HEALTH AND STRESS

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DRUGS FOR PTSD AND OTHER STRESS RELATED DISORDERS

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Surveys show that stress induced diseases such as depression, insomnia, and particularly PTSD, have escalated over the past two decades. They also reveal that in many patients, treatment with drugs not only provides little relief, but may have serious side effects that should have been anticipated.

Also Included In This Issue

Several recent reports suggest that these problems are much more common and dangerous than previously suspected. And they are likely to persist because of the tremendous power of pharmaceutical manufacturers, whose major goal is to make more money, rather than to prevent, reduce or ameliorate disease.

In many instances, complications, contraindications and adverse side effects do not surface until a drug has been in wider use for a longer period of time than that required in studies to demonstrate safety and efficacy. This is especially common in clinical trials that do not include adequate numbers of senior citizens who often take multiple medications, or younger individuals and women, both of whom can have different responses. In addition, adverse reactions may be concealed or minimized by utilizing confusing terminology and excluding subjects because of an unrelated medical condition. As emphasized in past Newsletters, this is exactly what transpired with statins. A subsequent review of internal company documents confirms that manufacturers were well aware of cognitive disturbances and muscle damage due to CoQ10 deficiency before their products were approved, but were able to conceal this in their applications. Similarly, after evidence of a

possible link to skin and breast cancers started to accumulate, patients with malignancies or a history of cancer were no longer accepted for any statin studies. Canada and other countries require all statins to have a label warning of Q10 depletion and its consequences. However, despite lawsuits demanding that the FDA provide similar information, it was not until a few months ago that the Agency finally mandated a black box warning of increased risk of memory loss and other cognitive disturbances as well as Type 2 diabetes. It also acknowledged that periodic blood tests to detect liver disease were of little value.

Insomnia Due To Stress, And Why Sleeping Pills Are Not The Solution

In some instances, it can take well over a decade before a drug is banned because of safety concerns. The reason for this is that adverse side effects are often attributed to something else, and well over 90 - 95% that can be documented are never reported. Almost everyone has experienced occasional problems in falling asleep or having interrupted sleep due to worries, environmental disturbances, dietary indiscretion, or physical pain. Insomnia has been defined as having difficulty in initiating and/or maintaining a restful sleep, which is associated with impaired daytime functioning or significant distress for more than a month. Insomnia can occur at any age, but is seen more frequently in the elderly, and although the optimal amount of sleep varies for each of us, most people need 7 to 9 hours daily. If you occasionally get less than your basal requirement, you may not notice any symptoms, especially if you compensate for this by sleeping longer on weekends or other days, and taking naps.

However, if you fail to get enough sleep more frequently and do not compensate for it, your sleep deficit adds up and eventually decreases the ability to retain new information, pay attention, and react to signals promptly, which increases risk for motor vehicle and other accidents. Sleep deficits also increase risk for obesity, diabetes, cardiovascular disease, depression, substance abuse and breast cancer via other mechanisms. Getting adequate amounts of restorative sleep is analogous to having enough money in your bank account to pay bills. It's easy to check on your bank balance to see if it is getting too low, but it's difficult to determine how much you have in your sleep account, and small daily deficits add up. The first clue that you are close to sleep bankruptcy might be that you suddenly feel overwhelmingly drowsy for no apparent reason. This is most apt to occur in mid afternoon or shortly before your usual bedtime, when we are programmed by circadian rhythms to normally be less alert and sleepier.

Before the invention of the light bulb and the ready availability of electricity, people slept an average of 10 hours a night, and like animals, they generally retired shortly after sundown. They were awakened by the gradual increase

