Defining what differentiates a professional psychologist from any other healthcare professional, counselor, psychiatrist or physician, in particular, is an important discussion for professional psychology. Yet, for much of the public, confusion reigns - and with good cause. Over the past few decades we have seen multiple articles laying the foundation as to why M.A. counselors, for example, are equal to doctoral level psychologists in the service we provide to consumers of mental health. I have written numerous articles opposing the conclusions equating lessor trained providers with professional psychologists, but I have always insisted that unless professional psychology can describe how we comprise a different class of providers, we lose the argument showing that greater education and experience does lead to better outcomes.

In fact, in my opinion, our arguments have failed to convince others outside of psychology because, even in our own ranks, there are those who buy the false arguments put forth by the academics in APA. Only when we, as a profession, can demonstrate how our unique talents combined with our greater and significant education and experience differentiates us from the others in a positive sense, will we change the perception that we are simply all “psychotherapists.”

NAPPP, over these past many years, has addressed this issue in developing positions and advocating for doctoral level practice. Our position on this issue, and many more, are well known as we have aggressively promoted and advocated for professional psychology. Our position with respect to non-doctoral level providers is not based upon economic considerations, but on what we, as professional psychologists have to offer our patients. So, it is not about the others, it’s about us. There simply is no comparison that could possibly demonstrate that the number of years of additional doctoral level education and experience renders our services no better off than people who opt for lessor training.

APA academics have been promulgating this myth for years. The have even used very questionable data to support the myth that services from lessor trained providers are not qualitatively and quantitatively different in terms of outcomes. There is absolutely no evidence-based research that could even support that conclusion. APA’s latest gambit to save its diminishing relevance by setting the foundation for the masters degree to become the entry level into professional psychology will fail because ultimately, consumers prefer the more educated and experienced practitioner.

Think about what type of research design it would take to even approach such a hypothesis. In the least, it can be said that an effective provider is one where the consumer trusts and likes the provider. However, psychologists, counselors and social workers serve vastly different populations including the types and severity of the issues
found in our different practices. The ability to come to a correct diagnosis and understanding the complexities of human behavior takes more than a 12-month master’s degree. Each profession has its proper focus based upon education and training. We do not, however, do the same things with the same population.

A person who complains of symptoms of depression, for example, might easily be treated by lessor-trained professionals as having depression. Professional psychologists, however, understand that symptoms of depression do not necessarily indicate depression, but may be indicative of a more serious underlying process. This comes from focused doctoral level training that requires considerable time and an understanding of research.

**Psychiatry and Psychology**

If there is confusion in the public mind about the roles between counselors and psychologists, there is even more confusion between psychiatry and psychology. It is clear to us that there is no science of psychiatry but there is a science of psychology. This is a major difference that the public lacks. With respect to what we both do, however, the difference is vast. Yes, most psychiatrists do not do therapy and we do. Psychiatrists prescribe medicines. Most psychologists do not. Yet, most psychologists have a well-balanced understanding and suspicion of the effectiveness of medications that is supported by an ever-increasing body of research.

Psychiatrists haven’t abandoned therapy solely for economic reasons. In my view, many psychiatrists abandoned therapy because for many years they have not been seen by other physicians as being “real” doctors. Sound familiar? And why was this? It’s because one is not considered a “real” doctor unless one can prescribe medications.

As psychologists we all too well know this line of talk. So, psychiatry morphed itself back into medicine by becoming mere distributors for drug companies. When they abandoned therapy they also abandoned who they were and their sole reason to exist as a mental health profession. As a result, American medical students have determined that psychiatry is not a profession that deserves their attention. Psychiatry has been in decline since and will never recover. Psychiatry’s only hope is to keep recruiting foreign trained medical school graduates to fill their training slots and to keep psychologists from gaining nationwide prescriptive authority.

To keep psychologists from falling into the same trap as psychiatrists we need to legally require, among other things, that prescribing psychologists must also provide on-going therapy and assessment services to those patients who they prescribe medications as the dominant share of their practice. Moreover, prescribing psychologists should be required to abide by prescribing standards such as those delineated in NAPPP’s model legislation [https://nappp.org/pdf/model.pdf](https://nappp.org/pdf/model.pdf)

Another reason psychiatry is not held in high esteem by their physician colleagues and medical students can be attributed to their mistaken belief that prescribing medications is a specialty. It is not. Prescribing
medications is an acquired proficiency.
Relying upon science has always been a major part of being a doctoral level psychologist. Applying our commitment to evidence-based prescribing is natural to us. However, although the lack of reproducibility in so much of what we believe in has increased our skepticism about what is and what is not evidence based, we remain scientist-practitioners. The same cannot be said about non-doctoral level providers. No one would reasonably equate those providers as “scientist-practitioners.

Every day another article appears either in a journal, newspaper reports or Internet news about the over-prescribing of psychotropic medications, and other classes of medications, as well. For example, more than one primary care physician has prescribed highly sedative antipsychotic medications for patients complaining of sleep issues. Daily, consumers are bombarded by TV ads 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 are trained to avoid “shotgun” diagnoses or the utilization of questionable therapies. We are more focused upon what we are doing in relationship to the problem presented. We are focused on specifics and scientific evidence. 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 differentiate us from other prescribing professionals.

How we treat our patients is a complicated issue. As psychologists we are trained not only to treat problems that are treatable, but also trained in how we go about providing that treatment. We understand the vast differences between symptoms and syndromes. We know that medications can have serious side effects, so simply sending a patient away with instructions to call if there is a problem or scheduling an appointment six weeks into the future is unacceptable and unthinkable to professional psychologists. Thus, focusing on how we differ from other healthcare professionals will connect with consumers and others.
WELCOME OUR NEW BOARD MEMBERS

NAPPP has installed three new members to the executive board. The new board members will be replacing Dr. Nicholas Cummings, Dr. Howard Rubin and Dr. Levon Margolin, who have all given outstanding support and service to professional psychology and to the NAPPP membership over these many years.

The new board members are Dr. Sharna Wood, Dr. Cheri Surloff and Dr. Keith Petrosky. All three have served as on the NAPPP advisory board and have proven their commitment to professional psychology and the mission of NAPPP.

Dr. Sharna Wood
Dr. Wood is the current program chair for NAPPP. She is a tireless psychologist and has worked in public hospital, clinic and private practice settings since 2001. She served for several years on the executive board for a geriatric psychiatric hospital group in east Texas, operates two physical locations and conducts specialized and forensic evaluations throughout Texas, and provides expert witness support for law firms nationwide. She has worked closely with several test publishers in gathering data for new and improving older test instruments such as NEPSY2, and currently WAIS-5/WMS-5. She was also a finalist for the National Academy of Neuropsychology Outstanding Dissertation Award for her research in geriatric neuropsychology. Dr. Wood has been an associate editor of The Clinical Practitioner for several years.
Dr. Cheri Surloff
Dr. Surloff is a Neuropsychologist and a Medical Psychologist. She has over 25 years experience working with traumatic brain injury, spinal cord injury and all areas of physical and psychological injury. She was a Board Member of the Florida Brain Injury Association for seven years and is on the Medical Board of the Florida Brain Tumor Association for over 20 years. She has taught for over 20 years each semester at Florida Atlantic University teaching Neuroscience and Psychopharmacology. Dr. Surloff has Post-Doctoral Masters in Psychopharmacology and passed the national exam for Prescriptive Authority. She was the Director of Neuropsychology at the Memorial Healthcare System for over 15 years. She is on staff at all the Memorial Hospitals, Aventura and Jackson Health Systems. Her service was lauded by the state Brain and Spinal Cord Association and she has reviewed every Level I Trauma Center for the state.

Dr. Keith Petrosky
Dr. Petrosky, PHD, ABMP, is a graduate of the University of Pennsylvania. He did his doctoral studies at Temple University. He has been a regular contributor to The Clinical Practitioner for the last several years. He is in full time private practice in the Main Line Philadelphia suburb of Exton. He evaluates and treats adults and children. In addition to his private practice work, he is a consultant to a regional cardiology program where he has directed a lifestyle change group for heart attack and post-surgical heart patients for more than 15 years. He developed a number of hospital-based programs, including an integrative health and healing program for cancer patients and an anxiety management program for patients anticipating surgery. He has provided stress management programs for large business corporations and hospital employees.
Ernest Hemingway wrote the fictional novel “A Farewell to Arms,” drawing largely from his own experiences as an ambulance driver serving in Italy during World War I. When our Veterans leave the battlefield, they attempt to say farewell to their (“beyond normal human experience”) combat trauma. Unfortunately it is not so easy and many of them suffer enduring symptoms of PTSD. A remarkably large amount of them die by suicide each year.

The Veteran’s Choice Program allows veterans to see outside providers under certain conditions where they have to wait too long to see a doctor or where it is a burden to travel a large distance to a VA Medical Center. NAPPP has advocated not only that Veterans should not have to wait a lengthy period of time to see a provider but that they should have immediate access to see a provider.

I would like to see the Veteran’s Choice program expanded to allow this immediate access for outpatient services by properly trained psychologists. That includes prescribing in states that allow this, as well as a discussion of how to expand prescribing to veterans under the VA Medical Care system in states that do not. Whether this can be successfully negotiated or not is unknown until an initiative is undertaken to find out.

**WHY VETERANS NEED OUR HELP**

Veterans currently do not have continuity of care in their mental health treatment. They see whoever happens to be at the VA Medical Center at the time of their visit. They usually see someone else on their next visit and someone different thereafter. Many of them Skype with providers that they will never meet who reside in some unknown location. Veterans tell me these providers, whose first language is often not English, are difficult to understand and this is made worse by the electronic nature of the interaction.

Whereas I have found Skype to be helpful in seeing patients on occasion, the success of this method for myself depends on previously having developed a face-to-face relationship with the patient. I realize this is not possible in rural areas and that Skype can be beneficial in these cases. However, I believe that when a face-to-face meeting is possible that this should be the preferred method of providing psychotherapeutic services.

Since many of our veterans struggle with relationships in general due to PTSD, relating to a doctor electronically must be a somewhat emotionally “disconnected” experience for them that probably does little to bridge their difficulty in trusting others, which is such a big part of PTSD.

It is important to recognize that the VA is one of those medical environments where someone who may lack their full medical credentials can still work, such as physicians emigrating to the United States who may not have fully qualified for independent practice. Since the VA is federal it can establish its own rules.

