

By PHILIP S. CHUA, M.D., FACS, FPCS

THE industrial age has gifted the world with great advances in science and technology. However, we, humans, have neglected to prevent the expected adverse side effects on our environment of this quantum progress. As a result, we have contamination of the air we breathe (industrial pollutants), the water we drink (heavy metals), the food we eat (pesticide residues), which cause debilitating and deadly diseases; and destruction of the ozone layer, which increases our risk for the development of cancer, etc.

One latest study shows that the umbilical cord blood samples of newborns tested positive for a variety of toxic substances, obviously inhaled or ingested by the mothers throughout the pregnancy.

Our rivers, lakes and oceans are used as "dumps" for garbage and toxic chemicals, destroying water life and coral reefs. Our irresponsibility and cruelty to our environment is ushering in global warming and the melting of the ice caps, resulting in grave weather changes and tsunamis around the world.

Each year, about 64,000 people in the United States who die prematurely from cardiopulmonary diseases associated with air pollution, according to the U.S. National Resources Defense Council.

Air pollution constricts blood vessels and may even trigger heart attack. Global warming and air pollution are linked by combustion of fossil fuels. The burning of natural gasses, oil, coal, lead to "greenhouse" gasses and a variety of harmful air pollutants, like ozone, sulfur dioxide, nitrogen oxides and airborne particulates. All these cause grave effects on health, such as respiratory, cardiovascular and metabolic illness, and even cancer of the lungs and other organs.

Ozone in the stratosphere (upper atmosphere) is a significant factor that makes life on earth possible. Chemical pollution caused by industry and by us, as individuals, erodes the ozone layer. With the depletion of the ozone belt that shields the earth from excessive ultraviolet rays from the sun, there will be increased health problems for us and disruption of the sensitive terrestrial and aquatic ecosystems. While ozone (a form of oxygen with three atoms instead of the normal two) is protective in the stratosphere, it is most toxic near ground level, forming acid rain and photochemical smog that are dangerous to health.

Governments around the world, especially those of the rich nations, must control of the pollution in the environment caused by the \$1.5 trillion global chemicals and related industries and protect the health and well-being not only of the 6,861,895,300 plus people around the world but of our friendly planet earth, the only home we've got.

The use of antidepressant during pregnancy leads to 68 percent higher risk for miscarriage, according to a new study. Those on this drug are advised to discuss with their attending physician an alternative form of therapy. Some 23 percent of pregnant women on antidepressant medication discontinue its use on their own for fear of harm to their child.

Time for trivia

Why are golf balls dimpled?

Dimples in golf balls minimize the drag (reduces the eddies that drain the ball's energy on flight), enabling them to travel further and faster than a smooth ball would. A smooth ball can travel up to 70 yards (63 meters), but a golf ball can zoom up to 300 yards (275 meters), more than four times farther.

Does water in different hemispheres drain differently?

In the northern hemisphere, water swirls counterclockwise as it drains out from a perfectly symmetrical basin, tub or toilet bowl. In the southern hemisphere, it would swirl clockwise. This is caused by the Coriolis effect (water or air movement affected by the Earth's rotation). Exactly on the equator, the water would not even swirl, but drain straight down.

What really is the speed of sound?

The speed of sound varies on the medium in which it travels. Factors affecting it are air temperature, pressure and purity of the medium. At 32 degree F (0 degree C), the speed of sound is estimated between 740 to 741.5 miles (1191.6 to 1193.22 kilometers) per hour. The warmer it is, the faster the sound travels. Sound velocity is faster in water than in air, and even speedier in iron and steel. Traveling in air for five seconds, sound will travel the same distance under water in one second, and in steel in 1.3 of a second.

When will the sun die?

The earth would be a frozen ball without sunlight. The sun is the closest star to earth, about 92,955,900 miles (149,598,000 kilometers) away. It is made of 73.46 percent hydrogen, 24.85 percent helium, 0.77 percent oxygen, and traces of carbon, iron, neon, nitrogen, silicon, magnesium, sulfur and other. The center of the sun is about 27 million degrees F (15 million degrees C). The sun, which is about 4.5 billion years old, has a calculated longevity of 9.5 billion years, will burn out all of its hydrogen fuel into helium in about five billion years from now.

During this course, the sun will change its color from its present yellow dwarf size into a huge red giant, its diameter extending beyond Venus, and the orbit of Earth, burning it into a cinder.

Is there a U.S.\$100,000-bill?

Yes, the largest denomination currency in the United States is \$100,000 bill, introduced on Dec. 18, 1934 which, today, is worth \$1.6 million. This denomination is actually a Gold certificate note, which bears the picture of President Woodrow Wilson, used exclusively for official transaction between Federal Reserve Banks, and not circulated in public. Sorry, you can't get one. Also not available today (since July 14, 1969) for general public use are following denominations: \$500, \$1,000, \$5,000 and \$10,000, which were government issues in 1861 and 1878. All these denominations have appreciated by about 12.7 times of their original value.

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