in daylight, rather than the irritating and sudden sound of an alarm clock, which can disrupt restorative REM sleep. One poll found that Americans averaged 6.9 hours of sleep per night, which represents a drop of about two hours per night since the 19th century, one hour per night over the past 50 years, and about 20 to 25 minutes per night just since 2001. Most of us are unaware of the detrimental effects of sleep deprivation. In one report, when volunteers were restricted to less than six hours of sleep a night for two weeks, they noted only a small increase in sleepiness and felt they were functioning normally. However, objective testing revealed that their cognitive skills and reaction times progressively declined, **and by the end of two weeks, they were as impaired as controls who had been awake for 48 hours.** Several studies have shown that chronic sleep deprivation is associated with obesity and diabetes, especially in children and teenagers, due to disturbed hormonal secretion. One found that high school students getting six to seven hours of sleep were more than two and a half times as likely to be overweight as those getting more than eight hours. As noted, chronic sleep loss has been linked to an increased risk of heart disease, hypertension, breast and other cancers because of disturbances in function of the immune and endocrine systems. Women with breast cancer appear to have a poorer prognosis due to lack of melatonin, which normally blocks the carcinogenic effects of estrogen. People with insomnia are also four times more likely to have relationship problems with significant others. Researchers found that 55% had difficulties with their partners compared to 13% who slept well.

The benefits of sleep have been known since antiquity, and were described by Shakespeare in *Macbeth* as follows;

Sleep that knits up the ravelled sleeve of care,
The death of each day's life, sore labor's bath,
Balm of hurt minds, great nature's second course,
Chief nourisher in life's feast

Similarly, in *Hamlet*, the Prince's of Denmark's famous soliloquy:

To be, or not to be, that is the question:
Whether 'tis Nobler in the mind to suffer
The Slings and Arrows of outrageous Fortune,
Or to take Arms against a Sea of troubles,
And by opposing end them: to die, to sleep
No more; and by a sleep, to say we end
The heart-ache, and the thousand Natural shocks
That Flesh is heir to? 'Tis a consummation
Devoutly to be wished. To die to sleep,
To sleep, perchance to Dream; Ay, there's the rub,

In both of these, sleep is portrayed as relief from life's burdens as well as a restoration of the human spirit. Other passages in Shakespeare's plays

describe somnambulism (sleep walking) insomnia, nightmares, and even sleep apnea. Sleep is also a recurrent theme in his Sonnets as in XXVII:

Weary with toil, I haste me to my bed,
The dear repose for limbs with travel tired;
But then begins a journey in my head,
To work my mind, when body's work's expired:
For then my thoughts, from far where I abide,
Intend a zealous pilgrimage to thee,
And keep my drooping eyelids open wide,
Looking on darkness which the blind do see
Save that my soul's imaginary sight
Presents thy shadow to my sightless view,
Which, like a jewel hung in ghastly night,
Makes black night beauteous and her old face new.
Lo! thus, by day my limbs, by night my mind,
For thee and for myself no quiet find.

Shakespeare's preoccupation with sleep is so well known that some scholars believe that he must have suffered from insomnia, especially since he uses sleep-related themes and drugs to describe characters and develop plots. Lady Macbeth adds sleeping drugs to the wine of the king's guards, and they sleep through his murder. In *Othello*, Iago gloats, knowing that he has destroyed Othello's restorative sleep by planting false evidence against Cassio to provoke Othello's jealousy. Iago congratulates himself about the effects of his deception:

Not poppy, nor mandragora,
Nor all the drowsy syrups of the world,
Shall ever medicine thee to that sweet sleep
Which thou owedst yesterday.

It is also clear that Shakespeare was familiar with poppy, mandragora and other sleeping potions that were popular at the time. The poppy flower was used by the ancient Greeks and Egyptians to induce sleep, and it was so effective that *Hypnos*, the Greek god of sleep, was often depicted holding one, and the entrance to his home was covered in a sea of poppies. Due to the influence of Dioscorides, the Romans preferred mandragora, the mandrake plant, to promote sleep. Pedanius Dioscorides was a physician who practiced in Rome during Nero's reign. As a surgeon with the emperor's army, he had the opportunity to travel extensively and collected medicinal plants, herbs and minerals from all over the Roman and Greek worlds. Between 50 and 70 A.D. he compiled a five-volume book entitled *De Materia Medica*, (Regarding Medical Materials) that included pictures and descriptions of some 600 plants that were used to treat various complaints. It was

translated into numerous languages, and remained in constant use for the next 1600 years, during which it was supplemented by commentaries from Arabic and Indian sources. It is generally considered to be a precursor to all modern pharmacopeias.

Plato had previously referred to the soporific and possibly hypnotic effects of the mandragora, but Dioscorides described a concoction made from the mandrake plant and wine that produced anesthesia. He is the first physician known to use this word in its modern meaning: the absence of feeling.

