



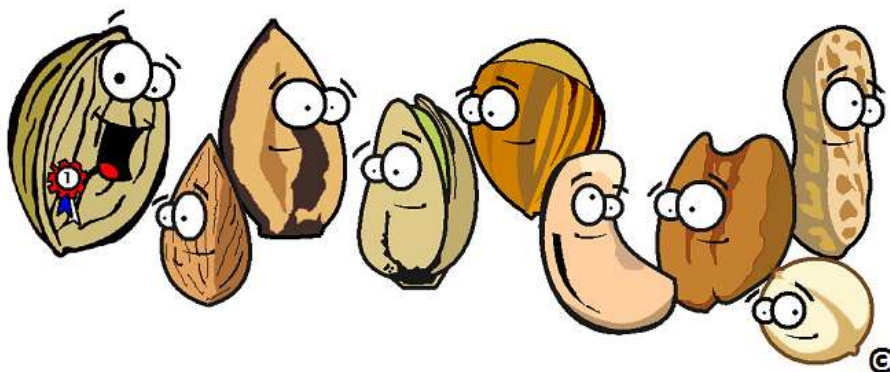
E-spoons E-zine
July 2011

Warning : this E-zine may contain traces of nuts

Nuts are heart healthy, but margarine might be a bigger menace for blacks than whites, causing a lack of membrane synergy in tweedle dum and tweedle dee. Bacteria enjoy roasted nuts but beware of roasting your nuts under the laptop, rather get the boys fired up with a little vitamin D. A buried nut becomes a big wide tree but unfortunately so do we. Don't throw your hailstones if nuts give you bad mojo, biotechnology is working hard to solve the problem of nut allergies.

The E-spoons E-zine is a monthly compilation of stories appearing on [7 Big Spoons™ blog](#). The stories are based on the latest science tit bits and will help you become a little healthier, wealthier and wiser by explaining the why. As a friend of Spoonful of Science you have been included on our mailing list – should you wish to unsubscribe follow the link at the bottom of the E-zine.

Crack open a walnut to beat heart disease



Cardiovascular health and wellbeing, is all about squashing the inflammation, which is causing [the blood vessels to break](#). Preventing inflammation is problematic, so most pharmacological interventions aim to contain it. Antioxidants, are a generic strategy, to obliterate the reactive chemical species from tearing holes in tissues.

Nuts are a great grab and go way to get lots of anti-oxidants. Recently, some scientists, with a little too much time on their hands, decided to find out which of the tree and ground nuts, should take the title of “The nut of nuts”.

The competition was fierce, with each nut offering a unique phytochemical contribution, but the nut which cracked the winning performance was the walnut.

PS. Want to learn more about the power of anti-oxidants ? Come and listen to my presentation at the [Herb Association Conference](#).

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Margarine is a bigger menace for blacks than whites

Most people believe that margarine is a heart healthy option. But it is member of the omega-6 tribe, which means that when all is said and done – it helps to create a chemical called arachidonic acid. Arachidonic acid is MR INFLAMMATION. But the extent of the problem depends on your genes especially those in the FADS cluster.



Just like our colouring (skin, eyes, hair) and the shape of our nose and ears are variable, the FADS cluster is different. Some people are very efficient at creating long chain PUFAs and some people are slow, being slow is the way to go with this particular trait. Slow coaches produce less inflammation.

Researchers looked at FADS clusters in different population groups within America. They found something very interesting

- White people (or those with European ancestors) are slow
- Black people (or those with African ancestors) are fast

So your genes are impacting what happens when you eat a piece of cake or cookie baked using margarine. If you're white, you maybe all right, but if you're black, you may be dialling up the stress levels.