Other physicians in a similar situation sometimes find work administering some part of the public health system where their “MD” degree helps to
Can We Provide “Veterans Choice”

meet whatever criteria is needed for that facility (e.g. running a state laboratory) rather than seeing patients.

There is a problem with this in that American veterans sometimes still harbor ill will towards people who physically, or by virtue of a strong accent, resemble the “enemy” that they fought against. Now they are expected to trust these providers who are the ones responsible for helping them with their military-service related mental health issues.

While I would estimate from my own experience that the majority of our veterans do manage to make peace with the “enemy,” some do not. In my view it is not our place to judge them. This is one place where the old adage of not judging unless one “has walked in the other person’s shoes” applies. I recognize implicitly that I was not “walking the point,” performing reconnoissance with the veteran or standing beside them when they called in the coordinates for the incoming artillery strikes in the role of “forward observer.”

I was not with them when they were under the terrifying attack where one of their best friends and comrades got killed. Veterans have my respect for their courage to do what many people could not do (or would do anything to get out of) and they can think anything they want to think as far as I am concerned. We should be there to help them, not to judge them, unless you are willing to stand alongside them in the field of battle.

Would these veterans prefer to see someone who has grown up in their own country who is aware of the national politics of their time of service and the aspects of our national culture associated with these wars? You bet they would. How does a Vietnam veteran, for example, explain to someone their lack of a “welcome home” from their fellow citizens unless the provider knows firsthand how badly they were treated? For these veterans to have the opportunity to see a fellow American who grew up in this country and who is trained as a doctoral level psychology practitioner could make all the difference in the world. When these practitioners have additional prescribing credentials to add to their in-depth psychotherapy training, this gives the veteran the type of help that can address many of their clinical needs. Last but not least, it includes the very important issue of continuity of care in permitting this veteran to see the same provider during each and every visit. These factors, I believe, would go a long way toward helping reduce veteran suicide.

POSSIBLE SCOPE OF PRACTICE EXPANSION
“SPIN OFFS”

At NAPPP we have advocated for prescribing to always take place wherever possible not by itself but always with psychotherapy. We do not, as in the case of the VA, outsource this to social workers or personal counselors who have much less education and training and are basically just providing a “listening” service. That is probably why so many veterans are in danger of suicide. Because they are not being adequately helped. Skyping with someone four times a year and talking with a social worker (not a doctor but “Bob” or “Nancy”) once a month is not an effective treatment for PTSD. (Go figure!) You and I know that we could do a much better job.

An important question to raise is whether the VA would be interested in allowing properly trained psychologists to prescribe for Veterans in an outpatient setting. In states where this is permitted one would think so. A further question is whether they would be willing to find a way to use properly trained psychologists from states where they are not yet able to prescribe. In other words, would they find a way
Can We Provide “Veterans Choice”

to incorporate this activity under the federal system of health care delivery? This would not seem to be possible at the surface level but one wonders what could be devised by the “powers that be” if there was enough incentive to extend the reach of healthcare delivery in order to help veterans.

For example, if the provider’s practice was within a short distance of a VA clinic could they travel there and prescribe out of that facility as a “visiting or courtesy staff” member or could they offer a prescription recommendation that could be considered, and if appropriate, written by one of the staff VA physicians?

The history of any profession is sometimes lost over time. I was a member of the first graduating class of the first training program in psychopharmacology on the East Coast, which happened to be located in New York City. This program evolved out of the Department of Defense initiative in training a number of psychologists to see if they could safely prescribe. They were enrolled in medical school classes to see what subjects were necessary to prescribe psychotropics and which were not.

Obviously, it was not necessary for a prescribing psychologist to know how to deliver a baby or to set fractured bones. Histology, or the study of tissue, was also not necessary for this purpose. Other subjects such as some training in neurology, endocrinology, and laboratory workups were relevant and were included as part of the curriculum that was established.

Some graduates of the DOD program such as James Meredith and Morgan Sammons were part of the faculty of these early programs. This history may perhaps be lost to many psychologists enrolled in doctoral level training programs across the United States.

I have not found it necessary to actually prescribe medications in my state of Pennsylvania in order to help my patients immensely. While Pennsylvania started out as one of the most progressive states in Colonial America under the leadership of William Penn, it can be quite backwards in comparison to many more progressive states.

While I cannot prescribe myself, I can still recommend medications to physicians who do the actual prescribing. However, I believe it does stick in our collective “craw” that doctoral level psychologists are unable to do work that is now pretty much universally permitted by nurses who have undergone a small amount (in comparison to psychologists) of additional training beyond their RNs and BSN degrees.

Unlike the Nurse Practitioners, psychologists have often been fighting against themselves to prevent prescribing. Lazy or disinterested psychologists try to prevent their more motivated competitors from expanding their scope of practice so that the lazy ones can maintain the “status quo.”

Our APA has failed to get behind this important expansion of “scope of practice” and is now pushing the agenda of helping master’s level practitioners achieve what seems to be an independent certification approaching licensing. It is also hard to believe that nurses have succeeded in their efforts going up against the entire medical community of sub-specialties (family practice, rheumatology, endocrinology, gynecology) and we have been held back by the lobbying efforts of just by one small group - psychiatry.

I was a member of the large contingent of psychologists who gathered together almost 20 years ago in Santa Fe New Mexico to celebrate the start of psychologists gaining the ability to prescribe there. This was part of a continuing education conference. A psychiatrist who
Can We Provide “Veterans Choice”

had graduated from Princeton University and who had worked in the Indian Health Service was one of the speakers at this conference and he enthusiastically welcomed our participation as fellow prescribers. Now, nearly 20 years since then, there has not to my knowledge been even one single case where a person was harmed by a psychologist’s prescription. This is a record that would be envied by any of our fellow prescribers in medicine, dentistry, nursing, and any other field of study. Yet every time this issue comes up, the potential “danger” to the public warning is announced and legislators are visited by lobbyists with the cold hard cash necessary to turn their votes.

For this reason, an initiative to expand prescribing through the federal system makes sense. It would be perhaps poetic justice that the field of work that was the basis for psychologists prescribing in the first place (military service) could re-start the nationwide expansion of prescribing psychology. If this could be done federally and psychology could maintain our pristine record of extreme caution to prevent even one instance of harm to patients, then it might be only a matter of time before every person in America might demand prescribing (along with psychotherapy treatment) from a properly trained psychologist rather than the inadequate treatment model that exists today of twenty minute medication checks provided by psychiatrists with outsourcing of therapy to lower level and less skilled providers.

Your comments are solicited in regards to the above proposal. Please send them to drkeith1@verizon.net.
FDA MedWatch:
Certain Prescription Insomnia Medicines: New Boxed Warning -
Due to Risk of Serious Injuries Caused by Sleepwalking, Sleep
Driving and Engaging in Other Activities

[Posted 04/30/2019]

Issue

FDA is advising that rare but serious injuries have happened with certain common prescription insomnia medicines because of sleep behaviors, including sleepwalking, sleep driving, and engaging in other activities while not fully awake. These complex sleep behaviors have also resulted in deaths. These behaviors appear to be more common with

- Lunesta (eszopiclone)
- Sonata (zaleplon)
- Ambien, Ambien CR, Edluar, Intermezzo, Zolpimist (zolpidem)

than other prescription medicines used for sleep.

Background

Eszopiclone, zaleplon, and zolpidem are medicines used to treat insomnia in adults who have difficulty falling asleep or staying asleep. They are in a class of medicines called sedative-hypnotics and have been approved and on the market for many years. These insomnia medicines work by slowing activity in the brain to allow sleep. Quality sleep can have a positive impact on physical and mental health.

Recommendation

If patients experience a complex sleep behavior where you engage in activities while you are not fully awake or if you do not remember activities you have done while taking the medicine you should:

- Stop taking your insomnia medicine.
- Contact your health care professional right away if you.

Healthcare professionals should not prescribe eszopiclone, zaleplon, or zolpidem to patients who have previously experienced complex sleep behaviors after taking any of these medicines. Healthcare Professionals should advise all patients that:

- Although rare, the behaviors caused by these medicines have led to serious injuries or death.
- To discontinue taking these medicines if they experience an episode of complex sleep behavior.

Healthcare professionals and patients are encouraged to report adverse events or side effects related to the use of these products to the FDA’s MedWatch Safety Information and Adverse Event Reporting Program:

Complete and submit the report Online: [www.fda.gov/MedWatch/report](http://www.fda.gov/MedWatch/report)
Ketamine a Panacea for Resistant Depression? Not So Fast, Experts Say

Ketamine’s rapid antidepressant effects and its recent approval by the US Food and Drug Administration (FDA) has clinicians and patients alike buzzing with excitement. However, for some experts, this excitement only serves to heighten concerns about the many unknowns and potential long-term side effects of the drug, which began its long history as an anesthetic.

Here, at the Anxiety and Depression Association of American (ADAA) 2019 Conference, experts debated the drug’s merits and potential pitfalls. Keynote speaker Alan Schatzberg, MD, was wary of esketamine. “We need to get phase 4 data looking at the effects when people stop ketamine treatment at different time points because right now, I don’t think the concerns on this have been answered.” Clinicians should prescribe cautiously, with priority to the acutely ill.

A N-methyl-D-aspartate receptor antagonist, ketamine’s side effects include abuse as well as cognitive, urological, and hepatic toxicities. However, Schatzberg told meeting delegates that what troubles him most are the lesser known reports in recent FDA Briefing documents of troubling relapse trends with esketamine.

“There appears to be a sharp relapse rate. Even after 12 to 16 weeks of treatment with esketamine, patients relapse quickly,” he said. This relapse rate is documented in FDA files even though patients remained on the antidepressant medications they had been taking before and during the study.

“Even the antidepressant wasn’t sufficient to prevent the relapse after discontinuing esketamine,” said Schatzberg. “This represents a real problem. What are you going to do with these patients — tell them to keep taking the esketamine?”

FDA briefing documents submitted to advisory panels considering the esketamine’s approval report six deaths in patients with resistant depression and three suicides — two at 12 and 20 days after the last dose of esketamine, and one 4 days after the last dose.

The two suicides that occurred at 12 and 4 days following the last dose were by patients who appeared to be improving, as indicated by scores on the Montgomery-Åsberg Depression Rating Scale.