Mandragora is a Mediterranean plant of the nightshade family, with white or purple flowers and large yellow berries. As seen to the left in this page from Dioscorides' book, it has a forked fleshy root that resembles the human form. The name mandrake comes from the Latin *mandragora*; (associated with man because of the shape of its root) and drake, which meant dragon in Old English. Dragons were thought to possess mystical or magical powers, and a shrieking sound could allegedly be heard as you pulled a mandrake root from the ground. Thus, in addition to its use for sleep, mandrake also referred to anything or anyone with magical properties.

This belief was so prevalent, that the first superhero that appeared in comic strips in 1934, (long before Superman, Batman and Wonder Woman) was Mandrake the Magician, whose supernatural power is illustrated below.

Over the next 30 years, Mandrake was able to triumph over a variety of villains, including gangsters, mad scientists, extraterrestrials, and characters from other dimensions, because of his ability to produce instant hypnosis via

magical hand motions. As seen above, when he utilizes his powers, his subjects see illusions. Mandrake could also make himself invisible.

Like mandrake, the henbane plant had been used for centuries to promote sleep, and was also popular in Shakespeare's day. As one Elizabethan herbalist, described it, "the leaves, the seeds and the juice, when taken internally, cause an unquiet sleep, like unto the sleep of drunkenness." However, in some individuals it induced a rather deep, unnatural-seeming sleep, "rather like a coma." The problem with mandrake and henbane was that their effects were unpredictable since dosage was difficult to standardize. In addition they were often taken with different amounts of alcohol, which could have disabling or even lethal consequences. Both were essentially discarded by the end of the 19th century because of these problems and the advent of synthetic substitutes. Other herbals like valerian, chamomile and St. John's wort are still popular but are used more for their anti-anxiety and antidepressant rather than hypnotic effects. Chloral hydrate, the first chemical sleep aid, was discovered in 1832 by Justus von Liebig, a German chemist, when he chlorinated ethanol. But its ability to induce a deep sleep very rapidly was not published until 1869, following which it became very popular because it was inexpensive, soluble in water and alcohol, and easy to prepare. (Chloroform, a related compound, was also discovered by Von Liebig and two other chemists in the 1830's. It later became a popular anesthetic until its adverse cardiac effects surfaced.)

A concentrated solution of chloral hydrate in alcohol earned the nickname "knockout drops" because of its dramatic effects, and was used to make a "Mickey Finn". This referred to Mickey Finn, a reputed pickpocket and thief, who often preyed on drunken bar patrons. He served as a bartender and ran a saloon in Chicago's South Loop neighborhood from 1896 until 1903, when it was closed because of numerous complaints about his "Mickey Finn Special". This was a coordinated robbery in which Finn or an employee, usually a "house girl", would slip chloral hydrate into a patron's drink. The incapacitated customer would then be escorted into a back room where he was robbed and later dumped in a nearby alley. On awakening the next morning, the victim would remember little or nothing of what happened after he had been "slipped a Mickey." Chloral hydrate was also used for recreational purposes, especially "date rape".

Bromide was synthesized in 1857 and lithium bromide was sold over the counter as a sleeping aid and sedative until the 1940's, when it was found to have cardiotoxic effects. Barbituric acid was invented in 1864 by Adolf Baeyer, who was awarded the Nobel Prize in chemistry in 1905. It had few physiologic effects, but thirty years later, it was discovered that combining it with other chemicals, produced compounds like pentobarbital (Nembutal),

amobarbital (Amytal), secobarbital (Seconal) and phenobarbital (Luminal). These barbiturates had strong sedative, anxiolytic and hypnotic effects that varied with speed of onset, duration and potency. Rapidly acting Amytal, Seconal, and Nembutal were popular sleeping pills and helped to promote anesthesia, whereas longer acting phenobarbital enjoyed widespread use as a sedative. However, they all caused respiratory depression, there were serious side effects when taken with many other medications, and especially alcohol. Addiction and overdoses that could be lethal were other problems.

