

DID YOU EAT YOUR VEGGIES? URINE TEST CAN TELL

PARIS: A simple urine test can reveal whether you had steamed fish or a fat-riddled steak for dinner, and could one day end dietary dishonesty, according to a study published yesterday. The test may also boost the health of people suffering from diabetes, obesity or heart disease, the study said. Monitoring calories is notoriously difficult outside a clinical setting because people are often reluctant to admit what they have-or have not-eaten. Still under development, the five-minute lab test identifies biological markers in urine that are specific to different food groups, researchers reported in *The Lancet Diabetes and Endocrinology*.

For now, the pee probe can distinguish between red meat, fish and chicken, and provides a good indication of fat, sugar, fibre and protein intake as well. "We're not at the stage

yet where the test can tell us a person ate 15 chips yesterday and two sausages," said co-author John Mathers, a professor at the Human Nutrition Research Centre at Newcastle University in England. "But it's on its way." In trials, some 60 percent of people under-report their intake of foods they know to be unhealthy, and over-report consumption of fruit and vegetables, research has shown.

Fried sausage and cola

"A major weakness in all nutrition and diet studies is that we have no true measure of what people eat," said senior author Gary Frost, a professor at the Department of Medicine at Imperial College London. Fibbing about food not only bedevils scientists studying nutrition, but also doctors treating diseases aggravated by poor diet. Excess

sugar, fat and salt intake, for example, is implicated in a host of conditions, from heart attacks and strokes, to high blood pressure and diabetes. But doctors can only help patients design healthier diets if they know what they are actually eating.

To develop the urine test, researchers at three universities asked 19 volunteers to adhere to four different diets ranging from super healthy to artery-clogging. They were observed in a research facility for three days and nights. The least healthy menu featured sugary cereal, whole milk, and buttered white toast for breakfast, followed by fried sausage, potato waffles, full-sugar cola, burgers with melted cheese, and chocolate for lunch and dinner. Meals at the other end of the spectrum had whole wheat cereal, low fat milk, steamed fish and boiled veg-

etables. The scientists established chemical profiles for each diet, and developed an "instant indicator" of whether someone is eating healthy or not. They then analyzed urine samples from 300 people who took part in an earlier study in which food intake was carefully monitored, and found that the new test accurately reflected what they had eaten.

"For the first time, this research offers an objective way of assessing the overall healthiness of people's diets without all the hassles, biases and errors of recording what we've eaten," Mathers said. The next step, he said, is to test a larger group of people. The researchers hope to make the test commercially available within two years, which would allow the public to send urine samples to a clinic for testing. —AFP



INCHEON, South Korea: In this file photo, health officials wearing protective suits carry a sack containing killed chickens after they were slaughtered at a chicken farm where a suspected case of bird flu was reported in Incheon, South Korea. —AP photos

BIRD FLU-PLAGUED SOUTH KOREA AGREES TO BUY US EGGS

DES MOINES, Iowa: South Korea is in the throes of a bird flu outbreak has asked the United States to ship it shell eggs, marking the first time the Asian country has sought to buy large quantities of fresh US eggs. The demand is good for a US egg industry that's awash in the product, having replenished its flocks after the 2015 bird flu outbreak and ending up with an oversupply that sent domestic prices to industry lows - about 79 cents a dozen earlier this month.

South Korea had been one of a few nations that issued a blanket ban on egg and poultry imports during the US' 2015 outbreak that resulted in the deaths of 49 million turkeys and chickens. But it seeks help now that it has lost about 26 million chickens - and a third of its egg-laying hens - to the H5N6 strain since November. It's South Korea's worst bird flu outbreak surpassing the 14 million birds killed in 2014.

The agreement to export shell eggs was announced Friday by the US Department of Agriculture, which kept prices from sliding further, according to Urner Berry protein market analyst Brian Moscoquiri. Although deals are



INCHEON, South Korea: File photo shows customers look at eggs at a discount store in Seoul, South Korea, a day after government officials announced that millions of chickens would be culled because of an outbreak of bird flu.

still being signed, Moscoquiri said he is aware of contracts for three or four airline flights of eggs - equivalent to as many as three or four million eggs. "We had never shipped shell eggs there before so we did not have a formal protocol between our two governments," said Jim Sumner, president of the US Poultry and Egg Export Council, an industry trade group which promotes the global export of US poultry and eggs. Some of the eggs are coming

out of Iowa, which is the nation's leading egg producer. Marcus Rust, the CEO of Rose Acre Farms, which supplies the second-most eggs in the US, says that the demand comes at a good time for producers, who usually see a lull in the first few months of a new year. The US has been called upon to help because it remains free of the bird flu in commercial poultry production. But the disease is a problem in Asia, Europe and other locations. —AP

TESTING WEARABLE SENSORS AS 'CHECK ENGINE' LIGHT FOR HEALTH

WASHINGTON: A next step for smart watches and fitness trackers? Wearable gadgets gave a Stanford University professor an early warning that he was getting sick before he ever felt any symptoms of Lyme disease. Geneticist Michael Snyder never had Lyme's characteristic bulls-eye rash. But a smart watch and other sensors charted changes in Snyder's heart rate and oxygen levels during a family vacation. Eventually a fever struck that led to his diagnosis.