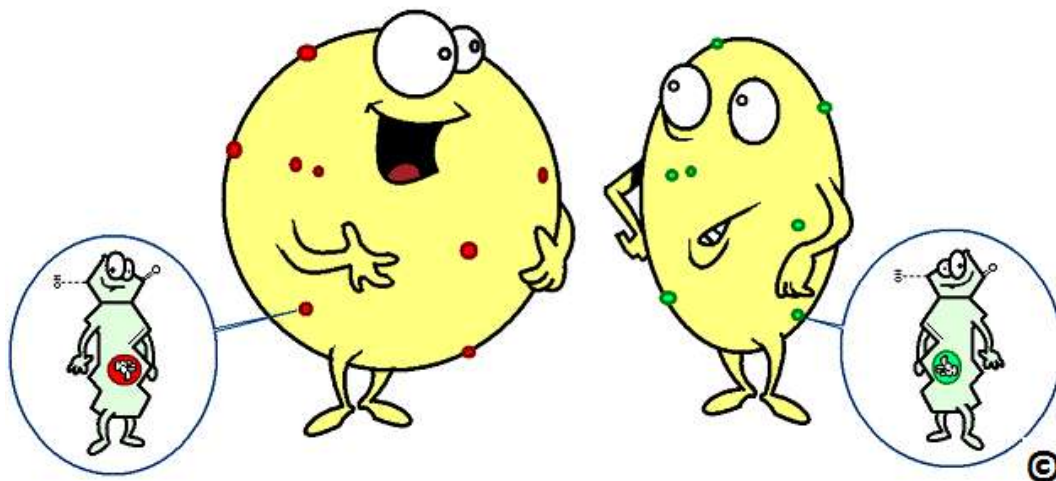
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Tweedle dum and tweedle dee lacked fat cell membrane synergy

A group of scientists from Finland took a peak at the membranes of fat cells from identical twins. The interesting part of the study is that these were not ordinary sets of twins. In each set, one twin was fat and the other thin. This meant that when they were peaking at the fat cells, the only significant difference was how much fat was in them. Since the twins share the same set of genes and they also grew up in the same environment.

The physical properties of the fat cell membranes, measured as the fluidity, from both full and empty fat cells was pretty much the same. But when the actual composition of the fatty acids within the membrane were examined – there was a difference. The types of fatty acids had changed - omega 6 fatty acids were up and omega-3 fatty acids were down in the full fat cells. This means that full fat cells are programmed to spit out more inflammatory mediators.



So if you have a big collection of full fat cells, increase your consumption of omega-3. [Restore the eicosanoid balance](#) and [overcome the side effects of obesity](#).

[Read full article here](#)

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Almonds are like dog biscuits for bacteria

You woke up this morning – fed the birds their ration of seeds, the dog and the cat, got their respective biscuits. Did you feed the most important “pets” in your life ? Did you feed your gut bacteria ?

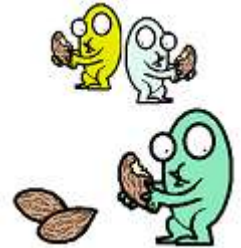
Siss – if you said the little suckers can just feed off the leftovers.

You don't just feed the dog leftovers. You buy the canine in your life, food specifically formulated to have all the nutrients a dog needs to be healthy. You buy the variety with the EXTRA GRAVY, so it tastes good as well. Yup, it does manage to eat the leftovers, which it skilfully persuades you to part with, but this is the cherry on top of your hounds' diet, not the staple food.

Your gut bacteria outnumber your own cells by about 10 to 1. Should you not be feeding them something special too ?

They love almonds.....

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Your laptop might be roasting your future kids



If you're using a laptop to maximize brain performance, make sure you're not nuking the next generation. Laptops produce quite a bit of heat, so if you're in the habit of using your laptop on your lap, you're potentially overheating the sperm factory.

Keeping the nether regions cool is important. Raising the temperature of the testicles, decreases the number of sperm produced (sperm count) and the sperm that are produced, are typically poor swimmers. Meagre sperm production can mean trouble fathering kids down the line.

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Vitamin D whips sperm into speed demons

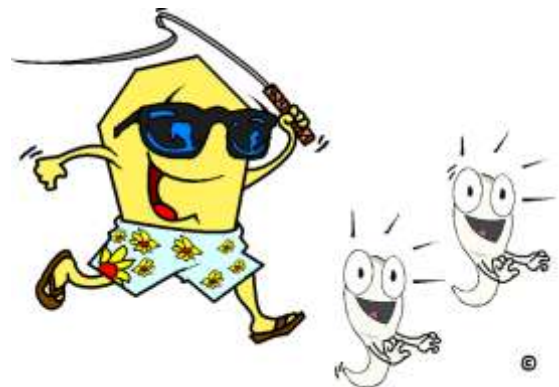
For a sperm, it is a long and arduous swim through the cervix, to the top of the uterus and down the fallopian tube to claim the prize. The distance may seem small when measured with a ruler, but when you're microscopic in size – a few centimetres is the equivalent of a marathon.

Only the strong make it to the finish line.

There is only one winner. The competition is fierce – a billion or more typically line up at the start gate. The sperm that reaches the egg first, drills into the thick wall and caboom fuses with the nucleus of the egg to create a zygote . A brand new, unique individual carrying the genetic package.

There is no silver medal in the sperm race. It's first or nothing.

