

A new study from researchers at Cardiff University in Wales has found antibiotics are not effective in treating mild cases of clinically infected eczema in children.

EHRs created for 65m Iranians

Health Desk

Currently, electronic health records (EHRs) have been established for 65 million Iranians, announced the health minister.

Hassan Qazizadeh Hashemi further said that once effective coordination is made among medical centers, insurance companies and Ministry of Communications and Information Technology, all insurance booklets will be phased out by March 2018.

He said the Health Ministry is in charge of creating the infrastructures for this, adding that the Health Overhaul Plan has become well established nationwide.

The Health Overhaul Plan will continue in new Iranian year starts on March 21.

Electronic health records will be completed by incorporating medicine and insurance data as well as information available in hospitals.

Earlier, health minister said the personal medical information available in clinics and private medical centers should be included in the EHRs in subsequent phases.

The minister predicted that all Iranians will have complete data recorded in the EHRs by mid-March 2018.

Data from state- and private-run medical centers as well as medicine information should be included in the records, he said.

This will create transparency and lead to a



Health Minister Hassan Qazizadeh Hashemi

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reduction in state expenses, the minister added. "The data on every record will help prevent unnecessary prescriptions and do away with drug trafficking."

The public will have access not only to their own data but also to the medical centers, he said. This data however cannot be accessed by any other individual, he added.

New drug can treat one in five breast cancers

Around 10,000 women a year in the UK might benefit from a new type of breast cancer treatment, said scientists.

Biological therapies can help fight breast cancers caused by rare, inherited genetic errors like the BRCA, BBC wrote.

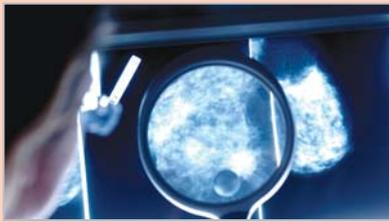
Now a new study by experts at the Wellcome Trust Sanger Institute suggested these targeted drugs may also work in many other women who do not have these risky genes.

The drugs could be effective in one in five breast cancers, said the researchers.

That's 20 percent of patients — far more than the one to five percent who develop the cancer alongside having faulty BRCA genes.

One biological therapy or PARP inhibitor, called olaparib, is already used on the NHS to treat advanced ovarian cancer.

It is not yet approved as a breast cancer drug, although some UK women are taking it



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in clinical trials.

For the latest work, published in the journal Nature Medicine, the researchers looked at the genetic make-up of breast cancer in 560 different patients.

They found a significant proportion of them had genetic errors or "mutational signatures" that were very similar to faulty BRCA.

Given the close similarity,

these cancers might be treatable with biological therapies too, they reasoned.

They recommended clinical trials to confirm this.

Baroness Delyth Morgan, from Breast Cancer Now, called the early results "a revelation."

She said, "We hope it could now lead to a watershed moment for the use of mutational signatures in treating the

disease."

One of the researchers, Dr. Helen Davies, said there was also the potential to treat other types of cancers with these drugs.

Biological therapies have already had some promising results for treating prostate cancer.

They change the way cells work and help the body control the growth of cancer.

High-risk genes

Carrying certain gene mutations, like faulty BRCA, increases a woman's risk of developing breast cancer, although it does not mean she will definitely go on to get cancer.

Some women opt to have surgery to have their breasts removed to lower their lifetime risk.

Vicki Gilbert, 54 and from Swindon, found out she was carrying high-risk genes — but

only after she developed breast cancer.

"I had been thinking about getting tested anyway because there was quite a lot of cancer on one side of my family. But then I was diagnosed with breast cancer out of the blue, before I even had a chance to go for the genetic screening."

She said finding out, even after the event, was helpful.

"When you get cancer you do think 'Why me?' I don't know for sure if it was because of the genes that I inherited. That would be impossible to say. But, for practical reasons, it is useful to know that I carry these genes."

Vicki has been free of cancer for around seven years, but still has regular checks because of her increased genetic risk.

Women can lower their lifetime risk of breast cancer by exercising regularly, eating a good diet and maintaining a healthy weight.

Zapping the brain with electricity could improve memory

Zapping the brain with low levels of electricity may help improve the short-term memory of those suffering major neurological injuries, a new study found.

The research found applying a low voltage current can help people perform better on tasks such as remembering new names or a shopping list, express.co.uk reported.

Scientists hope the technique could one day be used to bypass damaged areas of the brain and relay signals in people who have suffered a traumatic injury, stroke or epilepsy.

In the brain there are a huge number of messages being sent at the same time, with brainwaves working at different frequencies and in different regions keeping a steady "beat".

The research team from Imperial College London found weak electrical current through the scalp helps align different parts of the brain, synchronizing their brain waves and enabling them to keep the same beat. Neuroscientist Dr. Ines Ribeiro Violante, who led the research, said: "What we observed is that people performed better when the two waves had the same rhythm and at the same time."

Senior author of the paper Professor David Sharp, said: "We are very excited about the potential of brain stimulation to treat patients."

"I work with patients who often have major problems with working memory after their head injuries, so it would be great to have a way to enhance our current treatments, which may not always work for them."

