



Together for Life

Every Day of the Year



Cockroaches



A cockroach can survive for about a week or so without its head! If a cockroach becomes decapitated, the wound on their neck would clot and seal off. If this happens they will no longer be able to eat food, but insects can survive for weeks on only one meal. Without a brain, cockroaches can still perform simple bodily functions and simple reactions. Their head can even survive for a few hours after being cutting off.

<http://www.science-facts.com>

Frogs and Science



Frogs are raised commercially for several purposes. Frogs are used as a food source, for dissections in high school and university anatomy classes, and as model organisms throughout the history of science. Due to frogs, scientists discovered the link between electricity and the nervous system, human chorionic gonadotropin, a hormone found in pregnant women, and a frog can be cloned by somatic cell nuclear transfer, the same technique later used to create Dolly the Sheep. Frogs are currently being used for cloning research and other branches of embryology.

Why Ireland Has No Snakes

Legend has it that St. Patrick drove all the snakes from Ireland. The story goes that sometime back in the fifth century St. Patrick stood on a hill and used a staff to herd the slithering creatures into the sea, banishing them for eternity. It's true, aside from zoos and pets, there are no snakes on the emerald isle. In fact, there never were any snakes in Ireland. This state of affairs probably has more to do with the vagaries of geography than any neat tricks performed by St. Patty.



Snakes first evolved from their lizard forebears about 100 million years ago during the late Cretaceous period, about the same time that Tyrannosaurus rex first appeared. Migrating to Ireland wasn't an option at this time, as the area was completely underwater. Now snakes are found in deserts, grasslands, forests, mountains, and even oceans virtually everywhere around the world. Everywhere except Ireland, New Zealand, Iceland, Greenland, and Antarctica, that is. So where did the myth of St. Patrick and the snakes come from? Most scholars agree that snakes symbolize paganism, which St. Patrick is also credited for banishing from Ireland.

<http://nationalzoo.si.edu/Animals>

Sharks and Cancer

Sharks apparently are the only animals that never get sick. They are immune to every type of disease including cancer. Sounds great, but this statement found on a popular science fact website is unfortunately false. Researchers at George Washington University Medical Center in Washington, D.C., reported they have documented more than 40 cancerous and benign tumors in sharks and their close marine relatives, including skates and rays. Three of the tumors were chondromas—tumors of cartilage—in sharks. So where did this "fact" originate?



Sharks do not have bones. They have a cartilaginous skeleton. There are factors within animal cartilage which may stop new blood vessels from forming—a long-standing strategy for retarding the growth of cancerous tumors. But sharks' cartilage is no different than humans' cartilage. Yet there is a major market for cancer fighting products. This includes freeze-dried shark cartilage pills.

"People read on the Internet or hear on television that taking crude shark cartilage extract can cure them of cancer, and they believe it without demanding to see the science behind the claims," said Gary K. Ostrander, a research professor in the departments of Biology and Comparative Medicine at The Johns Hopkins University. "This shows how the electronic media has increased the potential harm of pseudoscience."

<http://www.science-facts.com>

<http://www.sciencedaily.com/releases/2004/12/041201082202.htm>

http://news.nationalgeographic.com/news/2003/08/0820_030820_sharkcancer_2.html

http://www.cancer.org/docroot/NWS/content/NWS_1_1x_Sharks_Get_Cancer.asp

Need another reason not to smoke?



Irfan Rahman, Ph.D., associate professor of Environmental Medicine and an investigator in the University of Rochester's Lung Biology and Disease Program, discovered that the 4,700 toxic chemical compounds in cigarettes and in cigarette smoke wipe out a gene that plays a vital role in protecting the body from the effects of premature aging. Without this gene we not only lose a bit of youthfulness—but the lungs are left open to destructive inflammation and diseases such as chronic obstructive pulmonary disease (COPD) and lung cancer.



"You can be 45 years old and look great on the outside, but if you are a smoker or former smoker, your lungs can easily be 60 years old because of the chemical assault," Rahman said.

SIRT1, the gene Rahman discovered, plays a pivotal role in the puzzle. It belongs to a class of genes that regulate chronic inflammation, cancer, and aging. When SIRT1 is highly active, or over-expressed in mice, worms and fruit flies, their life spans are greatly increased. When the SIRT1 gene was studied in humans, people who smoke had less active SIRT1, causing their body to age.

http://www.sciencecodex.com/cigarettes_leave_deadly_path_by_purging_protective_genes

The truth about cats and dogs



Non steroidal anti-inflammatory drugs have been developed to provide relief from canine arthritis, a painful degenerative joint disease that affects one in five adult dogs. As many as one in 200 cats have feline diabetes. Today, they are successfully treated with daily injections of insulin products designed especially for animals. A new technique in open heart surgery to correct subaortic stenosis (a narrowing of the aorta), which had been performed on children with this congenital heart defect, has been successfully adapted by veterinarians to extend and enhance the lives of dogs with this common heart abnormality. Veterinarians are adopting minimally invasive procedures such as laparoscopic and arthroscopic surgery to view, diagnose and treat health problems in animals. This method, which results in substantially less recovery time, involves making only small incisions in the animal's skin and muscle into which tiny instruments, a lens and a light source are passed. Animal contact lenses are now available for companion and service animals that have suffered eye injuries. The lenses ease the pain and promote healing of eye wounds—giving aging pets a new lease (or leash!) on life.

<http://www.fbresearch.org/survivors/truth.htm>

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