



Amber waves of grain

The American Prairie Reserve is working to protect a grassland ecosystem on 3.5 million acres in northeastern Montana. The nonprofit’s goals include securing habitat for species that roamed the area in past centuries and providing public opportunities for hiking, horseback riding, biking, camping, birdwatching and hunting. Clockwise from left: The big land is crowned by a bigger sky. A burrowing owl, one of the species that would be protected, scans the landscape. Pronghorns, which resemble deer and antelopes, race across the prairie. With a storm approaching, mother bison feed their young.



AMERICAN PRAIRIE RESERVE



Deja vu is no passing event for British man

BY BAHAR GHOLIPOUR

Trapped in a time loop: That’s how one man felt because of his recurring episodes of deja vu. Unlike the vague, fleeting sensation most people experience in deja vu, his episodes were persistent and long.

The 23-year-old British man started to have “frightening” episodes of deja vu shortly after starting college, said researchers who detail his unusual case in a new report. For minutes, and sometimes even longer, he would feel that he was reliving experiences. The episodes grew in intensity and became debilitating.

“Rather than simply the unsettling feelings of familiarity which are normally associated with deja vu, he complained that it felt like he was actually retrieving previous experiences from memory, not just finding them familiar,” the researchers said.

Three years after the experiences began, the young man could no longer even watch TV or read the paper because he would have a disturbing feeling that he had encountered the content before, the researchers said.

The haunting sensation was stronger than just a feeling of familiarity. The man said he felt that at every present moment, he was reliving the past.

What made the case even more peculiar was that the man didn’t suffer from any of the neurological conditions previously reported in people who frequently experience deja vu. Instead, he suffered from anxiety, suggesting that anxiety disorders could be more related to deja vu than previously thought, according to the report, published Dec. 8 in the Journal of Medical Case Reports.



JEAN-SEBASTIEN EVRAND/AGENCE FRANCE-PRESSE VIA GETTY IMAGES

A faulty memory system?

Scientists have yet to find a complete explanation for deja vu, which is French for “already seen,” but a popular idea is that the false sensation of familiarity is the result of a failure in the brain’s memory system, which resides in the temporal lobe of the brain.

“Most explanations of deja vu suggest that it’s a phenomenon that arises from activity within the temporal lobe. Some kind of mistimed firing of neurons, perhaps — a temporary glitch in our processing of incoming information,” said Christine Wells, a psychologist at Sheffield Hallam University in the United Kingdom who co-authored the report of the man’s case.

“A key structure within the temporal lobe is the hippocampus, which is heavily involved in memory,” Wells said. “We have every reason to believe that’s the area that’s involved in deja vu.”

In fact, although almost anyone can have an episode of deja vu every once in a while, more-frequent and more-intense forms of the phenomenon are usually seen in people who have seizures in the temporal lobe, a condition called temporal lobe epilepsy.

In this man’s case, doctors looked for signs of seizures, but neurological examinations, including EEGs (electroencephalograms) and brain scans, didn’t turn up anything. His brain activity, as far as doctors could measure, looked normal. And a set of psychological tests of his

memory didn’t reveal any major problem, either.

Might it be anxiety?

Although the researchers didn’t find neurological clues that could explain this man’s deja vu, it is possible that they missed some signs, Wells said. The available technologies may not be sophisticated enough to pick up on what could be very subtle differences in the brain, she said.

The other explanation for the man’s chronic deja vu is his anxiety disorder.

“A lot of the previous research has focused — quite rightly — on temporal lobe epilepsy,” Wells said. “But it is possible that there are other disorders, such as anxiety disorders, in which people experience deja vu slightly more often than normal.”

The young man’s anxiety was so severe that he had to take a short break from college, and that’s when his deja vu began. These episodes caused him even more anxiety and distress, possibly creating a vicious cycle, the researchers said.

At one point, the deja vu became fairly continuous — this happened right after the man took the hallucinogenic drug lysergic acid diethylamide (LSD), he told the researchers.

Still, the case of a single man cannot prove that there’s a link between anxiety and deja vu, the researchers said. But the case raises the question, and it should be studied further, they said.

— Live Science

Weightlifting sessions may help get your belly back in shape

BY BAHAR GHOLIPOUR

People who lift weights every day may accumulate less belly fat over the years than people who spend the same amount of time doing aerobic exercises, according to a new study.

Combining weight training and aerobic activity, which is particularly beneficial for heart health, would be optimal, the researchers said.

“When we age, we lose muscle mass and we tend to accumulate more body fat. If you only engage in aerobic activities, such as running, jogging, you will end up losing fat as well as muscle mass,” said study co-author Rania Mekary, a researcher at the Harvard School of Public Health. “That’s why you need to supplement your workout with resistance training, in order to preserve the muscle mass.”

However, that is not to say that aerobic activities are less important for health, Mekary emphasized. Doing cardio exercises may help prevent conditions such as diabetes, heart disease and even cancer, she said.

The study looked at 10,500 healthy American men age 40 and older. Specifically, the researchers examined participants’ weight, physical activity and waist circumference to see how changes in the men’s activity levels over 12 years affected their waistlines. For older adults, waist circumference is a better indicator of healthy body composition than is body mass index, the researchers said.

Men’s waist sizes tend to increase as they age, and the men in the study showed a 1.2-inch increase in their waists, on average. But the men who engaged in weight training for 20 minutes a day had a smaller increase than men who spent the same amount of time doing aerobic exercises, according to the study. The results held after controlling for other factors that affect weight, such as diet.

The researchers also found that the men who increased their sedentary behaviors, such as watching TV, had a larger increase in their waistlines than



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those who didn’t increase sedentary time, according to the study, which was published in the journal Obesity.

“Engaging in resistance training or, ideally, combining it with aerobic exercise could help older adults lessen abdominal fat while increasing or preserving muscle mass,” Mekary said. Although the study was limited to men, the researchers suspect that the results are true for women as well, she said.

Some previous studies have found that aerobic exercises work better than weightlifting for people who are trying to lose belly fat. But those studies looked at the effects over shorter terms, often over several months.

A phenomenon called excess post-exercise oxygen consumption may explain why people in the study gained less fat over the years if they engaged in weight training, Mekary said. To burn fat, the body needs oxygen, and with weight training the body’s metabolic rate remains high up to two days after exercise, resulting in more burning of fat.

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