"Our next step is to try the approach out in our patients and we will see whether combining it with cognitive training can restore lost skills."

The study, published in the journal eLife, used a technique called transcranial alternating current stimulation (TACS) to manipulate the brain's regular rhythm.

They found that buzzing the brain with electricity could give a performance boost to the same memory processes used when trying to remember names at a party, phone numbers or even a short grocery list.

The researchers targeted the middle frontal gyrus and the inferior parietal lobule parts of the brain, which are known to be involved in working memory.

Volunteers carried out memory tests which increased in difficulty while receiving electrical stimulation to those two parts of the brain with at differently times, the same times or in a quick burst.

The results showed when the brain regions were stimulated in sync, reaction times on the memory tasks improved, especially on the harder tasks which required volunteers to hold two strings of numbers in their minds.

Violante said: "The classic behavior is to do slower on the harder cognitive task, but people performed faster with synchronized stimulation and as fast as on the simpler task."

Previous studies have shown brain stimulation with electromagnetic waves of electrical current affect brain activity, but the field has remained controversial due to a lack of reproducibility.

However with an MRI scanner, the team, in collaboration with University College London, was able to show changes in activity occurring during stimulation, with the electrical current potentially modulating the flow of information.

Violante added: "We can use TACS to manipulate the activity of key brain networks and we can see what's happening with MRI."

"The results show that when the stimulation was in sync, there was an increase in activity in those regions involved in the task. When it was out of sync the opposite effect was seen."

However making the treatment available to the wider public may be difficult due to the individual nature of people's brain.

New tool aids surgeons with bad posture in operating room

Researchers at the University at Buffalo (UB) have developed a new tool to identify poor posture and correct awkward positions for surgeons in the operating room (OR).

Surgeons often report neck, shoulder and lower back pain from standing in operating rooms for several hours a day, which can lead to sick days, decreased quality of care and early retirement, UPI reported.

Victor Paquet, an associate professor in the Department of Industrial and Systems Engineering at UB, said, "Everyone knows that surgeons operate in a high-stress environment."

"Our research looks at something less obvious: The long-term risks that surgeons face by putting themselves in uncomfortable positions in the OR."

A team of engineers and doctors at UB collaborated on developing a tool to identify pain-inducing positions to enable corrections to be made to improve posture.

The tool, called ErgoPART, or ergonomics postural assessment in real-time, was developed based on observations by a team of two ergonomics researchers, a female pelvic medicine and reconstructive surgery fellow, and a pre-medical undergraduate.

The team provided data after observing vaginal surgeons at MedStar Washington Hospital Center in Washington, DC.

Vaginal surgeons are more likely to experience chronic pain compared to other surgeons, according to recent studies.

The data was analyzed using computer software that records information about the surgery, the surgeon's positioning, task information, and operating room features, among other data.

The program then provides users visual feedback and cues to avoid. Xinhui Zhu, assistant professor of industrial engineering at Oregon State University, said, "With this tool, surgeons, as well as occupational and health safety workers, will have immediate access to a report on when and how long they remain in non-neutral positions during surgery."

"This information can be used to help individual surgeons, as well as to develop recommendations on how surgeries can be improved for the doctor and patient."



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Tests for preterm birth not effective in first-time pregnancies

A study by the National Institutes of Health has found transvaginal cervical length and fetal fibronectin tests are not accurate in predicting preterm birth among first-time pregnancies.

The commonly used tests assessed the shortened length of the cervix and the presence of fetal fibronectin — a glue-like protein that holds the amniotic sac to the uterus — in early pregnancy as risk factors for preterm birth, or birth before 37 weeks gestation, UPI wrote.

The new study by NIH researchers suggested those markers are not indicative of an increased risk of preterm birth.

Researchers screened 9,410 pregnant women as part of the Nulliparous Pregnancy Outcomes Study: Monitoring Mothers-to-be.

Participants had ultrasound testing to measure cervical length at 16 to 22 weeks of pregnancy and again from 22 to 31 weeks.

Fetal fibronectin tests were also performed at six and 14 weeks, 16 to 22 weeks and 22 to 30 weeks gestation. About eight percent of the women tested at 16 to 22



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weeks had a shortened cervix and went on to deliver spontaneously before 37 weeks.

Nearly 23.3 percent of women who were tested at 22 to 30 weeks had a shortened cervix and delivered prematurely.

The fibronectin test showed just 7.3 percent of women who delivered prematurely had high fibronectin levels at 16 to 22 weeks, while 8.1 percent of women delivered prematurely had high fibronectin levels at 22 to 30 weeks.

Researchers concluded that results of the tests, whether combined or alone, were not enough to support routine screening of preterm birth risk in first-time pregnancies.

Dr. Uma Reddy, a researcher at the Pregnancy and Perinatology Branch of NIH's Eunice Kennedy Shriver National Institute of Child Health and Human Development, said, "These methods of assessing women in their first pregnancy do not identify most of those who will later go on to have a spontaneous preterm delivery."

"There is a need to develop better screening tests that can be performed early in pregnancy."