Barbiturates were largely replaced by benzodiazepines, which appeared to be equally or more effective with fewer side effects, and also relaxed skeletal muscle. The first benzodiazepine was Librium, which was discovered accidentally in 1957, and was soon followed by Valium, Ativan, Xanax, Halcion, Restoril and others. Although much more expensive than barbiturates, which had lost their patent protection, these soon became the most popular tranquilizers and sleeping pills due to aggressive print and TV advertising that hyped their benefits and minimized side effects. Most benzodiazepines were usually recommended for short-term use only, but this was often ignored. It gradually became apparent that taking them daily for three or four weeks could lead to a physical dependence that was often magnified by the need to take increasing higher doses to attain the same effect. In addition, it was difficult to gradually wean yourself off without suffering severe withdrawal reactions described by some as "worse than trying to kick the heroin habit." Since suddenly stopping benzodiazepines can cause hallucinations, convulsions and death, patients continued to take them. For some, this necessitated going to multiple doctors and/or different pharmacies to maintain their habit, and many eventually developed memory loss and other cognitive deficits. Although there are antihistamines and other nonprescription drugs that can cause drowsiness, they only benefit a small percentage of patients and do not help to reduce withdrawal symptoms.

Over the last decade, a new class of non benzodiazepine medications for insomnia referred to as "Z drugs" has been developed to in an effort to avoid these problems. They are called "Z-drugs because their generic names usually begin with z. The most popular in the U.S. are: zolpidem (Ambien), zaleplon (Sonata) and zopiclone (Lunesta), and while they act on the same GABA receptors as benzodiazepines and barbiturates, they are not as likely to be as addictive or have severe withdrawal effects. Ambien is effective in initiating sleep but not maintaining it unless delivered in a controlled release form. Unlike benzodiazepines, it does not accumulate in the body but is usually taken only as needed. Sonata is similarly used for short-term treatment and should not be used daily for more than 10 days or in larger doses because it can be habit forming. It should be taken immediately before retiring and is ideal for resetting your body clock to prevent or

minimize jet lag. Lunesta is also designed for limited nightly use because it loses its effectiveness when taken daily for more than two weeks. It is not advised to prevent jet lag because if you awaken while the medication is still active, it can cause a peculiar memory loss for the next few hours. This has caused problems for passengers on 5 or 6-hour overnight flights to a foreign country, since they can't remember what happened during this period. Lunesta should only be taken when you know you are likely to be sleeping for 7 to 9 hours in familiar surroundings. As with all hypnotics, alcohol is contraindicated when taking any of these three drugs. Anti-histamines, cold and allergy medications containing them should be avoided. As there are generic versions of Ambien and Sonata, their prices have dropped, but Lunesta still costs $4-6 a night and some insurance companies may limit reimbursement or require medical justification that they are necessary.

Not surprisingly, as sales of these drugs have soared due to the steady increase in insomnia and aggressive TV advertising, it has become apparent that they are not as safe as claimed. This is especially true for senior citizens, who tend to get up frequently during the night. In one study, researchers road-tested a group of seniors each morning after taking one of the Big Three hypnotics, and found they had longer reaction times and made many more errors in detecting road exits and speed measurements than controls on placebos. In addition to impairment the following day, many also had become dependent on each of these drugs. It is estimated that at least 50% of people 65 and older have sleep related problems. They are also more likely to abuse alcohol and to suffer from depression. **The incidence of suicide is 300 percent higher in seniors who take hypnotics.** Common antibiotics like erythromycin, Tagamet for ulcers and antifungal medications can also interfere with how these three leading hypnotics work.

Even more alarming is a very recent report that **taking sleeping pills may be responsible for over 500,000 deaths/year and an increase in new cancers.** Researchers tracked 10,500 people for whom sleeping pills were prescribed for an average of 2.5 years between 2002 and 2007. Their survival was compared with 23,500 controls matched for age, sex, lifestyle factors such as smoking and underlying health problems who never took sleeping aids. **Those who took 18 or fewer per year had a more than 3.5 times higher risk for death than controls who didn't take any. People taking more than 132 sleeping pills per year were at five times higher risk for death and 35 percent higher risk for cancer.** An increased risk was found for every age group, but was surprisingly greatest among 18 to 55-year-olds. **Ambien was taken well over twice as frequently as the next leading hypnotic.** This is particularly disturbing since there were only 5 years of observation and it can take decades for carcinogens like tobacco to surface. One can only wonder if it's worth the

risk of taking a "Z drug" to catch a few zzz's, especially when CES (cranial electrotherapy stimulation) is a much safer and equally effective option. In a double blind study at Walter Reed, that has been submitted for publication, sleep was increased in the total active treatment group by 43 minutes, whereas it decreased in the "sham" group by 19 minutes. And this was after **only five consecutive daily 30-minute treatments**. All subjects satisfied the insomnia diagnostic criteria and therapy was well tolerated. It should be noted that when CES was first developed, it was known as "electrosleep" and it is recognized by the FDA to also be safe and effective for treating chronic pain, anxiety and depression, frequent causes of insomnia.

