

## sci-tech.

**Soon, rocket-assisted pills to help ailing human gut**

Deyu Li of Vanderbilt University in Nashville, Tennessee, and colleagues have developed a more forceful drug release system that comprises of a capsule with a drug-ejecting piston that is driven by a tiny solid-fuel rocket motor. The researchers conducted in-vitro tests of 18 different designs to find that 20 milligrams of fuel successfully released all 16 milligrams of a drug.

# HALF AN HOUR OF CELLPHONE USE A DAY INCREASES BRAIN CANCER RISK

A landmark 10-year study undertaken by the World Health Organisation has found that people who speak on their handset for more than half an hour a day for over 10 years are at risk of brain cancer...

Cellphone users worried about getting cancer aren't off the hook yet. A major international study into the link between cell phone use and two types of brain cancer has proved inconclusive, according to a report due to be published in the *International Journal of Epidemiology* today.

A 10-year survey of almost 13,000 participants found most phone use didn't increase the risk of developing meningioma – a common and frequently benign tumour – or glioma – a rarer but deadlier form of cancer.

## LONGER CALL TIMES INCREASE CANCER RISK

It found no increased risk of glioma or meningioma tumours after 10 years of using a mobile phone, although it found "suggestions of higher risk" for the heaviest users.

Given that the heaviest users in the study talked an average of half an hour per day on their phones, a figure which is not heavy by today's standards.

The heaviest users who reported using their phones on the same side of their heads had a 40 per cent higher risk for gliomas and 15 per cent for meningiomas, but the researchers said "errors" prevent making a causal link.

"The study doesn't reveal an increased risk, but we can't conclude that there is no risk because there are enough findings that suggest a possible risk," the study's chief author, Elisabeth Cardis

Among the factors that weren't examined were the effects of using handsfree devices during calls or the risk of having phones close by while not making calls – such as in a pocket, or next to the bed at night.

The authors acknowledged possible inaccuracies in the survey from the fact that participants were asked to remember how much and on which ear they used their mobiles over the past decade.

The authors said further investigation is necessary before they can conclude with certainty that there is no link between phone radiation and brain cancer, partly because people's usage has changed considerably since the start of the study in 2000.

## FUTURE STUDIES WILL LOOK AT RISK IN CHILDREN

Scientists are also planning to examine whether phone use increases the risk of tumours in the ear's acoustic nerve and the parotid gland, where saliva is produced. A separate study will look into the effects of cellphone use on children,

who are believed to be more susceptible to the effects of radiation. The \$24 million study was compiled by researchers in 13 countries where scientists interviewed 12,848 participants, of which 5,150 had either meningioma or glioma tumours.

Network operators and handset companies had keenly anticipated the results, which could have threatened the development of their business. There were an estimated 4.6 billion phone subscriptions at the end of last year, according to the International Telecommunication Union.

In a statement Sunday, the Mobile Manufacturers Forum welcomed the study. "The phone industry takes all questions regarding the safety of phones seriously and has a strong commitment to supporting ongoing scientific research," the industry group said.

AGENCIES

## MORE RESEARCH NEEDED

The older varieties of cell-phones were more likely to cause damage. However, the newer varieties are less likely to emit the tumour-causing radiations. Though it is obvious that the radiations can cause damage, the extent of it is yet to be determined because most of the studies have been inconclusive.

A few years back, a study said that three to four hour of everyday cellphone use over a period of ten years will cause brain tumour. However, most of it has been speculation. The causes of most cases of tumour



and similar disorders are genetic, and hence pre-determined. For an outside stimulus to cause such damage, the brain would have to go to a series of reactions.

Nonetheless, it is advisable to use earphones that can reduce the risk to almost zero. And the lesser the usage, the lesser you will be in touch with a heated communication device, which is not a bad thing at all.

— Dr Keki Turel,  
Head of department of neuro-surgery, Bombay Hospital



## website

## PLANK.LY

This site is a utility that lets you track question and answers that you may want to ask someone on the microblogging site *Twitter*



A model shows off KDDI's new 2010 summer models of mobile handsets during their press preview in Tokyo on May 17, 2010. KDDI has introduced a total of 13 waterproof cell-phones for the Japanese market