a sustainable healthcare system by altering public perceptions of healthcare institutions and improving beliefs about the value of healthy lifestyles. HQ

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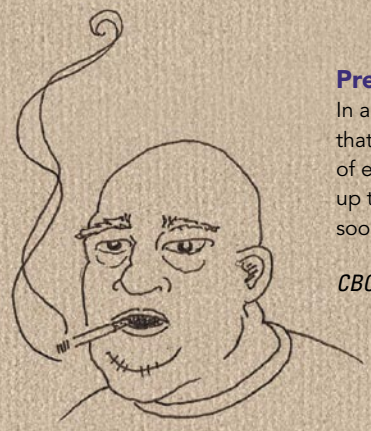
– **Patrick A. Shaw** is with the Quorum Strategic Health Communications.

Points of Interest



Preventing Obesity And Smoking Can Save Lives, But It Doesn't Save Money

In a paper published in the *Public Library of Science Medicine* journal, Dutch researchers found that the health costs of thin and healthy people in adulthood are more expensive than those of either fat people or smokers. They concluded that from age 20 to 56, obese people racked up the most expensive health costs. But because both the smokers and the obese people died sooner than the healthy group, it cost less to treat them in the long run.

CBC News February 4, 2008 http://www.cbc.ca/cp/health/080204/x020436A.html

E-noses Could Make Diseases Something to Sniff At

Engineers are developing electronic versions of the human nose that will allow doctors, ever in search of less-invasive techniques, to tap into what the nose knows about the human body. "The sense of smell has been used as a medical diagnostic tool for thousands of years," says Bill Hanson, an anesthesiologist and critical care specialist at the University of Pennsylvania in Philadelphia, who has studied whether odour can be used to diagnose an ailment. "Both diseases and bacteria that cause diseases have individual and unique odors. You can walk into a patient's room and know immediately in some cases that the patient has such and such bacteria just because of the odor."

There are a variety of electronic e-nose models, all of which consist of an array of olfactory sensors that are activated in unique patterns when exposed to different aromas; software identifies each odour and its source by analyzing the patterns. (The human brain uses this same pattern-recognition process to identify smells.)

Emily Anthes ***Nature*** January 11, 2008 http://www.sciam.com/article.cfm?id=electronic-noses-could-make-diseases-something-to-sniff-at

Wearing Too Much Perfume May Indicate Depression

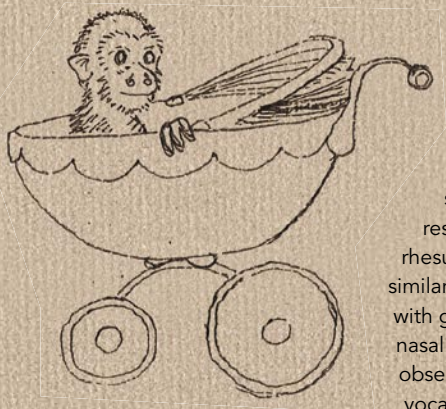
Depression has been linked to a biological mechanism that affects the olfactory glands. "Our scientific findings suggest that women who are depressed are also losing their sense of smell, and may overcompensate by using more perfume," explains researcher Professor Yehuda Shoenfeld, a member of the Sackler Faculty of Medicine at Tel Aviv University.

ScienceDaily January 8, 2008 http://www.sciencedaily.com/releases/2008/01/080103124645.htm

A Bird's Eye View

Researchers think that birds can see antioxidants and choose foods containing them. Martin Schaefer of the University of Freiburg, in Germany, and his colleagues found that birds could clearly perceive the strong ultraviolet colouration given to fruit by the presence of a group of antioxidants called anthocyanins. For four days, 11 birds were given a choice between two cups of food that were identical except that the food in one was blue because it contained anthocyanins. All the birds chose the food with the anthocyanins, which confirmed that the birds could see the compound and had a preference for it.

The Economist November 29, 2007
http://www.economist.com/science/displaystory.cfm?story_id=10205178



Baby Talk

When humans talk to babies, they instinctively use a high-pitched, singsong voice. Recent research indicates that female rhesus macaques do something similar, calling out to infants with grunts and girneys, soft, nasal vocalizations. Researchers observed that female monkeys vocalized more frequently after an infant was born, and that if an infant were to be separated from its mother, other females oriented toward the baby and increased vocalizations. The researchers suggested that the sounds do not encode specific information but, rather, are acoustically designed to attract infants' attention.

