



Have fun and learn!

Don't you want to improve your technical English skills & comprehension? Then test your understanding by reading below, and then use the 'Questionnaire link' to answer questions, which are based on these texts. Please send your answers ⇨ Mr. 'H', LTE News Editor.

Medical Devices used in treating Heart Diseases & its Ailments – Part 2*

*Part 1: LTE - 24. Jan. 2008, Vol.7 – Be advised, some questions in this month's LTE 'Questionnaire' will refer to back to that issue's "Introduction – The Human Heart."

The Artificial Pacemaker

This medical device uses electrical impulses, delivered by electrodes contacting the heart muscles, to regulate the beating of the heart.



An early Pacemaker (see: scale in cm)

The primary purpose of a pacemaker is to maintain an adequate heart rate, either because the heart's natural pacemaker is not fast enough, or there is a block in the heart's electrical conduction system.

Modern pacemakers are programmable, allowing the cardiologist to select the optimum pacing modes for individual patients.

The development of the transistor led to a first clinical implantation into a human in 1958 at the Karolinska University Hospital in Solna, Sweden. By 1970, the lithium-iodide (also: lithium anode) cell batteries, which were designed by Wilson Greatbatch (USA), became the standard for future pacemaker designs.

Defibrillators

Fibrillation is the rapid, irregular and unsynchronized contraction of the muscle fibers of the heart. Two major classes of fibrillation are *atrial* & *ventricular*

fibrillation as in the names of the two different heart chambers. The Defibrillator treats these, as well as life-threatening cardiac arrhythmias and pulseless ventricular tachycardia thru delivering a therapeutic dose of electrical energy to the affected heart. By terminating arrhythmia, it allows normal sinus rhythm to be re-established by the body's 'natural pacemaker', in the sinoatrial node of the heart.

Today, **Automated External Defibrillators (AED)** are standard medical devices, which can be purchased for home use and can be observed at all major transportation hubs. **Implantable Cardioverter Defibrillators (ICD)** devices of about the size of a pager can be placed below the collarbone!



Portable AED Defibrillator

Data Sources:

1. Texas Heart Institute
2. "Biological Sciences"; Prof. William T. Keeton, Cornell University, NY
3. Wikipedia
4. New York Times
5. American Heart Assoc.

Check your understanding on the above text & chart.



If you click on the LTE Newsletter's 'Questionnaire link', you will find questions to answer. Then please send your answers to Mr. 'H'. We look forward to helping you to improve your technical English skills!

Round-the-World Life Science News & Updates

Life Science/Medical Research

David Blaine, Magician: This Time, He'll Be Left Breathless, NY Times, April 22, 2008

As a doctor monitored his heart and his blood and breathing, David Blaine filled his lungs with pure oxygen and prepared to hold his breath - for 16 minutes, he hoped. Mr. Blaine is a famous magician, but he insisted that this was no trick.

He was training to break the world record for breath-holding, a logical enough step in his other career. As a self-described endurance artist, he'd spent 35 hours atop a 105-foot pole and survived a week buried in a coffin. He'd fasted for 44 days in a box suspended over the Thames, a nutritional experiment that was written up in The New England Journal of Medicine (with Mr. Blaine listed as a co-author).

This breath-holding experiment, conducted last week at a swimming pool on Grand Cayman Island, was being run by Dr. Ralph Potkin, a pulmonologist in Los Angeles who is a researcher trying to understand the human propensity for going without air.



David Blaine in the pool

Food & Beverage

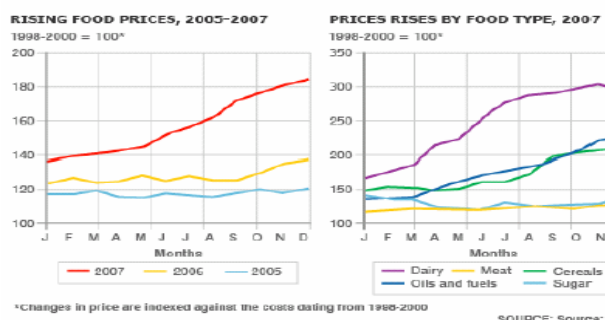
Worldwide Food Crisis? Institute for Food Technology Newsletter, April 9, 2008

Increasingly higher food commodity prices are contributing to social unrest, especially in emerging and developing countries. In those countries, the food-related expenditure of the poor is much larger as a share of household expenditure than for other income groups.

According to a presentation by Robert Zoellick, President of The World Bank, food prices have soared recently to all time highs. Since 2005, the prices of staples have jumped 80%. Last month, the real price of rice hit a 19-year high; the real price of wheat rose to a 28-year high and almost twice the average price of the last 25 years.

The cost of food: facts and figures

Explore the facts and figures behind the rising price of food across the globe.



REACH Q&A sessions and update

The Cosmetics & Toiletries' REACH Question & Answer Round Table with Dr. Annelie Struessmann, Technical Director CONUSBAT & REACH 'Only Representative' is now online.

Click [⇨ C&T.com | Reach Roundtable](#)

If you'd like to share this LTE Newsletter with friends and colleagues, feel free to forward this issue and invite them to subscribe to receive the next issue on their own.



If you'd like to share this LTE Newsletter with friends and colleagues, feel free to forward this issue and invite them to subscribe to receive the next issue on their own.

Mr. 'H' says: Don't let language be a barrier to your success!

CONUS Business, Advice & Training

D: Kruppstr. 18, 52072 Aachen, Tel. +49 241 81987 / Fax: +49 241 81928
NL: Spinnewiel 18, 1252 DB Laren, Tel. +31 35 5435911
USA: 269-10 Grand Central Pkwy., NYC, NY 11005, Tel. 718 279 4025

www.conusbat.com
Copyright 2008 - CONUSBAT