Antidepressants in Bipolar II Disorder

Antidepressants are increasingly discouraged in bipolar I disorder but what about bipolar II? Here depression is the more prominent pole, and the risk of antidepressant-induced mania is smaller. On the other hand, most of what we know about treatment comes from studies on bipolar I. Research on antidepressants in bipolar II is scant, but a new textbook gives a rare glimpse into how the experts approach them in their practice.

In Bipolar II Disorder: Modeling, Measuring and Managing, Gordon Parker surveyed 18 international experts on their treatment strategies with bipolar II disorder. I’ve clustered their responses about antidepressants into 4 categories:

1. Antidepressants are helpful in bipolar II and do not cause hypomania (endorsed by 1 out of 18 experts).

2. Antidepressants are helpful in bipolar II but are best used with a mood stabilizer to avoid hypomania (endorsed by 10 out of 18 experts).

3. Antidepressants are best avoided or used with a mood stabilizer as a last resort in bipolar II (endorsed by 6 out of 18 experts).

4. Antidepressants should almost always be avoided in bipolar II because of the risk of hypomania and cycling (endorsed by 1 out of 18 experts).

That’s quite a spread, but there is one thing nearly all agreed on: antidepressants can cause hypomania, mixed states, and worsen the overall course by triggering more frequent episodes and rapid cycling. This issue has long been debated, but studies over the past decade have largely put that debate to rest.
On the other hand, nearly all experts saw a role for antidepressants in bipolar II disorder. Most saw bipolar II as a more varied group than bipolar I, and within that group are some who respond to antidepressants. Even those who tended to avoid antidepressants admitted that a small minority of bipolar II patients could do well with antidepressant monotherapy.

Psychiatric Times April 16, 2019

Dr. Reinhardt: This article points out that according to science, antidepressants should be discouraged with bipolar disorder, but that this is based primarily on bipolar 1 research. The spin-author writes that with Bipolar 2, “...risk of antidepressant-induced mania is smaller.”

The author collected the opinions of 18 “experts.” Only 1 thought there was clear benefit, 10 thought there may be some benefit but must be used with another chemical to prevent harm, and the rest thought there was only harm. Chemicals that increase depression and suicide risk compared to placebo by 4-8% (found in every study) but are no more effective than a jelly bean have no place in health care.

Psychoactive Medications and Adverse Outcomes Among Older Adults Receiving Hemodialysis

Guidelines recommend avoidance of several psychoactive medications such as hypnotics in older adults due to their adverse effects. Older patients on hemodialysis may be particularly vulnerable to complications related to use of these agents, but only limited data are available about the risks in this population.

To evaluate the association between the use of psychoactive medications and time to first emergency department visit or hospitalization for altered mental status, fall, and fracture among older patients receiving hemodialysis, a total of 60,007 adults 65 years or older receiving hemodialysis with Medicare Part D coverage in 2011 were included in the study. The predictors were use of sedative-hypnotics and anticholinergic antidepressants (modeled as separate time-varying exposures). The outcomes were time to first emergency department visit or hospitalization for altered mental status, fall, and fracture (modeled separately).

Overall, 17% and 6% used sedative-hypnotics and anticholinergic antidepressants, respectively, in 2011. In multivariable-adjusted Cox regression, anticholinergic antidepressant use was associated with a 25%, 27%, and 39% higher hazard of altered mental status, fall, and fracture, respectively, compared with no use. Use of sedative-hypnotics was not associated with adverse outcomes.

Conclusions: Anticholinergic antidepressants were associated with adverse outcomes in older hemodialysis patients, and alternative treatments should be considered. Sedative-hypnotics were not associated with the risks evaluated in this study, but further investigation of the harms of this class of agents is warranted before their recommendation as a treatment option for insomnia in this population.


Dr. Reinhardt: Sedative-hypnotics and anticholinergic antidepressants are on the Beers list as inappropriate for older patients, and their use is tightly restricted by federal law in nursing homes. Yet 17% and 6% of subjects used sedative-hypnotics and anticholinergic antidepressants, a clear indication of poor physician training, overly aggressive chemical company marketing or at worst, malpractice.

Antiepileptic Drug Treatment Patterns in Women of Childbearing Age With Epilepsy

Despite widespread warnings that use of certain antiepileptic drugs (AEDs) during pregnancy is associated with significant risks for congenital malformations and poor neurodevelopmental outcomes in children, these drugs are still being prescribed at concerning levels, new research shows. A study that included 45,000 women who had been diagnosed with epilepsy showed that approximately 5% of women with new-onset incident epilepsy were prescribed valproate (Depacon, AbbVie) and 15% received topiramate (multiple brands). Results also revealed that among women with prevalent epilepsy, 10% were prescribed valproate, and 13% were prescribed topiramate.

“Physicians, and women with epilepsy of childbearing
age, should be aware of the teratogenicity risks of certain antiepilepsy drugs such as valproate, topiramate, and phenytoin [multiple brands],” principal investigator Hyunmi Kim, MD, PhD, MPH, Department of Neurology, Stanford University School of Medicine, Palo Alto, California, told Medscape Medical News.

However, valproate is still deemed a category D medication for pregnant women with epilepsy or bipolar disorder if other medications are ineffective or are not tolerated.

JAMA Neurol. Published online April 1, 2019, reported in Medscape Psychiatry

Dr. Reinhardt: Twenty-three percent of epilepsy sufferers are inappropriately given these chemicals. What percentage of potential child-bearers among your pseudo-bipolar disorder patients are being given these “mood stabilizers?” Another a clear indication of poor physician training, overly aggressive chemical company marketing or at worst, malpractice.

Is dementia a possible statin adverse effect?

Reciprocal modulation between amyloid precursor protein and synaptic membrane cholesterol revealed by live cell imaging

A team of neuroscientists led by Florida Atlantic University’s Brain Institute sought to answer a fundamental question in their quest to combat Alzheimer’s disease -- “Is amyloid precursor protein the mastermind behind Alzheimer’s disease or is it just an accomplice?”

Although scientists have gained a lot knowledge about how this protein turns into amyloid plaques, little is known about its native function in neurons. In the case of more common sporadic Alzheimer’s disease, the highest genetic risk factor is a protein that is involved in cholesterol transportation and not this amyloid precursor protein. Moreover, various clinical trials designed to address Alzheimer’s disease by minimizing amyloid plaque formation have failed, including one from Biogen announced last month.

Researchers devised a multi-functional reporter for amyloid precursor protein and tracking the protein’s localization and mobility using quantitative imaging with unprecedented accuracy. They genetically disrupted the interaction between cholesterol and amyloid precursor protein. Surprisingly, by disengaging the two, they discovered that this manipulation not only disrupts the trafficking of amyloid precursor protein but also messes up cholesterol distribution at the neuronal surface. Neurons with an altered distribution of cholesterol exhibited swollen synapses and fragmented axons and other early signs of neurodegeneration.

Neurobiology of Disease, 2019; 127: 449 DOI: 10.1016/j.nbd.2019.03.009

Dr. Reinhardt: The synaptic surface fraction of APP was increased by a reduction in membrane cholesterol levels. Does it seem prudent to ingest chemicals that alter the cholesterol system, the backbone of all cell membranes, without knowing of potential downsides?

We do know that “too low” cholesterol (below 120 mg/dL) is inversely correlated with depression symptoms. This study did not include an examination cholesterol levels, but certainly hints at a possible link.

We do know that high total cholesterol does NOT correlate with dementia. “There was no evidence supporting an association between late-life TC and AD, or between late-life TC and any dementia.” (Cholesterol as a risk factor for dementia and cognitive decline: a systematic review of prospective studies with meta-analysis. Am J Geriatr Psychiatry. 2008 May;16(5):343-54.)

Study suggests overdiagnosis of schizophrenia

Specialized Consultation for Suspected Recent-onset Schizophrenia: Diagnostic Clarity and the Distorting Impact of Anxiety and Reported Auditory Hallucinations.

Johns Hopkins Medicine researchers report that about half the people referred to the clinic with a schizophrenia diagnosis didn’t actually have schizophrenia. Schizophrenia is a chronic, severe and disabling disorder marked by disordered thinking, feelings and behavior. People who reported hearing voices or having anxiety were the ones more likely to
be misdiagnosed.

Early detection of psychotic disorders is now recognized as vital in reducing dysfunction, morbidity, and mortality. However, making the diagnosis of a psychotic disorder, especially earlier in the course of disease, can be challenging, and an incorrect diagnosis of a psychotic disorder may also have significant consequences. We therefore, conducted a retroactive chart review of 78 patients referred to a specialty early psychosis consultation clinic to examine the role of specialty clinics in clarifying the diagnosis of early psychosis, especially potential schizophrenia.

Of the 78 patients, 43 (55%) had a primary diagnosis at referral of a schizophrenia spectrum disorder. The primary diagnosis in the consultation clinic was different in 22 (51%) of these 43 cases, and 18 (42%) of these patients were not diagnosed with any form of primary psychotic disorder. These patients were more likely to report anxiety and less likely to report thought disorder than patients with a consultation diagnosis of schizophrenia or schizoaffective disorder. Clinicians may therefore overdiagnose schizophrenia, demonstrating the value of second opinions from clinics specializing in the diagnosis of recent-onset psychosis.


Dr. Reinhardt: Well, 51% to 42% is better than 50/50! Let’s let the psychologists do the diagnosis after the MD or psychiatrist rules out physical causes, as is appropriate given everyone’s training. Read on!

Gluten-Free Diet May Ease Schizophrenia Symptoms

A gluten-free diet may reduce symptoms in a particular subset of patients with schizophrenia, early research suggests. In a small pilot study, investigators found individuals with schizophrenia who have elevated serum antibodies to gluten, specifically antigliadin antibodies (AGA IgG) and who were put on a gluten-free diet for 5 weeks showed greater improvement in negative symptoms compared with their counterparts who ate a diet containing gluten.

“With a gluten-free diet, we do have the potential to improve psychiatric symptoms, particularly negative symptoms, which is a symptom domain with a high unmet clinical need,” said lead investigator Deanna L. Kelly, PharmD, professor of psychiatry, University of Maryland School of Medicine, Baltimore.

“We don’t have anything for negative symptoms, so this could be a treatment for people if they have these antigliadin antibodies,” Kelly said.

The findings were presented here at the first annual Congress of the Schizophrenia International Research Society (SIRS) 2019.

