of treatment, with similar efficacy to fluoxetine 10 mg twice daily in patients with mild to moderate depression, and is also useful for PMS, insomnia, fright, shock, asthma, cough, pertussis, and as an expectorant; there is also some evidence that it can protect against and reverse adverse sexual effects from antidepressants, and can be used concurrently. True/false

22. DHEA is endogenously produced in the adrenal glands and in the liver, and in men, also by the testes, and at high levels, may be associated with successful treatment of major depression, with some possible benefit for schizophrenia as well; it is also been linked to better cognitive function, concentration, and working memory. True/false

23. Omega-3 fatty acids can be found in fish oils and krill oil and research has shown that fish oil can reduce triglyceride levels by 20 to 50%, and the EPA component has been found to be effective in treating depressive symptoms. True false

24. Dr. Reinhardt states that natural approaches to treating depression are typically quite safe, but one should be careful to avoid “polypharmacy” that could lead to serotonin syndrome.

25. Organic milk and meat contains around ______ percent more beneficial omega-3 fatty acids than conventionally produced products.

26. Organic meat had slightly lower concentrations of two saturated fats that are linked to an increased risk of cardiovascular disease. True/false

27. Organic milk contains 40% more conjugated linoleic acid, and slightly higher concentrations of iron and vitamin E. True/false
28. Omega-3 fatty acids are linked to reductions in cardiovascular disease, improve neurological development and function, and better immune function. True/false

29. According to Professor Leifert, a switch to organic fruit, vegetables, meat, and dairy products would provide significantly higher amounts of dietary antioxidants and omega-3 fatty acids. True/false

30. The two main omega-3 fatty acids in fish oil are EPA and DHA, and there is evidence that omega-3 fatty acids can be useful adjunctively in the management of treatment unresponsive depression and schizophrenia, and since these conditions are associated with increased risk of coronary heart disease and diabetes mellitus, they should also benefit the physical status of these patients. True/false

Only _____ percent of people with psychotic illness have symptoms that
meet the criteria for schizophrenia.

32. In the article referenced above, there is a proposal to drop the term “schizophrenia”, with something like ________________.

33. Reports of cognitive decline are common among menopausal women, and one study found that the use of an amphetamine improved subjective measures of executive function, but the editor urges caution because even low-dose use of amphetamines increases risk of Parkinson’s, and can cause mood swings, insomnia, delusions, paranoia, later depressed mood, and increases in systolic blood pressure. True/false

34. Proton pump inhibitors are widely used in the treatment of gastrointestinal diseases, but they also can result in B12 deficiency, which has been very well demonstrated to result in dementia. True/false

35. The editor suggests that use of proton pump inhibitors can be significantly reduced by which of the following recommendations

a. Do not lay down to nap after a meal or snack
b. Keep the upper body elevated, go for a walk, participate in an activity for at least one half hour after eating
c. Provide olfactory stimulation by food smells 15 to 30 min. before meals
d. all of the above

36. The incidence of falls among individuals 65 years and older is approximately _____ percent, and approximately ________ percent of these falls result in moderate to severe injuries.

37. In another study, higher brain BDNF was associated with slower cognitive decline, and the editor notes also that decreased BDNF has been linked to schizophrenia, memory development, depression, epilepsy, Alzheimer’s, drug addiction, obesity, eczema, and post chemotherapy cognitive impairment, adding that supplements that increase BDNF include niacin, curcumin, green tea, omega-3 fatty acids, and reservatrol. True/false

38. The editor states that viruses play a major role in mental health and other disorders, including schizophrenia and depression, and natural ap-
proaches to virus control include:

a. Zinc lozenges and topical creams
b. Lauric acid from coconut
c. pau d’arco from a rainforest tree
d. Echinacea
e. Garlic
f. Elderberry
g. Oregano

h. All of above, but selection of the appropriate botanical should be based on type of infection.

39. In another study, it was found that, for many children, ADHD symptoms decrease as they transition to adolescence, and that family environmental factors, such as parental criticism, may help explain this. True/false

40. Mental and physical (MAP) training, which may be particularly effective in increasing cognitive control processes and decreasing rumination, combines mental training through __________, and physical training through ______________.

41. In contrast to schizophrenic patients, those with bipolar one disorder were more likely to have completed the highest level of education. True/false

42. Attention bias modification (ABM) is a computer based task designed to shift attention from sad to neutral to positive word associations, and may be a potential treatment for mild to moderate adolescent major depression. True/false
Current Listing of Free CE Courses

The following courses are now available free with NAPPP membership. CE credit is provided by NAPPP and alliance partners who are approved sponsors of continuing education by the National Institute of Behavioral Health Quality and the American Psychological Association. Many states require specific courses for licensure and license renewal. NAPPP courses are designed to meet these requirements. However, members should check with their state statutes to determine specific CE requirements. Contact Dr. Caccavale for details at doctorjc1@ca.rr.com

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<tr>
<td>Psy #14</td>
<td>Diagnosing and Treating Substance Abuse</td>
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</tbody>
</table>

A review of the diagnosis of the spectrum of mood disorders along with a discussion of the psychological and pharmacological interventions for each disorder.