Say "wearables," and step-counting fitness trackers spring to mind. It's not clear if they really make a difference in users' health. Now Snyder's team at Stanford is starting to find out, tracking the everyday lives of several dozen volunteers wearing devices that monitor more than mere activity. He envisions one day having wearables that act as a sort of "check engine" light indicating it's time to see the doctor. "One way to look at this is, these are the equivalent of oral thermometers but you're measuring yourself all the time," said Snyder, senior author of a report released Thursday on the project.

Among the earliest hints: Changes in people's day-to-day physiology may flag when certain ailments are brewing, from colds to Lyme to Type 2 diabetes, researchers reported in the journal *PLOS Biology*. Interest in wearable sensors is growing along with efforts to personalize medicine, as scientists learn how to tailor treatments and preventive care to people's genes, environment and lifestyle. The sensors are expected to be a part of the National Institutes of Health's huge "precision medicine" study, planned to begin later this year.

But a first step is learning what's normal for different people under different conditions. The Stanford team is collecting reams of data - as many as 250,000 daily measurements - from volunteers who wear up to eight activity monitors or other sensors of varying sizes that measure heart rate, blood oxygen, skin temperature, sleep, calories expended, exercise and even exposure to radiation. That's paired with occasional laboratory tests to measure blood chemistry and some genetic information.

An initial finding: Blood oxygen levels decrease with rising altitudes during plane flights, in turn triggering fatigue. But toward the end of long flights, oxygen begins rising again, possibly as bodies adapt, the researchers reported. It was that phenomenon that alerted Snyder, the longest-tested participant, "that something wasn't quite right" on one of his frequent long flights. Landing in Norway for a family vacation, Snyder noticed his oxygen levels didn't return to normal like they always had before. Plus his heart rate was much higher than normal, which sometimes signals infection. —AP

THE GOOD, BAD AND UNKNOWN ABOUT MARIJUANA'S HEALTH EFFECTS

NEW YORK: It can almost certainly ease chronic pain and might help some people sleep, but it may also raise the risk of getting schizophrenia and trigger heart attacks. Those are among the conclusions about marijuana reached by a federal advisory panel in a report released Thursday. The experts also called for a national effort to learn more about marijuana and its chemical cousins, including similarly acting compounds called cannabinoids.

The current lack of scientific information "poses a public health risk," said the report, from the National Academies of Sciences, Engineering and Medicine. Patients, health care professionals and policy makers need more evidence to make sound decisions, it said. For marijuana users or those considering it, "there's very little to guide them" on amounts and health risks, said Dr Marie McCormick of the Harvard School of Public Health, who headed the committee.

Several factors have limited research. While the federal government has approved some medicines containing ingredients found in marijuana, it still classifies marijuana as illegal and imposes restrictions on research. So scientists have to jump through bureaucratic hoops that some find daunting, the report said. A federal focus on paying for studies of potential harms has also hampered research into possible health benefits, the report said. The range of marijuana products available for study has also been restricted, although the government is expanding the number of approved suppliers.

Twenty-eight states and the

District of Columbia have legalized marijuana for a variety of medical uses, and eight of those states plus the district have also legalized it for recreational use. The report lists nearly 100 conclusions about marijuana and its similarly acting chemical cousins, drawing on studies published since 1999. Committee members cautioned that most conclusions are based on statistical links between use and health, rather than direct demonstrations of cause and effect.

The review found strong evidence that marijuana can treat chronic pain in adults and that similar compounds ease nausea from chemotherapy, with varying degrees of evidence for treating muscle stiffness and spasms in multiple sclerosis. Limited evidence says marijuana or the other compounds can boost appetite in people with HIV or AIDS, and ease symptoms of post-traumatic stress disorder, the report concluded. But it said there's not enough research to say whether they're effective for treating cancers, irritable bowel syndrome, epilepsy, or certain symptoms of Parkinson's disease, or helping people beat addictions.

There may be more evidence soon: a study in Colorado is investigating the use of marijuana to treat PTSD in veterans. Turning to potential harms, the committee concluded:

- Strong evidence links marijuana use to the risk of developing schizophrenia and other causes of psychosis, with the highest risk among the most frequent users.
- Some work suggests a small



ALBION, Illinois: In this file photo, marijuana grows at a medical marijuana cultivation center in Albion, Ill.—AP

increased risk for developing depressive disorders, but there's no evidence either way on whether it affects the course or symptoms of such disorders, or the risk of developing post-traumatic stress disorder.

● There's a strong indication that using marijuana before driving increases the risk of a traffic accident, but no clear link to workplace accidents or injuries, or death from a marijuana overdose.

● There's limited evidence for the idea that it hurts school achievement, raises unemployment rates or harms social functioning.

● For pregnant women who

smoke pot, there's a strong indication of reduced birthweight but only weak evidence of any effect on pregnancy complications for the mother, or an infant's need for admission to intensive care. There's not enough evidence to show whether it affects the child later, like sudden infant death syndrome or substance use.

● Some evidence suggests there's no link to lung cancer in marijuana smokers. But there's no evidence, or insufficient evidence, to support or rebut any link to developing cancers of the prostate, cervix, bladder, or esophagus.

● Substantial evidence links pot smoking to worse respiratory symptoms and more frequent episodes of chronic bronchitis.

● There's a weak suggestion that smoking marijuana can trigger a heart attack, especially for people at high risk of heart disease. But there's no evidence either way on whether chronic use affects a person's risk of a heart attack.

● Some evidence suggests a link between using marijuana and developing a dependence on or abuse of other substances, including alcohol, tobacco and illicit drugs. —AP

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PAGE





THE LEADING INDEPENDENT DAILY IN THE ARABIAN GULF





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