More Depressing News About The Safety And Efficacy Of Antidepressants

As emphasized in previous Newsletters, antidepressants do more harm than good, especially since they are little better than placebos. This is especially true for serotonin boosting drugs like Zoloft and Lexapro, the two best selling antidepressants. Recent reports not only confirm this, but also explain how these drugs gained approval and continue to bring in billions despite the widespread damage they cause. A *New England Journal of Medicine* article analyzed FDA reviews of 74 drug company trials of 12 antidepressants obtained under the Freedom of Information Act. Its purpose was to determine if each study was viewed as positive or negative compared to a placebo, and if it was published, how accurately the article portrayed the results. Thirty-seven of the 38 studies the FDA deemed positive were published. Of the 36 studies that were unfavorable, 22 were never published and 11 were published with an interpretation that made them appear positive. All studies must be registered but negative ones are not required to be published, and **the true negative outcome was concealed in 33 of these 36 studies**. **Published articles were 95 percent positive** because they frequently emphasized certain positive end points and downplayed or discarded negative ones. **When the FDA reviewed all the data, only 51% were considered positive.**

In addition, the degree of positive effect in the published papers was up to 70% greater than the FDA's appraisal, so that on average, **the drugs seemed one-third more effective than they were.** Drug company statisticians and spin artists are adept at magnifying benefits that may not be detected by reviewers, but even if they are questioned, the editor may overlook this or will be overruled by the publisher. A trivial drug sponsored study or supplement can bring in $800,000 or more from reprints and advertisements. When *NEJM* published the VIGOR study to show that Vioxx was superior to similar drugs with respect to GI side effects, the high incidence of heart attacks was glossed over. Numerous concerns were raised with the editor, but since the journal was selling thousands of reprints these were ignored, including complaints by the FDA and AMA. Although Merck

was forced to withdraw the drug because of 60,000 deaths, the *NEJM* knowingly waited more than a year to express concern about the validity of the study, which, by then, had generated $1 million or more for reprints.

Internal company documents also revealed collusion between editors and antidepressant drug manufacturers. Although drugs are FDA approved for only specific indications, a physician can prescribe them for any disorder it might possibly benefit. Drug companies are strictly prohibited from advertising or encouraging such off label use but can circumvent this with deceptive advertising. Depakote was approved to treat epilepsy in 1983, for bipolar disease in 1995, and to prevent migraine the following year. It is one of the most widely prescribed off label drugs. Last month, **Abbott agreed to pay a $1.6 billion fine for promoting its unapproved use** in PTSD, depression, anxiety, dementia, schizophrenia, obsessive-compulsive disorder, alcohol and drug withdrawal, attention deficit disorder, conduct disorder and other psychiatric conditions in children and adolescents. Abbott actively promoted its use in nursing homes to treat dementia and paid kickbacks to physicians and pharmacists to encourage its use. In regard to depression, Depakote was approved to treat only the manic phase of bipolar disease and some reports suggest that **it actually worsens depression. Johnson & Johnson was also just fined $1.1 billion for Risperdal safety claims** that failed to disclose it caused diabetes and obesity.