Elevated AGA IgG may be present in about 30% of all patients with schizophrenia. The antigliadin antibody is not related to the antibodies seen in celiac disease, which affects roughly 1% of the overall population.

This subgroup of schizophrenia patients with elevated AGA IgG has significantly lower positive schizophrenia symptoms than patients with no AGA IgG. They also have higher levels of kynurenine, which has been linked to schizophrenia pathology, Kelly noted.

“We had done a 2-week gluten-free trial in two people who had elevated AGA IgG and schizophrenia, and we noted robust symptom improvements, particularly in the domain of negative symptoms, so we wanted to do a feasibility study and enroll more patients,” she told Medscape Medical News in an interview after her plenary session talk.

The researchers randomized seven patients to receive a gluten-free diet and nine patients to receive a diet containing gluten for 5 weeks. All were inpatients, had elevated AGA (IgG > 20 U), had been on the same antipsychotic for at least 4 weeks prior to study entry, and had a Brief Psychiatric Rating Scale total score > 29. The cohort ranged in age from 18 to 64 years.

At the end of the 5 weeks, AGA IgG levels had decreased by 34% in the gluten-free group vs 16% in those who consumed a diet containing gluten. Similarly, patients in the gluten-free group reported less abdominal pain, diarrhea, constipation, reflux, and indigestion, as noted on the Gastrointestinal Symptom Rating Scale. They also showed a greater improvement on the Clinical Global Impression scale, with an effect size (ES) of –0.75.
The findings, Kelly said, add to a growing body of evidence that there is an association between inflammation and immune activity in schizophrenia and also suggest that more personalized treatments targeting diet modulation or immune activity and inflammation may play future roles in schizophrenia treatment.

In future, all patients newly diagnosed with schizophrenia may undergo testing for AGA IgG.


Dr. Reinhardt: According to the previous article, it is also possible that these patients did not have schizophrenia in the first place!

Viewing the bundle of diagnostic criteria for schizophrenia reveals that this is a catch-all diagnosis for many conditions we know, and many that we have yet to discover, that many be treatable through diet and medical interventions that do not include “major tranquilizers.”

I have never seen a full diagnostic work up to rule out all of the known disorders that mimic schizophrenia. This is due to the costs of these tests, the lack of knowledge of the diagnostician, and the invasiveness of some of these tests, which require a spinal tap.

How many psychiatrists and psychologists even ask if a “schizophrenia patient” even owns a cat, or recommend testing for Bartonella henselae infection? Yet 28% of all household cats carry these bacteria, well known to cause “schizophrenia” symptoms.

In the case of gluten intolerance, the AGA IgG antibody test has poor sensitivity in cases of non-celiac gluten. Yet researchers found significant symptom reduction even at the 5-week abstinence point. We, as psychologists, CAN take point on this. It is very simple to do dietary counseling to avoid gluten and monitoring symptoms over a few weeks to identify symptom change. This type of elimination diet is 100% accurate, if rigorously followed, compared to a lab that might miss 70-90% of cases?

Another issue may be revealed in this study: The researchers did not control for folate deficiency caused by known alleles of the MTHFR gene. The 677TT and the 1298CC genotypes show a frequency of 25.0% and 12.5% respectively in the general population. Many studies have demonstrated that synthetic folate (folic acid) may inhibit absorption of natural, bioavailable folate, leading to hyperhomocysteinemia, which has been linked to depression, schizophrenia and affective disorders, minimal cognitive impairment, dementia, Parkinson’s disease, multiple sclerosis, epilepsy, cardiovascular disorders, atherosclerosis, myocardial infarction, stroke, and eclampsia. In 1998, the U.S. Food and Drug Administration (FDA) mandated that all enriched cereal grain products be fortified with folic acid.

Did this study accidentally highlight the need for MTHFR allele testing and/or avoidance of all baked goods in “schizophrenic” patients?

The kynurenine issue also deserves renewed attention. L-Kynurenine is a metabolite of the amino acid L-tryptophan used in the production of niacin. Cognitive deficits in schizophrenia are associated with imbalances in the enzymes that break down kynurenine. Niacin is well known to cause “schizophrenia.” Kynurenine production is increased in Alzheimer’s disease and cardiovascular disease where its metabolites are associated with cognitive deficits and depressive symptoms. Kynurenine is also associated with motor tics. Abnormalities of the kynurenine (KYN) pathway may be implicated in the pathophysiology of depression. (Kynurenine pathway in depression: A systematic review and meta-analysis. Neurosci Biobehav Rev. 2018 Jul;90:16-25) The products of kynurenine metabolism are important regulators of the immune balance.

Orthomolecular psychiatry has explored the kynurenine pathway and use of niacin for schizophrenia for over 60 years, yet this non-patentable approach is widely ignored.

Niacin, vitamin B3, has three known forms: nicotinic acid, nicotinamide, and inositol hexanicotinate. The three forms have different actions; only nicotinic acid, for example, lowers LDL and triglycerides. Nicotinamide has been found to inhibit sirtuin, a unique class of NAD(+)–dependent deacetylases required for diverse biological processes, including transcriptional silencing, regulation of apoptosis,
fat mobilization, and lifespan regulation. Sirtuin is inhibited by nicotinamide. Nicotinamide is the most common form found in b-complex and multivitamins, although niacin as nicotinic acid is also available. Nicotinic acid causes flushing and overdose can cause serious side effects. The CDC recommends a maximum tolerable intake of 30 mg/day, although much higher doses are commonly taken.

The use of “convenient” or inexpensive forms of nutrients in multivitamins and other supplements could be the reason why supplement studies do not seem to show a health benefit. Using synthetic folate, folic acid, for example can cause folate deficiency in those with certain MTHFR alleles.

### Adjunctive probiotic microorganisms to prevent rehospitalization in patients with acute mania: A randomized controlled trial.

Immunological abnormalities play a role in the pathophysiology of mania and have been associated with relapse. Probiotic organisms such as Lactobacilli and Bifidobacteria modulate inflammation in humans and animal models. The trial examined whether the administration of probiotic organisms prevents psychiatric rehospitalizations in patients recently discharged following hospitalization for mania.

Patients hospitalized for mania (N = 66) were randomized after discharge to receive 24 weeks of adjunctive probiotics (Lactobacillus rhamnosus strain GG and Bifidobacterium animalis subsp. lactis strain Bb12) or adjunctive placebo in a parallel two-group design format. The effect of treatment group on the risk of rehospitalization was calculated using Cox regression models. The modulating effect of systemic inflammation was measured employing an inflammation score based on immunoglobulin levels directed at previously defined antigens.

During the 24-week observation period there were a total of 24 rehospitalizations in the 33 individuals who received placebo and eight rehospitalizations in the 33 individuals who received the probiotics (z = 2.63, P = .009). Hazard functions indicated that the administration of the probiotics was associated with a significant advantage in time to all psychiatric rehospitalizations (hazard ratio [HR] = 0.26, 95% confidence interval [CI] 0.10, .69; P = .007). Probiotic treatment also resulted in fewer days rehospitalized (mean 8.3 vs 2.8 days for placebo and probiotic treatment, respectively; (P = .017). The effect of the probiotic treatment on the prevention of rehospitalization was increased in individuals with elevated levels of systemic inflammation at baseline.

CONCLUSION: Probiotic supplementation is associated with a lower rate of rehospitalization in patients who have been recently discharged following hospitalization for mania.

Bipolar Disord. 2018; 20(7):614-621 (ISSN: 1399-5618)

### Long-term benefit of Microbiota Transfer Therapy on autism symptoms and gut microbiota

Many studies have reported abnormal gut microbiota in individuals with Autism Spectrum Disorders (ASD), suggesting a link between gut microbiome and autism-like behaviors. Modifying the gut microbiome is a potential route to improve gastrointestinal (GI) and behavioral symptoms in children with ASD, and fecal microbiota transplant could transform the dysbiotic gut microbiome toward a healthy one by delivering a large number of commensal microbes from a healthy donor.

We previously performed an open-label trial of Microbiota Transfer Therapy (MTT) that combined antibiotics, a bowel cleanse, a stomach-acid suppressant, and fecal microbiota transplant, and observed significant improvements in GI symptoms, autism-related symptoms, and gut microbiota. Here, we report on a follow-up with the same 18 participants two years after treatment was completed. Notably, most improvements in GI symptoms were maintained, and autism-related symptoms improved even more after the end of treatment. Important changes in gut microbiota at the end of treatment remained at follow-up, including significant increases in bacterial diversity and relative abundances of Bifidobacteria and Prevotella. Our observations demonstrate the long-term safety and efficacy of MTT as a potential therapy to treat children with ASD who have GI problems, and warrant a double-blind, placebo-controlled trial in the future.
Dr. Reinhardt: “Roughly 30-50% of all people with autism have chronic gastrointestinal (GI) problems, primarily constipation and/or diarrhea that can last for many years. That chronic discomfort and pain can cause irritability, decreased attention and learning, and negatively impact behavior... Improvements in GI symptoms, ASD symptoms, and the microbiome all persisted for at least eight weeks after treatment ended, suggesting a long-term impact.” The present study now shows the benefits are extended beyond eight weeks to at least two years post-treatment.”

Exercise Cuts Brain Inflammation in First-Episode Psychosis

Aerobic exercise reduces brain inflammation in patients with first-episode psychosis (FEP), early research suggests.

In a study involving 25 outpatients newly diagnosed with schizophrenia, aerobic exercise performed once a week led to a significant reduction in interleukin-6 (IL-6), suggesting physical activity may reduce the deleterious effects of brain inflammation. “IL-6 has been found to be a marker for brain inflammation in schizophrenia, and schizophrenia patients have higher levels than controls,” lead author Joseph Ventura, PhD, University of California, Los Angeles (UCLA) Semel Institute for Neuroscience and Human Behavior, told Medscape Medical News.

“Interleukin-6 has also been found in other psychiatric conditions to be a biomarker of brain inflammation, so inflammation is a big concern,” Ventura said. The findings were presented here at the Congress of the Schizophrenia International Research Society (SIRS) 2019.

High levels of IL-6 have been associated with depression, said Ventura. However, he added, at this point, it’s unclear whether brain inflammation leads to depressive symptoms, or whether depression increases brain inflammation. “In any event,” he said, “we know that IL-6 is not good for you. So what can we do about it?”