Psy #9 - Physiology For Psychologists: 10 CE credit hours

This course covers basic understanding of critical concepts in human physiology, including being aware of indications for referral to other health care providers for treatment and interrelationships between organs/systems, psychopharmacology, and psychopathology.

Psy #10 - Issues In Postpartum Disorders: 10 CE credit hours

A review of the evaluation and diagnosis of postpartum disorders. A review of the relevant literature is included.

Psy #11 - Doing Pre-Marital Counseling: 10 CE credit hours

Dr. Sandra Levy Ceren details how to do pre-marital counseling. This course is built upon Dr. Ceren’s many years of experience and is replete with case studies.

Psy #12 - Mastering Medical Terminology For Psychologists: 10 CE credit hours

This course is designed for Psychologists who want to learn and master medical terminology. This course will allow clinician’s to communicate effectively with medical practitioners. A must for clinicians who regularly work with medical practitioners.

Psy #13 - Caring For The Elderly: 10 CE credit hours

This course is a basic course designed for Psychologists who want to learn additional skills related to diagnosing and treating the elderly patient. Particular attention is devoted to dementias.

Psy #14 - Diagnosing and Treating Substance Abuse: 10 CE credit hours

A basic understanding of diagnosing and treating patients with substance abuse problems. The course focuses on alcohol abuse but does cover the abuse of...
Current CE courses

other substances including prescription drugs.

**Psy #15 - Ethics II: 4 CE Credit hours**

This 4 unit course is for those Psychologists who do not require the more extensive 10 unit course.

**Psy #16 - Introduction To Medical Psychology: 10 CE Credit hours**

A basic course in medical psychology for Psychologists. Reading materials focus on the understanding and treatment of diseases and illnesses that Psychologists can treat.

**Psy #17 - Primary Care Psychology: 15 CE Credit hours**

An introduction to how clinical psychology is practiced in a primary care setting. Reasons for integrating psychology into primary care are discussed along with treatment models and the different aspects of practice in a primary care setting.

**Psy #18 - Forensic Practice: 15 CE Credit hours**

An introduction to the practice of forensic psychology for Psychologists who want to expand their services into this area of practice. Topics include psychological evaluations for the court (child custody; competency; insanity), psychological factors in eyewitness testimony, trial consultation, and criminal investigation.

**Psy # 19 - Clinical Supervision: 6 CE Credit hours**

Ethically and legally, supervisors are responsible for patient care as well as the training and development of their supervisees. Supervision becomes a balancing act between the needs of the patient population and the needs of the supervisee. This course will help you do your job better and give you skills to rely on in your supervision of interns.

**Psy # 20 - Neurology For Psychologists: 15 CE Credit hours**

An introduction to basic neurological practice for Psychologists. It provides participants with a thorough understanding of the structure of the nervous system. Topics include: performing a competent neurological work-up, basic description and components of typical neurological disorders, behavioral neurology, muscle disorders, sensory disorders, and ethical issues in practice.

**Psy #21 - Understanding The Affordable Care Act: 15 CE Credit hours**

This course presents a thorough presentation of the new healthcare reform laws and how both patients and practitioners will be affected as the new rules and regulations are implemented. This is a must course for those wanting to get the most out of these reforms.

**Psy #22 - Entrepreneurship For Psychologists: 10 CE credit hours**

An introductory course for Psychologists who want to expand their knowledge about the opportunities and benefits of becoming an entrepreneur in mental health. With the new Affordable Care Act now law, there are many opportunities for Psychologists if we can learn the concepts and success behind entrepreneurship. This is what has been missing from graduate psychology education.

**Psy #23 - Crisis Management Intervention Consulting: 15 CE credit hours**

This course is designed for clinical Psychologists who want to develop a significant and workable knowledge base to provide crisis management consulting services to municipalities and private organizations. It will also serve the function of providing practitioners with a good knowledge base to understanding crisis management interventions.

**Basic Neuropsychology (10 Contact Hours)**

This course is designed to introduce clinical psychologists to basic neuropsychological evaluation. It provides participants with a substantive understanding of what constitutes a neuropsychological workup. Psychologists who complete this course will learn how to identify important neuropsychological disorders and how to evaluate dysfunction. This course is an introduction to what neuropsychology is but it is not intended to convey or imply certification as a neuropsychologist.

**Interpreting Blood Panels For Psychologists (6 contact Hours)**

Having an understanding about these tests and what they mean is essential to all healthcare providers. This course is designed to provide psychologists with general information to assist in their practices and professional development. The information provided in this course is based on research and consultation with medical and other authorities, and is, to the best of our knowledge, current and accurate.
There is a famous proverb, “He who fails to plan, plans to fail.” It’s easy to notice when a submission (even with the best intentions) has not been planned well or organized. An organized and structured writing piece shows our readers (and editors!) that your arguments are clear, concise and coherent. Hopefully with careful planning and the application of the following tips, a great submission will not be far behind!

