

Here are this week's health care news highlights from AskaPatient:

- Artificial intelligence may be able to predict your personality type based on eye movements. <http://ow.ly/EQuB30laGd4> (07-30-18)
- Emergency rooms come with a unique set of challenges, so researchers set out to find why so many errors occur there. <http://ow.ly/oGAn30laGhY> (07-30-18)
- Coating food processing equipment in regular cooking oil prevents harmful bacteria from growing on the machinery. <http://ow.ly/fJwB30laGrp> (07-30-18)
- Experimental drug reverses hair loss and skin damage associated with a high-fat diet. <http://ow.ly/Isi430lbSFU> (07-31-18)
- Why are insurance companies making patients wait twice as long as ten years ago for bariatric surgery? <http://ow.ly/EVCN30lbSGE> (07-31-18)
- Medicare reconsiders paying for seniors' spine surgeries at same-day surgery centers over potential safety risk. <http://ow.ly/S5r030lbSHd> (07-31-18)
- Trial investigating Viagra for poorly-developed fetuses is abruptly halted after 11 newborn deaths. <http://ow.ly/GIFy30ld9yt> (08-01-18)
- HIV drug that appeared to cure monkeys in a previous trial fails miserably in a human trial. <http://ow.ly/nquW30ld9Ea> (08-01-18)
- You probably don't feel any different when you are mildly dehydrated, but it could be wrecking your mental performance. <http://ow.ly/rxSu30ld9Oz> (08-01-18)
- The newly popular 'super fruit' from Africa's baobab trees is making locals tons of money, but is this sudden increased demand sustainable? <http://ow.ly/mnep30ledFV> (08-02-18)
- A drug already used to relieve symptoms of Alzheimer's disease may be able to stop or slow the progression before symptoms appear. <http://ow.ly/urZs30lefnh> (08-02-18)
- Just two weeks of inactivity can cause diabetic symptoms in some people, and they may never recover even after resuming normal activity. <http://ow.ly/WWdO30lefr6> (08-02-18)
- Hospice care provides an important service, but some providers are scamming Medicare for a slice of the \$16 billion pie at the expense of patients. <http://ow.ly/vu4d30lefDW> (08-03-18)
- Diabetes is a reversible disease - simply losing weight can help many diabetics reach a non-diabetic state. <http://ow.ly/TkQS30lfkHZ> (08-03-18)
- Lab-made lungs have successfully been transplanted into pigs, giving hope to thousands of patients awaiting donor lungs. <http://ow.ly/pdrZ30lfnX> (08-03-18)
- Johns Hopkins scientists suggests that a possible factor in Alzheimer's could simply be a pH imbalance. <http://ow.ly/iNXf30lfnP9> (08-04-18)
- Congo to use Ebola vaccine as early as next week to control a new flare up of the most recent outbreak. <http://ow.ly/Ghya30lgkIx> (08-04-18)
- Average Japanese adult height has declined annually since 1980 thanks to a concerning trend to keep pregnancy weight gain lower than recommended. <http://ow.ly/tLmy30lgkPw> (08-04-18)

From AskaPatient: Move over Prozac: the age of brain stimulation therapies is upon us

Depression affects more than 17 million people in the U.S. each year and is one of the most common mental disorders worldwide. Depression is persistent for many patients despite a variety of treatment options. **Repetitive transcranial magnetic stimulation (rTMS or TMS)** is a prescription treatment option that many people may not be familiar with, even though it was approved in the U.S. a decade ago. TMS is noninvasive, does not require anesthesia, and is approved therapy for patients whose depression does not respond to at least one medication. Patients may not receive TMS if they have implants such as vagus nerve stimulators, other magnetic implants, or cochlear implants.

TMS Treatment Procedure

TMS uses an electromagnetic coil to target a specific area of the brain thought to be responsible for mood regulation. The coil is placed on the forehead over the frontal lobe while pulses stimulate a localized area of nerve cells within the brain. The procedure lasts around 30 minutes, and is typically administered five times a week for six weeks. Talk therapy and medication may be used in conjunction with TMS. Check out the Canadian TV News (CTV) site referenced below to view news story that includes an interview with a patient and a demonstration of the patient receiving a new kind of TMS treatment.

Side Effects

While [antidepressant drug treatments](#) often have serious side effects, TMS side effects are usually short-lived and minor in comparison. They include mild headache, jaw pain, scalp discomfort, and a tapping sensation during treatment. Though rare, seizures are a risk, especially for those with seizure disorders. Bipolar patients have increased risk of mania episodes. TMS is fairly new as far as treatments go, so long-term effects are unknown.

Results

It often takes several weeks for a patient to notice improvements (if any) in their depression symptoms. Some patients may need additional treatment after a year or less, while others may enjoy symptom relief for a longer time.

Expense

Until recently, cost was a barrier for patients seeking TMS procedure. While still not considered a mainstream depression treatment, many U.S. insurance plans now cover TMS for its FDA-approved indication: treatment of major depressive disorder in cases when drug therapy has failed. Without insurance coverage, TMS therapy could cost the patient \$6,000 or more for a six-week course of treatment. In Canada, only two provinces (Saskatchewan and Quebec) provide transcranial magnetic stimulation therapies.

The Future

Researchers are exploring depression treatment possibilities using other types of magnetic stimulation, such as **intermittent theta-burst stimulation (iTBS)** and **low-field magnetic stimulation (LFMS)**. iTBS is a more powerful version of TMS that only takes 3 minutes per treatment and is equally successful. LFMS uses a fraction of the electromagnetic strength of TMS, has no side effects, and has been designed as a portable device. The efficacy of LFMS is less clear; a small Harvard study found immediate symptom relief for patients with major depressive disorder, but other studies have not supported those results. Currently, scientists are also investigating the effects of various brain stimulation treatments on other diseases and conditions such as migraine headaches, schizophrenia, PTSD, Alzheimer's, and Parkinson's disease.

Sources and Further Reading:

TMS and other brain stimulation therapies

- NIH overview of various types of [brain stimulation therapies](#)
- Mayo Clinic [overview of TMS](#):
- Study shows new two-coil array to be safe and effective: March 2018, [Psychology Today](#)
- In Veterans Affairs medical center study rTMS flops, with high rates of remission in control and sham groups. June 2018 [MedPage Today](#)
- TMS: Hope for Stubborn Depression, Feb. 2018 [Harvard Health Newsletter](#)

iTBS

- Canadian study shows promising results for iTBS treatment for depression. June 2018, [Psychology Today](#), June 2018:
- Three-minute treatments of theta-burst magnetic stimulation are as effective as standard magnetic stimulation. April 2018 story includes

CTV news video showing patient receiving TMS therapy: <https://www.ctvnews.ca/health/three-minute-magnetic-brain-stimulation-treatments-can-reduce-depression-symptoms-study-1.3904034>

LFMS

- Small Harvard study on LFMS shows immediate symptom relief: [Harvard Gazette](#), 2014
- Proof-of-concept study finds no significance for rapid improvement with LFMS: <https://www.ncbi.nlm.nih.gov/pubmed/29030111>

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