

FOR DAILY USE

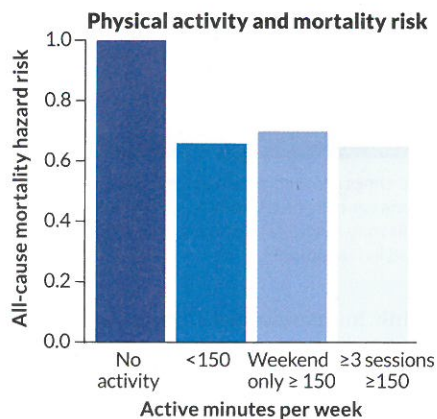
Any workout is worth it

Any exercise — even the weekend warrior approach, cramming it all into Saturday and Sunday — is better than none. Compared with inactive adults, those who got the recommended amount of weekly exercise, or even substantially less, had about a one-third lower risk of death during the study period, researchers report online January 9 in *JAMA Internal Medicine*.

Gary O'Donovan at the University of Leicester in England and colleagues analyzed data from 63,591 people ages 40 and older, surveyed between 1994 and 2012 as part of the Health Survey for England and the Scottish Health Survey. Adults should be getting 150 minutes of moderate activity (such as walking) or 75 minutes of vigorous activity (such as jogging) spread out across the week, according to the

U.S. Centers for Disease Control and Prevention and the World Health Organization.

Measured against people who did absolutely nothing, active people who worked up a sweat three or more times per week, weekend warriors and even those who moved less (60 minutes per week on average) all reduced their risk of dying early. The observational study can't say that exercise caused the reduced risk, just that there's an association. — *Bethany Brookshire*



SOURCE: G. O'DONOVAN ET AL/JAMA INT. MED. 2017

HOW BIZARRE

Surface action on Venus

With scorching temperatures and a mind-numbingly slow rotation (one Venus day lasts 243 Earth days), Venus was already a contender for weirdest planet in the solar system. Now add a giant bow-shaped structure in its atmosphere to its list of oddities. The mysterious 10,000-kilometer-long arc was so big that it appeared to stretch between the planet's poles. And it didn't budge, even as winds in the upper atmosphere whipped along at a brisk 100 meters per second.

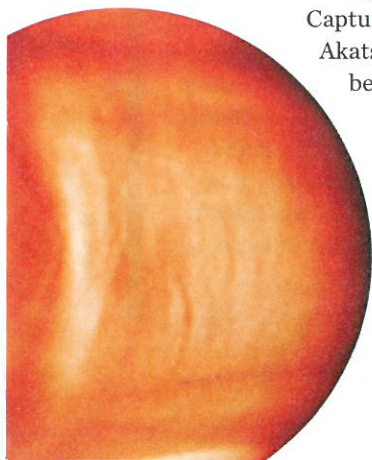
The structure, which lasted at least four Earth days, could be a gravity wave, a large disturbance in the flow of air or other fluids, scientists say. It may have formed on Venus when winds in the planet's lower atmosphere slammed into a mountain range, got pushed into the upper atmosphere and got stuck, Japanese researchers report online January 16 in *Nature Geoscience*.

Captured by the Japan Aerospace Exploration Agency's Akatsuki spacecraft in December 2015, the structure could be the largest stationary gravity wave seen in the solar system. If it did shift

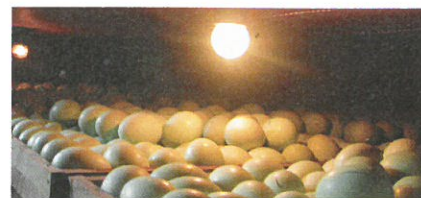
A bow-shaped structure arches vertically across Venus in this infrared image. Whiter colors represent higher temperatures, showing that the odd structure is hotter than other areas of the atmosphere.

from the lower to upper atmosphere, there may be more going on at the planet's surface than once thought.

— *Ashley Yeager*



CLOCKWISE FROM TOP: A.S. ZAIN/SHUTTERSTOCK; ©PLANET-C; GRAPH ADAPTED BY T. TIBBITTS



Shining light on incubating eggs could make adult broiler chickens less fearful, a new study suggests.

TEASER

Lighting the way to calmer chickens

Fearful, flighty chickens raised for eating can hurt themselves while trying to avoid human handlers. But there may be a simple way to hatch calmer chicks: Shine light on the eggs for at least 12 hours a day.

Researchers at the University of California, Davis bathed eggs daily in light for different time periods during their three-week incubation. When the chickens reached 3 to 6 weeks old, the scientists tested the birds' fear responses. In one test, 120 chickens were randomly selected from the 1,006-bird sample and placed one by one in a box with a human "predator" sitting visibly nearby. The chickens incubated in light the longest — 12 hours — made an average of 179 distress calls in three minutes, compared with 211 from birds incubated in complete darkness, animal scientists Gregory Archer and Joy Mench report in January in *Applied Animal Behaviour Science*.

Chickens exposed to lots of light as eggs "would sit in the closest part of the box to me and just chill out," Archer says. The others spent their time trying to get away. How light has its effect is unclear. On commercial chicken farms, eggs typically sit in warm, dark incubation rooms. The researchers are now testing light's effects in large, commercial incubators. Using light exposure to raise less-fearful chickens could reduce broken bones during handling at processing plants, Archer says. It might also decrease harmful anxious behaviors, such as feather pecking of nearby chickens. — *Aylin Woodward*