Seed Volume 13 December 2007 http://seedmagazine.com/

Bone, Sweet Bone...

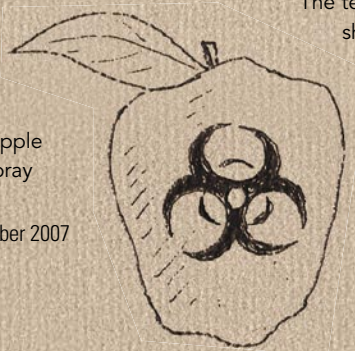
Although sweets can help weaken teeth, sugars are apparently key to making bone strong. Based on nuclear magnetic resonance imaging of horse bones, researchers concluded that polysaccharides help to guide the proper crystallization of bone minerals. A better understanding of how bone forms should alter the way osteoporosis and osteoarthritis are treated and perhaps lead to new ways of creating synthetic bone.

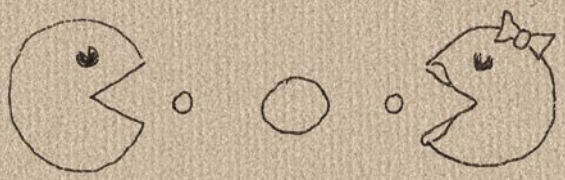
Scientific American January 2008 http://www.sciam.com

An Apple a Day ...?

Apples contain loads of fibre, vitamins and cancer-preventing antioxidants, but most of them also contain up to four pesticides – even after they've been washed. Just one apple exceeds daily recommended limits on bug-spray consumption.

Mental Floss Volume 6, Issue 6 November–December 2007
http://www.mentalfloss.com/





Shoot First, Ace Geometry Later

Playing an action-packed video game nearly wipes out sex differences in a basic spatial-thinking task, research has revealed. In a study of college students, men were better than women at rapidly switching their attention among stimuli displayed on a computer screen, a common test of spatial ability. But after both sexes played the role of a World War II soldier in a video game for 10 hours over several weeks, women caught up to men on the spatial-attention task, as well as on an object-rotation test of more advanced spatial ability. Women's gains persisted when the volunteers were retested an average of five months later.

The study's lead author, University of Toronto psychologist Ian Spence, speculated that the video game practice may have caused "massive overexercising" of the brain's attentional system or even switched on previously inactive genes that underlie spatial cognition.

Siri Carpenter *Scientific American Mind* Volume 18, Issue 6 December 2007. http://www.sciam.com/article.cfm?id=shoot-first-ace-geometry

Personal Genome Service

A personal genetics company, 23andMe, is helping individuals understand their own genetic information through the latest advances in analysis of deoxyribonucleic acid and through web-based interactive tools. The company's service will enable customers to gain deeper insights into their ancestry and other inherited traits, which are marked in an individual's genetic code.

23andMe https://www.23andme.com

Couch Potato Lifestyle May Speed Up Ageing

Being a couch potato in your free time could make you a decade older biologically than someone who is physically active, according to a major study of people's "chromosomal clocks".

Tim Spector at St Thomas' hospital in London, UK, and colleagues measured the lengths of telomeres – the DNA that bookends our chromosomes – in the white blood cells of 2,401 twins.

Telomeres shorten each time a cell divides, and when they become too short a cell can no longer divide, so telomeres act as a kind of timer counting down our biological age. The researchers found that people who did not exercise in their spare time had shorter telomeres than very active people.

On average, the least active (getting just 16 minutes exercise a week) had telomeres 200 base pairs shorter than the most active (exercising 3 hours a week), which translates to them being about 10 years biologically older.

The team previously showed that smoking and obesity can shorten telomere length to the equivalent of 10 years. But they found that exercise and telomere length were linked independently of whether people smoked or were overweight.

Priya Shetty *NewScientist.com News Service* January 29, 2008 http://www.newscientist.com/article/dn13238-couch-potato-lifestyle-may-speed-up-ageing.html