It is estimated that over 10% of the population now take SSRI and other antidepressants, most of which are for off-label conditions such as fatigue, non-specific pain, smoking, headaches, abnormal sensations and PMS complaints. Four out of 5 prescriptions are from non psychiatrists. Confirmation that antidepressants do more harm than good comes from a just published study showing that 50-60% of patients discontinue SSRIs because of sexual, gastrointestinal and other side effects. These include: impotency and loss of libido (up to 80%), diarrhea, constipation, indigestion, bloating (up to 23%), increased bleeding tendencies and stroke (especially in the elderly, who also have higher death rates) and osteoporosis. Even those who seem to respond initially often require larger and larger doses to get the same effect. Many become dependent and find it very difficult to reduce, much less discontinue, the drug because of severe withdrawal side effects. And if an SSRI is stopped, a recurrence of depression is much more likely. According to the article,* at least 42 per cent will have a relapse compared to only 25% who never took any medication. * Andrews P et al. *Primum Non Nocere* - Antidepressants Do More Harm Than Good. *Frontiers in Psychology* 3:1-18, April 24 2012

Serotonin is an ancient chemical found in fungi and plants as well as animals that regulates numerous adaptive responses such as cell differentiation, temperature regulation, blood clotting, digestion and gut movement, insulin

and electrolyte balance, cerebral blood flow, reproductive function, mating behavior, as well as mood. It is not surprising that any interference with its normal homeostatic metabolism could have unanticipated and undesirable repercussions. That is why new antidepressants in the pipeline like Ketanest, an anesthetic aid, Latuda, an antipsychotic, and levomilnacipran, a fibromyalgia drug, are being developed, not because they affect serotonin, but rather in the hope that they may have antidepressant activity that is mediated by a different mechanism. Here again, cranial electrotherapy stimulation is much safer and much more cost effective than drugs. Alpha-Stim does not cause dependency or withdrawal symptoms, and has been cleared by the FDA for depression for over three decades. The fact that CES is rarely listed as an option is a testament to the power of Big Pharma.

What Will It Take To Stop The Current PTSD Drug Therapy Disaster?

The FDA has approved only two drugs for the treatment of PTSD, Paxil and Zoloft. Both are SSRI antidepressants that carry a black box warning of **increased suicide risk in 18 to 24-year-olds, the age group of most young army recruits**. They are minimally effective, which is why numerous other drugs are prescribed off label, including: antidepressants, tranquilizers, hypnotics, mood stabilizers and other psychotropics, often in combinations that prove to be lethal cocktails due to unanticipated additive effects. An Army psychiatrist's deployment kit is currently likely to include nine kinds of antidepressants, benzodiazepines for anxiety, four antipsychotics, two kinds of sleep aids, and drugs for attention-deficit hyperactivity disorder. Many believe it is no coincidence that **suicides in Army personnel have increased 80% in the past 4 years. Veterans now kill themselves at a rate of one every 80 minutes, or over 6,500/year. That's more than the total number of soldiers killed in Afghanistan and Iraq combined since those wars began.** Over 110,000 active-duty Army troops are on antidepressants, psychotropics, sedatives and other prescription medications.

Prior to the Iraq war, soldiers could not go into combat if they were taking any of these. Today, it is more likely that military doctors won't approve their deployment unless they take psychiatric drugs, because "safety and efficacy is so well-established that it would be a mistake to send battalions into combat without the help of medications that can prevent suicides, help soldiers rest and calm shattered nerves." However, regulating their use in combat situations is much more difficult than in civilian life. Soldiers are often sent out on deployment with 180 days' worth of medications they trade with friends or grab a fistful to get some rest at the end of stressful days. Those with injuries can easily become addicted to narcotics for pain. As one Navy staff psychiatrist who resigned her commission in 2002, largely because of concerns that military psychiatrists even then were handing out too many pills commented, "The big difference is these are people who have

access to loaded weapons, or have responsibility for protecting other individuals who are in harm's way." **In one report, 17% of Afghan combat troops were taking tranquilizers, antidepressants or hypnotics prior to deployment**. Most were taking two or more.

Paradoxically, many of these drugs are officially prohibited in the 2010, 251 page VA/Department of Defense *Clinical Practice Guideline For Management Of Post-Traumatic Stress.* These include Risperdal, Seroquel and other second generation antipsychotics and benzodiazepines like Valium and Xanax. From 2001 through 2011, the VA and Defense Departments spent $860.1 million on Seroquel and $791 million for Risperdal. During the same period they spent $116.2 million on benzodiazepines. Details were not provided on how many individual doses of benzodiazepines were purchased but they receive large bulk discounts that could be as low as $1 dollar per pill. That would mean a total of 116 million doses since 2001, which is **the equivalent of more than 100 benzodiazepine pills per person on active duty today.** This was despite the Army Medical Command's warning that the use of benzodiazepine tranquilizers such as Xanax and Valium to treat PTSD could intensify combat stress symptoms and lead to addiction. Last September, the Defense Centers of Excellence also emphatically warned against their use, stating "There is evidence against the use of benzodiazepines in PTSD management as it may cause **HARM**. **Strongly recommend against the use of benzodiazepines for treatment of PTSD**." It also recommended that Seroquel and Risperdal should not be used, and that "**evidence does NOT support the use of atypical antipsychotics as a monotherapy for PTSD**." A 2011 VA study reported that Risperdal was no more effective than a placebo for treating PTSD.

