

THE SCAN

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Courtesy of: Medical Arts Radiology

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Did You Know?

- A recent national poll showed that 89 percent of American women say they believe that mammograms are vital to their health.

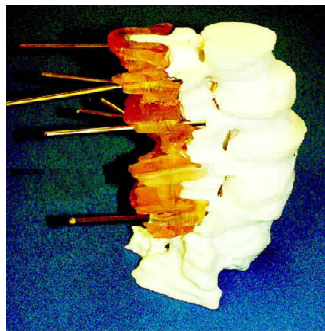
- A study by the National Bureau of Economic Research proved Americans who live in areas with greater access to medical imaging, like MRI and CT scans, live longer than those who don't.

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Body Parts - Made to Order!

A technique that has long been used to produce engineering prototypes is now putting 3-dimensional versions of CT (computerized tomography) scans into doctors' hands. Called "rapid prototyping", or "3D printing" it makes a



operations.

The major benefit of improved planning is usually a dramatic reduction of surgery

time. That leads to a reduction of blood loss and, since surgery time becomes shorter, less need for anesthesia. The process also allows precise implants to be created before a single scalpel incision is made.

precise model of a patient's anatomy available to surgeons which vastly improves the planning of complex

time. That leads to a reduction of blood loss and, since surgery time becomes shorter, less need for anesthesia. The process also allows precise implants to be created before a single scalpel incision is made.

The models are produced on a 3D laser printer, like the machine shown here. But because the process can take up to several



hours, it is not yet suitable for emergency procedures.

CT Scans vs X-Ray Study

The results of a large scale study sponsored by the National Cancer Institute were published not long ago in the *New England Journal of Medicine*. The National Lung Screening Trial



recruited 53,454 participants aged 55 to 74 who had a history of smoking at least 30 packs a year and had no symptoms or history of lung cancer.

The participants were imaged once a year for three years with either a standard X-ray or low-dose helical CT.

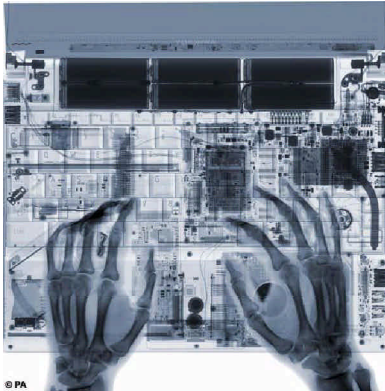
Results showed that heavy smokers who were screened for lung cancer with low-dose helical CT (computed tomography) scans had a 20

percent lower mortality risk than those screened with standard X-ray. Experts suggest that some issues need to be addressed before there is any major policy changes on CT lung cancer screening for heavy smokers. One of them is dealing more effectively with false positives.

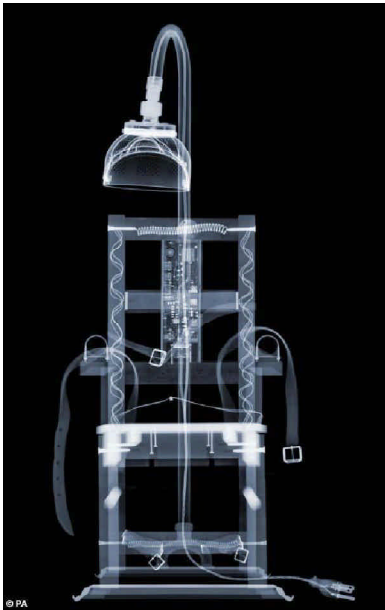
Whacky X-rays



Hi-tech Sneakers



Computer Keyboard



Last Rest!

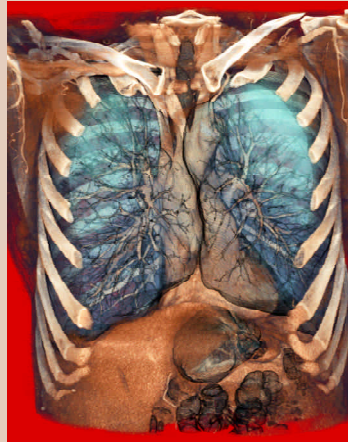


CT Scans-Another Tool to Detect COPD?

Chronic obstructive pulmonary disease (COPD) is a major cause of death in heavy smokers, yet it still remains substantially underdiagnosed. But that may soon change!

According to a study published in *The Journal of the American Medical Association* Dutch researchers have discovered that computed tomography (CT) scans, usually used for lung cancer screening, may also help physicians detect COPD in smokers at an early stage.

1,140 men, all current and former heavy smokers underwent low-dose inspiratory and expiratory CT scans obtained for lung cancer screening of



men took part in an ongoing lung cancer CT screening trial which ran from July 2007 to September 2008. Researchers found that “CT scanning had a sensitivity in COPD diagnosis of 63% and a specificity of 88%”. The participants also underwent lung function tests that are standard screens for diagnosing COPD.

The investigators wrote, “because smokers die not only from lung cancer but also from COPD and cardiovascular disease, the rationale for evaluating lung cancer screening CT scans for additional information may prove important.”

More Evidence that Mammograms are Vital to Women’s Health.

Mammography has helped reduce the breast cancer death rate by more than 30 percent since 1990. Every major medical organization with expertise in breast cancer now recommends that women get annual mammograms starting at age 40.



information they need to make informed decisions and to protect and enhance access to life-saving mammograms.”

According to a recent poll of 1,000 American voters conducted for the *American College of Radiology*, nearly 9 out of 10 women reported that having a regular mammogram gave them a feeling of control over their own health care. Nearly 90 percent of women who had a mammogram considered them important to their health and well-being.

Debra L. Monticciolo, MD, president of the Society of Breast Imaging said “Mammography is the best tool available to screen for breast cancer. At present, there is nothing to replace it. We need to make sure that women get the