Please keep in mind that The Clinical Practitioner is the public face of NAPPP. Internal discussions, squabbles, rants and raves, politics and so on are best submitted to the members’ listserv. Although we entertain political discussions within our ranks only official policy positions will appear in TCP.

We Welcome Member Submissions!
NAPPP is a practice organization. Please keep all submissions to practice issues.

All Submissions regardless of type should be proof read, spell checked, grammar and punctuation checked. Minor editing can be done to prepare a submission for print; However, if more than minor corrections are needed the submission will unfortunately have to be returned.

Technical Considerations
1. Please attach submissions to your email as Word files (.doc), unless you have checked with us about other formats.
2. Use standard fonts. We have found Verdana and Georgia to be the most readable in electronic format.
3. If your submission must have special characters or fonts, please embed these in your document.
4. If your submission includes objects (pictures, graphs, drawings, etc.) these MUST be included as separate files.
5. Please include technical references and links as appropriate.

Letter Submissions
We welcome short submissions which deal with issues such as insurance and billing, reports on published research, reports on conventions attended, the business of practice, interesting solutions to patient problems, and other practice related topics.

1. Please make submissions @50-150 words.
2. The editors will select submissions based on relevance and space needs.

Submissions for feature articles
We will consider feature articles of any length dealing with practice issues, “How To” articles, and any topic directly relating to practice. Please submit your article ideas to editor.theclinicalpractioner@gmail.com

1. A brief statement of topic and short outline of your proposal will allow us to guide you on article development.
2. Articles can be any length. Please have your editor check that every sentence has a purpose and appropriate structure.
3. An Introductory Paragraph introducing your subject and main Idea of your article is a MUST.
4. Supporting Paragraphs that develop the main idea of your topic:
   -Should list the points that develop the main idea of your article
   -Please place each supporting point in its own paragraph
   -Develop each supporting point with facts, details and examples.
5. End with a Summary Paragraph or Conclusion and do this by:
   -Restating the strongest points that support the main idea
   -Conclude by restating the main idea in different words
   -Give a personal opinion or suggest a plan of action.

Keep in mind that readers will only continue as long as they are presented with new information. Do not rehash information or ideas, but do summarize in the final paragraph(s)
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Summary of Requirements

- Current and valid license to practice psychology.
- Successfully pass an examination.
- Complete specific coursework.
- Provide a product sample.
- Provide letters of recommendation

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The accreditation process for professionals and service providers engaged in behavioral healthcare is sorely lacking and mostly absent. Consequentially, consumers and professionals alike, have little idea or notion of what constitutes quality practice, services, and products. The mission of NIBHQ is to provide accreditation to licensed, doctoral level behavioral healthcare professionals and service providers. NIBHQ is a profession specific agency that awards accreditation based on standards developed by behavioral healthcare professionals. Our mission is to award accreditation only to those individuals and entities that can meet and maintain adherence to standards specifically developed to promote quality in the provision of behavioral healthcare services and products.

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**Book Description**

In 2009, over fifty-two million prescriptions for antipsychotic medications were written, totaling over $14.6 billion in sales. Such is just one small indication of how our current medical system treats its patients with medication as a first-line approach. This is not the answer. There is a growing need for integrated health care systems which include psychological care, particularly those services provided by medical psychologists. Medical psychologists are not physicians, but they do many of the same things that physicians do or should be doing. Medical psychologists are also doing things that clinical psychologists have never done. A medical system which profits from and relies primarily upon medication is not sustainable, especially when these medication-only treatments may be at the least ineffective and, at worst, harmful to patients. **This reader seeks to define medical psychology's place in this complex and challenging environment.**

Nicholas A. Cummings: Psychology's Provocateur

This book is not only a biography of professional psychology's innovator and visionary. It is a book that documents the long history and struggle of professional psychology. Dr. Nicholas Cummings, “Nick” to so many of his friends, has been at the front lines of talking and making the fight for psychologists to be recognized and included in the healthcare system. Nick's biography is the biography of every psychologist. It is our history, and absent the accomplishments of Nick Cummings, there is no doubt that professional psychology would not exist.

The Cummings Foundation is making copies of the book FREE of charge to TCP readers who would like one for the $5.00 shipping charge, only. If you would like your free copy of the book, email Linda Goddard at l.goddard0@gmail.com and she will arrange to have the book sent to you. A faster way to get your copy is to send a check for $5.00 to:

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Handbook of Health and Behavior: Psychological Treatment Strategies for the Nursing Home Patient

By Joseph M. Cascardi, PhD

This Handbook of Health and Behavior gives readers a portable and concise reference tool to help nursing home patients better manage and cope with their medical conditions. It places an emphasis on behavioral health principles and approaches, using health and behavior CPT codes, and helps psychologists function within an integrated care model by rotating the profile of behavioral health services in these settings. It can serve as a guide for health care professionals whose older patients face psychological barriers in the treatment of their medical problems.

The Handbook is published by Concept Healthcare, LLC and can be ordered at Amazon, Lulu.com, or take a 30% discount and mail this form to orders@cohealth.org.

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