Although military expenditures for pharmaceuticals to treat PTSD and mental illness since 2001 are now approaching $2 billion, these problems are getting steadily worse rather than improving. In addition to escalating suicide rates, mental health disorders have been the leading cause of hospitalization of active-duty service members for the past 4 years, in what one Army physician called "**an epidemic of mental illness and PTSD**." **Some 21,735 active-duty personnel were hospitalized for mental disorders in 2011, a greater than 30 percent increase from 2009.** Because of the obvious failure of drugs, various types of psychotherapy, and different combinations of these, there has been increased interest in "alternative and complementary approaches". I was curious as to what the official 2010 "Guideline" position was, especially with respect to cranial electrotherapy. Several pages were devoted to a discussion of herbal and other supplements, homeopathy, "Mind/Body" medicine (meditation, yoga, *Tai Chi*), massage, exercise, "Energy Medicine" (acupressure, *Shiatsu, Chi Kung*, *Reiki, Johrei*), acupuncture and Animal-Assisted Therapy. All of these were dismissed as having little "evidence based medicine" support. I finally

found what I was looking for in a small section entitled Biomedical Somatic Therapies, which included Electroconvulsive Therapy (ECT), Cranial Electrotherapy Stimulation (CES), Vagal Nerve Stimulation (VNS), Repetitive Transcranial Magnetic Stimulation (rTMS), and Deep Brain Stimulation (DBS). It acknowledged that these had been FDA cleared for treating depression but there was no evidence to support their use in PTSD. ECT, rTMS and VNS each had an additional paragraph explaining that they might possibly be considered as an alternative in chronic, severe, medication and psychotherapy-resistant treatment of PTSD, but as usual, CES was ignored.

The National Center for Complementary and Alternative Medicine (NCCAM) published a 32-page booklet detailing the results of a 2011 conference on non traditional therapies for PTSD that I thought might contain some useful information but electrotherapy was not even mentioned. It indicated that the best evidence available was for: Prolonged Exposure, Cognitive Processing Therapy, Stress Inoculation Training and EMDR (eye movement desensitization and reprocessing). NCCAM's Budget for 2012 was increased to $131 million, almost $4 million more than last year, and I was interested in learning what type of PTSD research they funded. For 2011, they spent close to $4 million on three studies: the effects of yoga in insomnia, PTSD biomarkers in sweat, and mechanisms of mindful meditation benefits in PTSD. They emphasized that SSRI and SNRI (serotonin-norepinephrine reuptake inhibitor) drugs were the treatments of choice, even though no SNRI has ever been approved for treating PTSD. Nor does anyone ever mention that 50% of PTSD patients stop treatment because of side effects.

I am finishing this on Memorial Day, which has deteriorated into an orgy for sales of cars, clothes, computers etc., rather than to honor those who have made the supreme sacrifice for our nation. Because of CES triumphs in PTSD, insomnia, depression and pain, one can only wonder how many military personnel might have benefited from this very safe and cost effective modality. In one study, **75% of veterans preferred Alpha-Stim over all other CAM therapies**, so why is CES repeatedly ignored and deprecated? Advances that threaten the status quo are often trumped by politics, money and an ingrained bias that refuses to acknowledge the truth. Nevertheless, I believe that as news of the successful results of CES therapy spreads and is confirmed by others, "truth will out" — so stay tuned!!

Paul J. Rosch, MD, FACP
Editor-in-Chief

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PAUL J. ROSCH, M.D., F.A.C.P.
EDITOR-IN-CHIEF
www.stress.org
e-mail: stress124@optonline.net