Assessment of Glyphosate Induced Epigenetic Transgenerational Inheritance of Pathologies and Sperm Epimutations: Generational Toxicology

Ancestral environmental exposures to a variety of factors and toxicants have been shown to promote the epigenetic transgenerational inheritance of adult onset disease. One of the most widely used agricultural pesticides worldwide is the herbicide glyphosate (N-(phosphonomethyl)glycine), commonly known as Roundup. There are an increasing number of conflicting reports regarding the direct exposure toxicity (risk) of glyphosate, but no rigorous investigations on the generational actions.

The current study using a transient exposure of gestating F0 generation female rats found negligible impacts of glyphosate on the directly exposed F0 generation, or F1 generation offspring pathology. In contrast, dramatic increases in pathologies in the F2 generation grand-offspring, and F3 transgenerational great-grand-offspring were observed. The transgenerational pathologies observed include prostate disease, obesity, kidney disease, ovarian disease, and parturition (birth) abnormalities. Epigenetic analysis of the F1, F2 and F3 generation sperm identified differential DNA methylation regions (DMRs). A number of DMR associated genes were identified and previously shown to be involved in pathologies. Therefore, we propose glyphosate can induce the transgenerational inheritance of disease and germline (e.g. sperm) epimutations. Observations suggest the generational toxicology of glyphosate needs to be considered in the disease etiology of future generations.

Dr. Reinhardt: The “jury is still out” on Roundup, just as it was for smoking, asbestos, and thalidomide for so many years, We are told that washing food will remove
A Social Analgesic? Acetaminophen (Paracetamol) Reduces Positive Empathy

Acetaminophen appears to reduce feelings of empathy in users, new research suggests.

Investigators showed scenarios of positive experiences to 114 college students who had taken either acetaminophen (1000 mg) or placebo and found that those who had taken acetaminophen experienced less pleasure and empathetic feelings toward the hypothetical characters in comparison with those who had taken placebo. The ability to recognize pleasure and positivity was unaffected.

“We found that acetaminophen reduced the affective, although not the cognitive, side of empathy,” Dominik Mischkowski, PhD, visiting assistant professor, Department of Psychology, Ohio University, Athens, told Medscape Medical News.

In the current study, 114 undergraduate students at the Ohio State University were randomly assigned to receive either 1000 mg of acetaminophen (n = 59) or a placebo in liquid form (n = 55).


Dr. Reinhardt: Acetaminophen is the only one of over the counter pain meds that does not reduce inflammation. Blocking pain while allowing the inflammation causing the pain to remain untreated seems, well, crazy. Since this is also the only OTC pain med that destroys the liver, it also seems like an odd choice for being allowed on the market, let alone being the chemical “4 out of 5 doctors recommend.”

Melatonin Benefits Kids With Autism, Ups Parents’ Quality of Life

Prolonged-release melatonin improves sleep quality in children with autism spectrum disorder (ASD) and is associated not only with improved externalizing behaviors in kids, but also better quality of life for parents, results of a phase 3 trial and extended follow-up show. The drug was also associated with a threefold improvement in externalizing behavior scores among the children, as well as significant improvements in parental quality of life and satisfaction with their child’s sleep.

Schröder said that the two presentations demonstrated that “pediatric prolonged release melatonin is efficient not only short term but maintains its effect long term in children and adolescents with ASD and has positive effects on their caregivers.”

Maras began his presentation by pointing out that externalizing behaviors such as hyperactivity and aggression are significantly and negatively correlated with impaired sleep quality in children with ASD.

After 2-week run-in phase, 125 children from 24 sites in the US and European Union were randomly assigned in a 1:1 fashion to pedPRM 2 mg for 3 weeks followed by pedPRM 2 mg or 5 mg for 10 weeks, or an equivalent placebo.

Children from both the active and control groups were then switched to open-label follow-up, in which they were given pedPRM 2 mg or 5 mg for 18 weeks, followed by a further 78 weeks of the intervention at 2 mg, 5 mg, or 10 mg doses.

“We have about one third of the children reacting sufficiently 2 mg, which was the lowest dose on this study, so this was enough for a group of children,” he said.

“The biggest group, about 50%, needed to get about 5 mg per day melatonin, and there is also a smaller group, about 20%-22%, that needed even 10 mg per day to get sufficient treatment effects,” Maras noted.

Vitamin B12 modulates Parkinson’s disease LRRK2 kinase activity through allosteric regulation and confers neuroprotection

Parkinson’s is the most common, chronic neurodegenerative movement disorder affecting 1% of the global population over seventy years of age. Although most cases of Parkinson’s are sporadic, the inheritable variants of the disease are mainly associated with mutations of the gene that encodes the LRRK2 enzyme. Neurotoxicity, or the pathogenic effects as a whole associated with LRRK2, is mainly due to the fact that pathogenic mutations increase the kinase activity of this enzyme, which has prompted an international race to develop inhibitors. Right now, specific, powerful inhibitors of the kinase activity of LRRK2 do in fact exist. Yet many of them cause undesirable side effects or produce very unclear clinical results.

This research has revealed that AdoCbl, one of the active forms of vitamin B12, acts as an inhibitor of the kinase activity of LRRK2 in cultured cells and brain tissue. It also significantly prevents the neurotoxicity of the LRRK2 variants associated with Parkinson’s in cultured cells of primary rodents, as well as in various genetically modified models used to study this disease.

According to the study, vitamin B12 has turned out to be a new class of modulator of the kinase activity of LRRK2, which “constitutes a huge step forward because it is a neuroprotective vitamin in animal models and has a mechanism unlike that of currently existing inhibitors. So it could be used as a basis to develop new therapies to combat hereditary Parkinson’s associated with pathogenic variants of the LRRK2 enzyme.”

Cell Research, 2019; 29 (4): 313 DOI: 10.1038/s41422-019-0153-8

Dr. Reinhardt: What is the role in vitamin B12 deficiency in the pathogenesis of Parkinson’s? We already know that B12 deficiency can cause dementia, likely through inhibition of production of superoxide dismutase in the brain, which has a major role in neutralizing metals, viral particles and bacteria which find their way into the brain. We also know that intrinsic factor, a protein released in the stomach and necessary for absorption of B12 in the gut, declines with age. We know that Metformin, the first line treatment for blood sugar abnormalities, inhibits B12 absorption, and that blood sugar abnormalities correlate with age. Further, we know that animal protein, the source of almost all dietary B12, plays a decreasing role in diet as we age due to a variety of factors including dentition issues, increased reliance on frozen dinners. We know that the elderly are the greatest users of stomach acid suppressors, which inhibit protein digestion and B12 absorption. We know that it is not at all unusual to spot gait disturbance in elderly patients that magically disappear when supplemental B12 is provided, indicating B12 deficiency is not unusual.

According to the CDC, “A serum B12 level below the normal expected range may indicate B12 deficiency. However, a B12 level within the low normal range does not exclude B12 deficiency; symptomatic patients need to be further evaluated.”

“The initial laboratory assessment of a patient with suspected vitamin B12 deficiency should include a complete blood count and a serum vitamin B12 level. Several coexisting conditions may falsely lower serum B12 levels, including oral contraceptive use, multiple myeloma, pregnancy, and folate deficiency. In contrast, falsely normal levels may be seen in patients with liver disease, myeloproliferative disorders, or renal disease.”

Note that folate deficiency renders the lab tests for B12 levels as essentially useless. We know that flour and baked goods in the US are fortified with folic acid, the synthetic form of folate. We also know that certain MTHFR alleles, occurring in an estimated 38% of the population, are at very high risk of folate deficiency, and that synthetic folic acid can block absorption of natural folate from the diet, resulting in disruption of the histidine cycle, the serine and glycine cycle, the methionine cycle, the thymidylate cycle, and the purine cycle. We know that many countries do NOT fortify food with the synthetic folic acid specifically because it masks true folate and B12 deficiency labs.

This and other research articles promote the idea that a new, patentable “treatments” that blocks the same pathways as B12 does naturally should be the goal of Parkinson’s research.

An alternate approach to the “deficiency diseases” is
1. Avoid foods that are “fortified” with folic acid.

2. Take only supplements that include bioavailable folate (5-methyltetrahydrofolate, aka 5-MTHF) rather than folic acid. These are widely available.

3. Take a sublingual form of B12, such as Superior Source sublingual B12 1000 mcg every day. Sublingual delivery is as effective as injection; B12 excess symptoms is unheard of; absorption at any age is vastly superior to oral ingestion.

With the rates of these “disorders” so high, might it be time to start teaching physicians in training nutrition, a lacking identified in the Journal of the AMA?

A good source for B12 deficiency information can be found from the journal American Family Physician article 2011 Jun 15;83(12):1425-1430.

Gum bacteria implicated in Alzheimer’s and other diseases

Researchers are reporting new findings on how bacteria involved in gum disease can travel throughout the body, exuding toxins connected with Alzheimer’s disease, rheumatoid arthritis and aspiration pneumonia. They detected evidence of the bacteria in brain samples from people with Alzheimer’s and used mice to show that the bacterium can find its way from the mouth to the brain.

“People with genetic risk factors that make them susceptible to rheumatoid arthritis or Alzheimer’s disease should be extremely concerned with preventing gum disease.”

P. gingivalis commonly begins to infiltrate the gums during the teenage years. About one in five people under age 30 have low levels of the bacterium in their gums. While it is not harmful in most people, if it grows to large numbers the bacteria provoke the body’s immune system to create inflammation, leading to redness, swelling, bleeding and the erosion of gum tissue.

Making matters worse, P. gingivalis even causes benign bacteria in the mouth to change their activities and further increase the immune response. Bacteria can travel from the mouth into the bloodstream through the simple act of chewing or brushing teeth.


Food additive may influence how well flu vaccines work

Michigan State University scientists have linked a common food preservative to an altered immune response that possibly hinders flu vaccines.

The study conducted in mice, presented at the 2019 Experimental Biology meeting in Orlando, Fla., April 7 at 9 a.m., offers up a new potential factor in vaccine effectiveness.

Tert-butylhydroquinone, or tBHQ, can be found in several food products including cooking oils, frozen meats (especially fish) and processed foods such as chips and crackers. Products don’t always have to include it on ingredient lists.

