

RMRC, Bhubaneswar

(Laxmi Narayan Memorial Library)

Weekly Current Awareness Service

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GOOGLE CAN BRING YOU BACK 100,000 ANSWERS, A LIBRARIAN CAN BRING YOU BACK THE RIGHT ONE.

-NELL GAIMAN

Monday morning team requests you to visit the library regularly.

About Monday Morning

Monday morning is a weekly E- CAS (Electronic Current Awareness Service) of RMRC Library, Bhubaneswar which carries one Biomedical & health science news item and some useful current medical research links so that the scientists can access the articles. This E- Bulletin starts its journey from 21st Nov. 2016. In this maiden attempt we cordially invite your inputs and suggestions to improve in future.

Dr. Banamber Sahoo, Lib & Inf. Officer
Satyajit Nayak & Twinkle Rout (Lib. Trainee)

Don't eat before hitting the gym

Major difference in adipose tissue gene expression as compared to post-meal workouts

LONDON: Fitness enthusiasts, take note of this! Exercising on an empty stomach may help burn more body fat and fuel your metabolism, boosting your health in the long run, a new study has found.

Researchers from the University of Bath in the UK studied a group of overweight males. The volunteers had to walk for duration of 60 minutes at 60 per cent maximum oxygen consumption while being on an empty stomach, and on another occasion for two hours after the consumption of a high-calorie carbohydrate-rich breakfast.

The team took multiple blood samples after eating or fasting and after exercising. They also collected adipose tissue samples immediately before and one hour after walking. Gene expression in the adipose tissue differed significantly in the two trials, researchers said.

They found that the expression of two genes, PDK4 and HSL, increased when the men fasted and exercised, and de-



Study method

Volunteers walked for 60 minutes at 60 per cent maximum oxygen consumption while on empty stomach, and for two hours after a high-calorie breakfast.

creased when they ate before exercising.

The rise in PDK4 most likely indicates that stored fat was used to fuel metabolism during exercise instead of carbohydrates from the recent meal, researchers said.

HSL typically increases when adipose tissue uses stored energy to support increased activity,

such as during exercise, said Dylan Thompson of University of Bath. These results reinforce the view that "adipose tissue often faces competing challenges," Thompson said.

After eating, adipose tissue is busy responding to the meal and a bout of exercise at this time will not stimulate the same beneficial changes in adipose tissue, he said. This means that exercise in an empty stomach might provoke more favourable changes in adipose tissue, and this could be beneficial for health in the long term, he added.

The study was published in the *American Journal of Physiology-Endocrinology and Metabolism*.

Similar research that was conducted at the University of Glasgow five years ago found that among non-exercising, overweight men, those who walked briskly for an hour before breakfast burned more body fat over the next eight-hour period than they did when they ate before exercising.

1. Study finds some significant differences in brains of men and women.

Do the anatomical differences between men and women—sex organs, facial hair, and the like—extend to our brains? The question has been as difficult to answer as it has been controversial. Now, the largest brain-imaging study of its kind indeed finds some sex-specific patterns, but overall more similarities than differences. The work raises new questions about how brain differences between the sexes may influence intelligence and behavior. For more details click on the below link.

<http://www.sciencemag.org/news/2017/04/study-finds-significant-differences-brains-men-and-women>

2. Researchers discover new Swine Flu strain in India, govt working on vaccine.

Earlier this year, researchers at the National Institute of Virology (NIV) in Pune, run by the Indian Council of Medical Research's (ICMR), isolated a new strain called the Michigan strain as part of the on-going H1N1 surveillance in the country. For more details click on the below link.

<http://www.hindustantimes.com/india-news/researchers-discover-new-swine-flu-strain-in-india-govt-working-on-vaccine/story-4r1NrGZCxb5A44S61OP8ZO.html>

3. New report on how to improve speed, effectiveness of clinical trials during an epidemic.

Successful clinical trials to create drugs and vaccines for next pandemic disease will rely on building capacity, community engagement, and international collaboration before and during outbreak. For more details click on the below link.

https://www.eurekalert.org/pub_releases/2017-04/naos-nro041217.php

4. Secondhand Smoke Has Poor Health and Surgical Outcomes Among Children.

Secondhand smoke exposure is breathing the smoke from burning tobacco products, such as cigars, pipes, and cigarettes, and from smoke breathed out from a smoking person. It has a significant health effect on adults and children. For more details click on the below link.

<https://www.medicalnewsbulletin.com/secondhand-smoke-poor-health-surgical-outcomes-among-children/>

5. WHO Weekly epidemiological record.

Surveillance systems to track progress towards polio eradication worldwide, 2015–2016. For more details click on the below link.

<http://apps.who.int/iris/bitstream/10665/254988/1/WER9214.pdf>



E- CAS (Current Awareness Service)

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