But lots of men are producing sperm that are in such poor shape they can't go the distance to claim the prize.



[Could vitamin D be the energy tonic for unfit human sperm ?](#)

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A buried nut becomes a big wide tree

Today's mighty oak is just yesterday's nut, that held its ground.



Remember, forests provide shelter to people, habitat to biodiversity; are a source of food, medicine and clean water; play a vital role in maintaining a stable global climate and environment. Forests are vital to the survival and well being of people everywhere, all 7 billion of us.

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Are you organizing an event ?



Invite Dr Sandy to speak

Popular keynotes include

- Using “drugs” to enhance performance in the workplace
- The boa constrictor and the Can-Can girl

And for high school students

- Don't commit brain abuse this exam season

Visit <http://www.spoonfulofscience.com>

You are getting wider even if you're not getting fatter



Remember the thrill of standing next to the door post and having your height recorded. Each year you inched a little higher, and everyone marvelled at your progress.

No one measured how wide you were, well maybe in the latter years, the doctor has on occasion been interested in measuring the width around your belly. The measurement is seldom a celebration.

By the ripe old age of 20 – you are considered fully formed, but now science has discovered growth has not actually stopped. You won't get any taller, but you will get wider, skeletally speaking. Researchers at the University of North Carolina have discovered that the pelvis (hipbones) keep moving away from each other long after 20. In fact, they continue opening up, until you are swallowed up.

So face the factswith or without extra blubber, you will be wider at 40 than at 20, and wider still at 60 and widest in your 90s. The slight increase in diameter, means it is perfectly normal to need to increase the size of the trousers that you purchase, as the decades move on.

[So what kind of numbers are acceptable ?](#)

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Are you longing for a deep meaningful conversation about your health ?



[Chat to Dr Sandy over a cup of coffee](#)

Find out how to use “chemicals” effectively and safely, to maximize your health.

Hailstones are bacteria enjoying a game of tag

I know as humans, we like to think that we rule the world, but although our influence on the planet is profound, the true masters of the planet are not humans but microorganisms.

Bacteria not only hold tremendous sway over our well being, influencing our digestion, **immune system** and **thought life** in one way or another, but they manipulate the weather.

Bacteria often form the ice nuclei (IN) around which water precipitates, making them responsible for hail and rain.

So, next time it rains in your neighbourhood, join in the bacterial game of tag, with a little singing and dancing. Celebrate that glorious feeling, as you come up close and personal with these special characters.



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Bloodshot eyes are a sign of some bad mojo

Quite a few creatures have red eyes. Being stared at by a flaming red eye is pretty intimidating and most definitely could evoke a little terror, but these eyes (sclera) are red all over, so the blood vessel antics are kept secret.



Humans have coloured eyes floating in a sea of white, this set up is extraordinary. The unusual pattern means that the world bares witness to the blood vessel behaviour. Blood vessel activities are a distinctive form of human communication.

[So what stories do red eyes tell ?](#)

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GM peanuts could solve the problem of peanut allergies

Pimples on peanuts are the cause of peanut allergy

Biotechnologists give peanuts a makeover to solve the peanut allergy problem



**If you're worried or curious about GM foods, educate yourself.
Get the facts not media hype.**

Join Prof Thomson for a free public forum at the Sandton Convention Centre on 6 September 2011.

Visit <http://www.abic2011.co.za> for more information.

Did you enjoy the E-zine ?

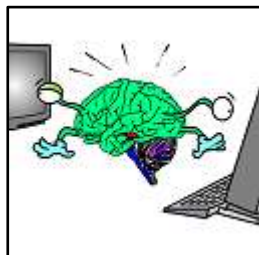
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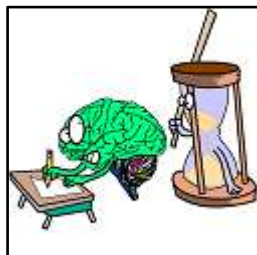
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Neurotechnology tips provides tit bits of science to help you buzz up your brain performance.

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Work and TV are like oil and water, they don't mix



Trick and treat your brain to beat procrastination



If you want to be the boss, you need to read now

We will be whispering in the wind next month. Look out for it in your inbox on 3 August (the first Wednesday of the month).

Yours scientifically

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The cartoons were drawn by [Guy Alain Ngangob](#) – drop him an e-mail if you need a cartoon or two. If you want to access the science articles used to compile the newsletter visit the relevant pages on the blog and follow the link. Photos were all taken by Dr Sandy at the Bird Park in Knysna, South Africa.

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