“If you get a vaccine, but part of the immune system doesn’t learn to recognize and fight off virus-infected cells, then this can cause the vaccine to be less effective,” said Robert Freeborn, a fourth-year doctoral student who led the study with Cheryl Rockwell, an associate professor in pharmacology and toxicology.

“We determined that when tBHQ was introduced through the diet, it affected certain cells that are important in carrying out an appropriate immune response to the flu.”

TBHQ also slowed down the initial activation of T cells, reducing their ability to fight off an infection sooner. This allowed the virus to run rampant in the mice until the cells fully activated.

A second phase of the study showed the additive hindered the immune system’s ability to remember how to respond to the flu virus, particularly when another strain was introduced at another time. This resulted in a longer recovery and additional weight loss in the mice.
Six-Month Prevalence of Mental Disorders and Service Contacts among Children and Youth in Ontario: Evidence from the 2014 Ontario Child Health Study.

The 2014 Ontario Child Health Study is a provincially representative survey of 6537 families with children aged 4 to 17 years in Ontario. DSM-IV-TR mental disorders were assessed using the Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID) and included mood (major depressive episode), anxiety (generalized anxiety, separation anxiety, social phobia, specific phobia), and behaviour disorders (attention-deficit/hyperactivity disorder, oppositional-defiant disorder, conduct disorder). The MINI-KID was administered independently to the primary caregiver and youth aged 12 to 17 years in the family’s home.

Past 6-month prevalence of any mental disorder ranged from 18.2% to 21.8% depending on age and informant. Behaviour disorders were the most common among children, and anxiety disorders were the most common among youth. Among children and youth with a parent-identified mental disorder, 25.6% of children and 33.7% of youth had contact with a mental health provider. However, 60% had contact with one or more of the providers or service settings assessed, most often through schools.

Conclusions: Between 18% and 22% of children and youth in Ontario met criteria for a mental disorder but less than one-third had contact with a mental health provider. These findings provide support for strengthening prevention and early intervention efforts and enhancing service capacity to meet the mental health needs of children and youth in Ontario.


Incidence of multiple sclerosis misdiagnosis in referrals to two academic centers

Highlights

• Accurate multiple sclerosis diagnosis can be challenging.

• 18% of new MS patients in two clinics were determined to be misdiagnosed.

• Misdiagnosis is associated with atypical clinical or imaging findings.

• Misdiagnosed patients receive years of unnecessary MS medications.

• Migraine is the most common alternate diagnosis.

Multiple Sclerosis (MS) specialists routinely evaluate misdiagnosed patients, or patients incorrectly assigned a diagnosis of MS. Misdiagnosis has significant implications for patient morbidity and healthcare costs, yet its contemporary incidence is unknown. We examined the incidence of MS misdiagnosis in new patients referred to two academic MS referral centers, their most common alternate diagnoses, and factors associated with misdiagnosis.

Demographic data, comorbidities, neurological examination findings, radiographic and laboratory results, a determination of 2010 McDonald Criteria fulfillment, and final diagnoses were collected from all new patient evaluations completed at the Cedars-Sinai Medical Center and the University of California, Los Angeles MS clinics over twelve months.

Of the 241 new patients referred with an established diagnosis of MS, 17% at Cedars-Sinai and 19% at UCLA were identified as having been misdiagnosed. The most common alternative diagnoses were migraine (16%), radiologically isolated syndrome (9%), spondylopathy (7%), and neuropathy (7%). Clinical syndromes and radiographic findings atypical for MS were both associated with misdiagnosis. The misdiagnosed group received approximately 110 patient-years of
unnecessary MS disease modifying therapy.

Conclusions: MS misdiagnosis is common; in our combined cohort, almost 1 in 5 patients who carried an established diagnosis of MS did not fulfill contemporary McDonald Criteria and had a more likely alternate diagnosis.

Multiple Sclerosis and Related Disorders. Published online February 1, 2019.

**Wristband samplers show similar chemical exposure across three continents**

To assess differences and trends in personal chemical exposure, Oregon State University researchers deployed chemical-sampling wristbands to individuals on three continents. After they analyzed the wristbands that were returned, they found that no two wristbands had identical chemical detections. But the same 14 chemicals were detected in more than 50 percent of the wristbands returned from the United States, Africa and South America. The target list evaluated includes 76 consumer product-related chemicals, 124 flame-retardants, 185 industrial-related chemicals, 98 PAHs, 260 PCBs/dioxins/furans, 773 pesticides and 14 phthalates.

They detected 36 chemicals in common in the United States, South America and Africa. Many of the chemicals commonly found include endocrine disruptors and those that modify cognition and behavior.

Royal Society Open Science 06 February 2019https://doi.org/10.1098/rsos.181836
How does bereavement impact the immune system? @mnt, Tim Newman
Losing a loved one is, of course, incredibly traumatic; it may also shorten lifespan. A recent paper reviews decades' worth of research into bereavement and its effects on the immune system. A recent paper discusses loss and the immune system. For years, researchers and laypeople alike have noted that when someone loses a partner, their risk of mortality increases significantly. In days gone by, we might have referred to this as a death from a broken heart. The phenomenon has been under investigation for decades. For instance, researchers using data from a Finnish population published their findings in 1987. They found that "For all natural causes, mortality during the first week [following the death of a spouse] was over two-fold, compared to expected rates." Another study, published in 1995, concluded that, following the death of a spouse, mortality "was significantly elevated in both men and women." This elevation was most pronounced 7–12 months after the bereavement. Although scientists have collected a fair amount of evidence demonstrating this effect, there is less information about the biological mechanism that drives it. Now, a literature review has attempted to tie previous findings together to create a clearer picture of this phenomenon. Specifically, the authors were interested in how bereavement and grief might negatively influence the immune system, thereby increasing mortality risk. The authors, from the University of Arizona, in Tucson, recently published their paper in the journal Psychosomatic Medicine. The researchers conducted a systematic review of published research from 1977 to now. In all, 33 studies met the grade to be considered for analysis and the scientists focused on 13, which were of the highest quality. When asked why they conducted the research, one of the authors, Lindsey Knowles, explained that "There is strong evidence that spousal bereavement increases morbidity and risk for early mortality in widows and widowers; however, we have yet to discover how the stress of bereavement impacts health." It was in the late 1970s that scientists started looking to the immune system's role in increased mortality risk after bereavement. A paper published in The Lancet in 1977 claims to be the first to measure an abnormality in immune function following bereavement. Knowles explains that she wanted to create a document that includes "all published data on the association between bereavement and immune function — to establish a knowledge base and suggest specific directions for future research." The paper outlines the primary findings from studies that have been carried out to date. In particular, they identify that people who are bereaved have increased levels of inflammation, faulty immune cell gene expression, and reduced antibody responses to immune challenges.

Psychostimulants play a major role in fatal strokes among young adults ScienceDaily.com, Wiley
Scientific research continues to uncover interesting connections between the gut microbiome and human health, including everything from depression to PTSD to autoimmune disease. Another example of this are the emerging ties between gut health and autism, with an exciting new study demonstrating how boosting microbial diversity via fecal transplants can dramatically reduce its symptoms in the long term. One in every 59
children born in the US is diagnosed with autism, according to the Centers for Disease Control and Prevention, and unfortunately for many of them, chronic gastrointestinal issues are a harsh reality of their condition. According to scientists at Arizona State University (ASU), who conducted the new study, around 30 to 50 percent of autism sufferers experience serious gut problems like constipation, diarrhea and stomach pain. "Many kids with autism have gastrointestinal problems, and some studies, including ours, have found that those children also have worse autism-related symptoms," says ASU's Rosa Krajmalnik-Brown. "In many cases, when you are able to treat those gastrointestinal problems, their behavior improves." The new study builds on earlier research from 2017 that found introducing new bacteria via fecal transplants in 18 autistic children brought about marked improvements in their behavior, as measured through questionnaires assessing their social skills, hyperactivity, communication and other factors.

**IBS: Telephone- and web-based CBT relieve symptoms** @mnt, Catharine Paddock PhD

The usual treatment for irritable bowel syndrome consists of drugs and advice on lifestyle and diet. Now, a new study suggests that giving interactive web-based or telephone-based cognitive behavioral therapy on top of usual care can reduce symptoms more effectively than standard care alone for those whose IBS is not responding to drugs. New research suggests that phone- and web-based talking therapy may ease IBS symptoms. The study, which took the form of a randomized controlled trial, is the biggest so far to have tested these types of cognitive behavioral therapy (CBT) for the treatment of irritable bowel syndrome (IBS). The trial took place in the United Kingdom under the direction of researchers from the University of Southampton and King's College London who detail the methods and findings in a paper that features in the journal Gut. IBS is a common intestinal condition with persistent symptoms that can markedly affect a person's quality of life. The new findings could help to widen access under the National Health Service (NHS) to effective psychological therapy for people with IBS. The U.K. clinical guidelines recommend CBT for people with IBS whose ongoing symptoms remain unresponsive to drugs after 12 months. The trial investigators state that while CBT can "reduce symptom scores and improve quality of life by targeting unhelpful beliefs and coping behaviors," scientists remain unclear about which methods of delivery are most effective. Previous studies have suggested that face-to-face sessions of CBT can help to reduce symptoms of IBS. "However," as first study author Dr. Hazel A. Everitt, who is an associate professor in general practice at the University of Southampton, explains, "in my experience as a G.P., I have found that availability [of face-to-face CBT] is extremely limited."

**Fecal transplants result in massive long-term reduction in autism symptoms** NewAtlas.com, Nick Lavars

Scientific research continues to uncover interesting connections between the gut microbiome and human health, including everything from depression to PTSD to autoimmune disease. Another example of this are the emerging ties between gut health and autism, with an exciting new study demonstrating how boosting microbial diversity via fecal transplants can dramatically reduce its symptoms in the long term. One in every 59 children born in the US is diagnosed with autism, according to the Centers for Disease Control and Prevention, and unfortunately for many of them, chronic gastrointestinal issues are a harsh reality of their condition. According to scientists at Arizona State University (ASU), who conducted the new study, around 30 to 50 percent of autism sufferers experience serious gut problems like constipation, diarrhea and stomach pain. "Many kids with autism have gastrointestinal problems, and some studies, including ours, have found that those children also have worse autism-related symptoms," says ASU's Rosa Krajmalnik-Brown. "In many cases, when you are able to treat those gastrointestinal problems, their behavior improves." The new study builds on earlier research from 2017 that found introducing new bacteria via fecal transplants in 18 autistic children brought about marked improvements in their behavior, as measured through questionnaires assessing their social skills, hyperactivity, communication and other factors.
Mental health can impact memory decades later @mnt, Maria Cohut
New research from the United Kingdom has found that people who experience recurrent episodes of depression throughout adulthood are more at risk of developing memory problems later in life. Accumulated depression and anxiety can predict a person's likelihood of developing memory problems. Scientists have already shown that depression and other mental health problems can affect a person's memory in the short term. For instance, a study that the journal Cognition and Emotion published in 2016 found that individuals with dysphoria — a persistent sense of unhappiness or dissatisfaction that is often a symptom of depression — had poorer working memory than people without any mental health problems. Now, however, researchers from the University of Sussex in Brighton, U.K. have found evidence that links experiencing mental health problems throughout adulthood to memory problems at the age of 50 years. The implications, says study author Darya Gaysina, are that "the more episodes of depression people experience in their adulthood, the higher risk of cognitive impairment they have later in life." "This finding highlights the importance of effective management of depression to prevent the development of recurrent mental health problems with long-term negative outcomes." Darya Gaysina. In the new longitudinal study, the findings of which appear in the British Journal of Psychiatry, researchers analyzed the data of 9,385 people born in the U.K. in 1958, which the National Child Development Study (NCDS) has been collecting. This new study is the first to look at the long-term relationship between mental and cognitive health.

People with happy spouses may live longer @Medical_Xpress, Association for Psychological Science
Research suggests that having a happy spouse leads to a longer marriage, and now study results show that it's associated with a longer life, too. The study was published in Psychological Science, a journal of the Association for Psychological Science. "The data show that spousal life satisfaction was associated with mortality, regardless of individuals' socioeconomic and demographic characteristics, or their physical health status," says study author Olga Stavrova, a researcher at Tilburg University in the Netherlands. Notably, spouses' life satisfaction was an even better predictor of participants' mortality than participants' own life satisfaction. Participants who had a happy partner at the beginning of the study were less likely to pass away over the next 8 years compared with participants who had less happy partners. "The findings underscore the role of individuals' immediate social environment in their health outcomes. Most importantly, it has the potential to extend our understanding of what makes up individuals' 'social environment' by including the personality and well-being of individuals' close ones," says Stavrova. Life satisfaction is known to be associated with behaviors that can affect health, including diet and exercise, and people who have a happy, active spouse, for example, are likely to have an active lifestyle themselves. The opposite is also likely to be true, says Stavrova: "If your partner is depressed and wants to spend the evening eating chips in front of the TV—that's how your evening will probably end up looking, as well." Stavrova examined data from a nationally representative survey of about 4,400 couples in the United States who were over the age of 50. The survey, funded by the National Institute on Aging, collected data on participants who had spouses or live-in partners; 99% of the sampled couples were heterosexual. For up to 8 years, participants and their spouses reported on life satisfaction and various factors hypothesized to be related to mortality, including perceived partner support and frequency of physical activity. They also completed a self-rated health measure and provided information related to their morbidity (as measured by number of doctor-diagnosed chronic conditions), gender, age at the beginning of the study, ethnicity, education, household income, and partner mortality. Participant deaths over the course of the study were tracked using the National Death Index from the Centers for Disease Control and Prevention or spouses' reports. At the end of 8 years, about 16% of participants had died. Those who died tended to be older, male, less educated, less wealthy, less physically active, and in poorer health than those who were still alive; those who died also tended to report lower relationship satisfaction, lower life satisfaction, and having a partner who also reported lower life satisfaction.
The spouses of participants who died were also more likely to pass away within the 8-year observation period than were spouses of participants who were still living.

**Scientists quash claims about single 'depression genes'** @mnt, Catharine Paddock PhD

After completing an enormous study, scientists have dismissed claims that single gene variants, or even a small group of them, can dictate susceptibility to depression. Instead, they suggest that any genetic risk for depression likely arises from very large numbers of variants, each contributing a small effect. A group of scientists has debunked the 'candidate gene hypotheses' for depression. Researchers at the University of Colorado Boulder (CU Boulder) reviewed hundreds of investigations that, over the last 25 years, had singled out "candidate genes" for depression. They found that 18 such genes had featured at least 10 times in previous studies. Then, using data from hundreds of thousands of people, they showed that the influence the 18 candidate genes had on depression was no stronger than that of genes they could pick out at random. In an American Journal of Psychiatry paper, the team concludes that early theories about "depression candidate genes" are wrong and that studies identifying them have likely done no more than produce "false positives."

The findings dispel the notion that people will soon be able to take a test that identifies a few genes for depression, and then it is just a matter of drug developers producing new medications that target them. "This study," says first study author Richard Border, who is a researcher and graduate student in CU Boulder's Institute for Behavioral Genetics, "confirms that efforts to find a single gene or handful of genes which determine depression are doomed to fail." Scientists working in the field of genetics rejected "candidate-gene hypotheses" years ago, adds senior study author Matthew C. Keller Ph.D., who is an associate professor of psychology and neuroscience at the university. Meanwhile, others in fields including psychology, he adds, have continued to pursue the idea of "depression genes" and seemed to find evidence to support it. For example, one of the 18 "historic candidate depression genes" is SLC6A4, which codes for a protein that has to do with transport and recycling of serotonin in the brain. About 20 years ago, researchers had suggested that having a particular, shorter variant of SLC6A4 could put people at greater risk for depression, especially if they had experienced trauma during childhood. Dr. Keller explains that the evidence linking candidate genes to depression often came from studies in which the sample sizes were too small. He likens it to the Hans Christian Andersen story of the "emperor's new clothes." "There's just nothing there," he adds, "I hope this is the final nail in the coffin for those kind[s] of studies."

**Large study ties PTSD, acute stress to cardiovascular disease** @mnt, Catharine Paddock PhD

A large Swedish population study has found strong links between psychiatric conditions that can follow extremely stressful experiences and the risk of several types of cardiovascular disease. The link between acute stress and cardiovascular symptoms may be bidirectional, suggests new research. In addition, the researchers found that the risk of a heart attack and other sudden and severe cardiovascular events is especially high in the 6 months that follow the diagnosis of the stress-related condition. For other types of cardiovascular disease — such as heart failure, a disease that develops slowly — the risk appears to be highest during the 12 months that follow the psychiatric diagnosis. For embolism and thrombosis, which are major conditions that develop from blood clots, the risk is likely higher 1 year or more after a diagnosis of stress-induced illness. In a paper in The BMJ about the study, the authors state that the findings apply "equally to men and women" and do not depend on medical history, family background, or having other psychiatric illnesses. They also note that the results support those of previous studies on relations between stress-induced conditions and cardiovascular disease.
Does a common pain reliever reduce empathy? @mnt, Tim Newman

Following on from a series of similar studies, researchers are once again investigating whether acetaminophen can influence our psychology. This time, the focus is on positive empathy. Acetaminophen is one of the most commonly used drugs globally. It offers quick relief from mild pain and is readily available over the counter. Although the medical community considers acetaminophen to be a relatively safe and useful drug, a recent study asks whether it might have an unexpected effect on the population at large. Researchers from Ohio University in Athens are examining its effect on our ability to empathize with others. Lead author Dominik Mischkowski has been interested in this unusual topic for some time. Although the idea that a popular analgesic might have a psychological effect seems surprising, Mischkowski is not the only person to have investigated it. For instance, a 2010 paper concluded that acetaminophen "reduced neural responses to social rejection." In other words, it appeared to reduce psychological pain. A study from 2015 concluded that acetaminophen blunted "evaluative and emotional processing," while a more recent study involving people with borderline personality disorder found that acetaminophen increased their level of trust. Mischkowski published the findings of a study in 2016, and Medical News Today covered it at the time. In the paper, the researchers explained how acetaminophen seemed to reduce participants' ability to empathize with those undergoing physical and emotional suffering. According to Mischkowski, this common pain reliever blunts responsiveness to one's own pain and also to the pain of others. "I'm still surprised about the striking psychological effects of such a common painkiller." Lead author Dominik Mischkowski.

Eating raw garlic could help keep your memory sharp in old age by boosting gut health, study suggests DailyMail.com

Eating raw garlic could help prevent age-related memory loss suffered by Alzheimer's and Parkinson's patients, scientists suggest. The natural compound found in garlic - allyl sulfide - improves the health of bacteria in the stomach and also improve cognitive health in the elderly. US scientists found the compound restores trillions of microorganisms - also known as gut microbiota - in the intestine. Previous research has highlighted the importance of gut microbiota in maintaining health. But few studies have explored gut health and age-related conditions. Dr. Jyotirmaya Behera at the University of Louisville in Kentucky said: 'Our findings suggest that dietary administration of garlic containing allyl sulfide could help maintain healthy gut microorganisms and improve cognitive health in the elderly.' A new study suggests that eating raw garlic as you age may improve gut health and, in turn, improve long- and short-term memory alike. Co-author Dr Neetu Tyagi added: 'The diversity of the gut microbiota is diminished in elderly people, a life stage when neurodegenerative diseases such as Alzheimer's and Parkinson's develop and memory and cognitive abilities can decline. We want to better understand how changes in the gut microbiota relate to ageing-associated cognitive decline.' The team tested the theory on 24-month-old mice - an age which correlates to humans aged between 56 to 69-years-old. The rodents were given allyl sulfide and compared to mice who were younger and the same age and not given the garlic compound. The results revealed that the older mice who ate the supplement showed better long-term and short-term memory as well as a healthier gut compared to the other rodents who suffered impaired spatial memory.

Stimulating brain with ultrasound can influence decisions @mnt, Catharine Paddock PhD

A noninvasive, low-intensity ultrasound method that targets nerve cells, or neurons, can alter brain function to influence decision-making. New research shows how a brain area called the anterior cingulate cortex controls a type of reasoning known as counterfactual thinking. Scientists have demonstrated the technique in a recent study, in which they disrupted "counterfactual thinking" in primates. Counterfactual thinking, or counterfactual reasoning, is a type of decision-making that involves considering options that are not available now but could be in the future. For example, a person working indoors on a sunny day who says to themselves, "I could be outside enjoying the sunshine," is engaging in counterfactual thinking. The recent
study is the first to show that a frontal brain region known as the anterior cingulate cortex can regulate counterfactual thinking. In a paper in Nature Neuroscience, the authors describe how they altered counterfactual thinking in macaque monkeys by targeting neurons in their anterior cingulate cortex with noninvasive, low-intensity ultrasound.

**Brain zaps boost memory in people over 60, study finds** [APNews.com, Malcolm Ritter](https://www.apnews.com)

Zapping the brains of people over 60 with a mild electrical current improved a form of memory enough that they performed like people in their 20s, a new study found. Someday, people might visit clinics to boost that ability, which declines both in normal aging and in dementias like Alzheimer’s disease, said researcher Robert Reinhart of Boston University. The treatment is aimed at “working memory,” the ability to hold information in mind for a matter of seconds as you perform a task, such as doing math in your head. Sometimes called the workbench or scratchpad of the mind, it’s crucial for things like taking medications, paying bills, buying groceries or planning, Reinhart said. “It’s where your consciousness lives ... where you’re working on information,” he said. The new study is not the first to show that stimulating the brain can boost working memory. But Reinhart, who reported the work Monday in the journal Nature Neuroscience, said it’s notable for showing success in older people and because the memory boost persisted for nearly an hour minimum after the brain stimulation ended. One scientist who has previously reported boosting working memory with electrical stimulation noted that the decline in this ability with normal aging is not huge. But “they removed the effects of age from these people,” said Dr. Barry Gordon, a professor of neurology and cognitive science at the Johns Hopkins School of Medicine in Baltimore. “It’s a superb first step” toward demonstrating a way to improve mental performance, said Gordon, who was not involved in the new study. Reinhart agreed that more research is needed before it can be formally tested as a treatment. The electrical current was administered through a tight-fitting cap that also monitored each subject’s brainwaves. For study participants, that current felt like a slight tingling, itching or poking sensation under the electrodes for about 30 seconds, Reinhart said. After that, the skin got used to the current and it was imperceptible. The researchers’ idea was to improve communication between the brain’s prefrontal cortex in the front and the temporal cortex on the left side, because the rhythms of activity in those two regions had fallen out of sync with each other. So the researchers applied the current to those two regions to nudge the activity cycles back into a matching pattern. The results provided new evidence that a breakdown in that communication causes the loss of working memory with age, Reinhart said.

**Simply seeing reminders of coffee can perk up the brain** [@mnt, Monica Beyer](https://www.mnt.com)

A new study shows that just seeing something that reminds people of coffee can result in a more alert and attentive mind. Even looking at a coffee cup may be enough to perk up the mind, suggests a new study. Many people turn to coffee for a quick morning pick-me-up, as its caffeine content is well-known for its stimulating nature. Researchers from the University of Toronto wanted to see whether exposure to items that remind people of coffee had any psychological effects. As it turns out, the answer is yes. Sam Maglio, an associate professor at the University of Toronto Scarborough's Department of Management and the Rotman School of Management, both in Ontario, Canada, wanted to explore coffee and its psychological effects, if there were any to be found. The study's results appear in the journal Consciousness and Cognition. "We wanted to see if there was an association between coffee and arousal, such that if we simply exposed people to coffee-related cues, their physiological arousal would increase, as it would if they had actually [drunk] coffee," Maglio explains. Psychological arousal is a term that describes parts of the brain getting activated into a state of alertness and attentiveness. This can result from many factors, involving neurotransmitters in the brain, emotional states, or caffeinated beverages, such as coffee.
Continuing Education Credit
By Gary Traub, Ph.D.

Get one hour of CE credit by reading this edition of TCP and completing the following questions. E-mail your answers to Dr. John Caccavale, NAPPP, at doctorjc1@ca.rr.com

1. In the lead article, the author asserts that Master’s level providers provide equally effective services to that of doctoral level providers. True/False

2. The author also asserts that Master’s level providers can come to a correct diagnosis just as easily as doctoral level providers. True/False

3. Because only those who can prescribe medications are considered to be “real” doctors, psychiatry has morphed itself back into medicine by becoming mere distributors for drug companies. True/False

4. The author states that psychiatry is in decline and will never recover. True/false

5. The 3 new board members of NAPPP are: _______________, _______________, and _______________.

6. Ketamine began its long history as an anesthetic. True/False

7. What was the problem cited in the article about the use of ketamine in treatment resistant depression?

8. In a survey of 18 international experts, what did almost all of them agree on?

9. Sedative hypnotics and anticholinergic medications are generally considered inappropriate for elderly patients. True/False

10. Valproate is safe for use during pregnancy. True/False

11. High total cholesterol correlates with dementia. True/False

12. Researchers at John Hopkins reported that schizophrenia is under diagnosed. True/False

13. A gluten free diet may reduce symptoms in some schizophrenic patients. True/False

14. What percentage of household cats carry a bacteria that can cause schizophrenic symptoms?

15. Probiotics can inflammation. True/False

16. What percentage of people with autism have chronic GI problems?

17. New research suggests that acetaminophen can reduce feelings of empathy. True/False

18. What vitamin appears to modulate Parkinson’s disease?

19. Deficiency of B12 can cause dementia. True/False

20. Gum bacteria is implicated in Alzheimer’s and various other diseases. True/False

21. Food additives can compromise your immune system. True/False

22. In the article about multiple sclerosis, misdiagnosis was relatively common, and the most common alternate diagnosis was migraine headaches True/False

23. In Dr. Petrosky’s article about “veteran’s choice”, it is asserted that veterans currently have acceptable continuity of care. True/False

24. The author asserts that expanding prescribing by psychologists in the VA system does not make much sense. True/False
Current Listing of Free CE Courses

The following courses are now available free with NAPPP membership. CE credit is provided by NAPPP. The National Alliance of Professional Psychology Providers is an approved sponsor of continuing education by the American Psychological Association. The National Alliance of Professional Psychology Providers maintains responsibility for all programs and its contents. 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.

**Introduction To Lifestyle Medicine: 6 CE credit Hours**
This course provides a foundation of theoretical and practical knowledge and skills, as well as an opportunity to plan strategies and practice techniques for assisting patients with positive health behavior changes through lifestyle changes.

**Introduction To Behavioral Health Consulting: 6 CE credit hours**
This course is an introduction to how clinical psychologists can learn about practice as behavioral health consultants. Reasons for integrating psychology into medical venues are discussed along with treatment models and the different aspects of practice in these settings.

**Issues in Substance Abuse: 6 CE credit hours**
This CE course is designed to give a basic understanding of diagnosing and treating patients with substance abuse problems. Primarily, the course focuses on alcohol abuse. But does give coverage to the abuse of other substances including prescription drugs.

**Evaluating and Preventing Suicide: 6 CE credit hours**
Refresher course that is being mandated in many jurisdictions for initial licensing and renewal.

**Treatment of Narcissistic Personality Disorder: 6 CE credit hours**
This course looks at diagnostic and treatment of narcissistic personality disorder (NPD). Relevant research is reviewed along with signs and symptoms, prevalence,
characteristics, subtypes, comorbidity, and treatment options. This treatment-focused course will help you learn the skills to successfully work with, and manage, the NPD patient.

**Pharmacotherapeutics: 10 CE credit hours**
This course presents the integration of the principles of psychology in the application of pharmacological agents in the alleviation of mental health concerns.

**Neuropsychological Evaluations: 10 CE credit hours**
This course will take you through the selection, administration and integration of neuropsychological data into a comprehensive report. Sample report included.

**Custody Evaluations: 12 CE credit hours**
This is a complete course on the major issues confronting psychologists in doing custody evaluations. It contains all the presentations from the Broken Family Court Conference that was sponsored by The Cummings Foundation and NAPPP.

**Domestic Violence - Treatment and Assessment: 10 CE credit hours**
This program reviews the assessment and treatment of domestic violence. Discussion of group and individual treatment is included.

**Ethics & Risk Management: 10 CE credit hours**
This course that discusses the newest issues facing psychologists ethically. A thorough discussion of prescription privileges and pharmacopsychology ethics is included. This course may be used to support additional reduction in liability insurance offered by insurers.

**Physiology For Psychologists: 10 CE credit hours**
Upon successfully completing the course, psychologists will achieve a 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.

**Interpreting Blood Panels: 6 CE credit hours**
As clinical practice has become more medicalized, it is important for psychologists to have a general knowledge about the content and interpretation contained in routine blood panels.

**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.

**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.
Mastering Medical Terminology For Psychologists: 10 CE credit hours
This course is designed for psychologists who want to learn and master medical terminology. Since collaboration is so ubiquitous in clinical practice, this course will allow clinicians to communicate effectively with medical practitioners. A must for clinicians who regularly work with medical practitioners.

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.

Ethics II: 6 CE Credit hours
This course is a 6 unit course for those psychologists who do not require the more extensive 10 unit course. Designed for BOP licensing and renewal.

Introduction To Medical Psychology: 10 CE Credit hours
This course is a basic course in medical psychology for psychologists. Reading materials focus on the understanding and treatment of diseases and illnesses that psychologists can treat.

Primary Care Psychology: 10 CE Credit hours
This course is 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.

Forensic Practice: 10 CE Credit hours
This course is 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.

Clinical Supervision: 6 CE Credit hours
Clinical supervision is the foundational educational experience to acquire clinical skills. Most states now require that supervisors receive specific training in this important role. Clinical supervision, while appearing on the surface to be similar to psychotherapy and counseling, is a different relationship with unique qualities and characteristics that set it apart. It requires the development of new knowledge and expertise. 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.
**Neurology For Psychologists: 10 CE Credit hours**
This course is designed to introduce clinical and neuropsychologists to basic neurological practice. It provides participants with a thorough understanding of the structure of the nervous system. Students will learn how to identify important structures and their functions. 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.

**Entrepreneurship For Psychologists: 10 CE credit hours**
This is 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.

**Crisis Management Intervention Training and Consulting: 10 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.

**Mood Disorders: 10 CE credit hours**
Mood disorders are among the most prevalent, recurrent, and disabling of all illnesses. This course examines the important issues in understanding and treating mood disorders.

**Forensic Evaluations: 10 CE credit hours**
Introduction to the field of forensic evaluation. Focus is on assessment, methods, psychometrics, report design and samples and a survey of frequently used objective and projective measures. Ethical standards and evaluations with special populations are covered.
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Summary of Requirements

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  Complete specific coursework.
  Provide a product sample.
  Provide letters of recommendation

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