

NEW TECHNOLOGIES IN MEDICINE

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Medicine borrowed sonar technology from the military and used it to identify body organs and problems without surgery. This sonar technology, called ultrasound, could detect gallstones and prostate-gland malfunctions and had many other uses. It's most wide-spread use was in obstetrics, where it was used to monitor almost half of all pregnancies and deliveries by 1979.

Computerized Axial Tomography is an imaging device closely related to ultrasound, computerized axial tomography (CAT) scanner takes many X rays and combines them to provide a cross-sectional picture—tomograms—of the patient's body. Computers then put the millions of bits of information together to form a picture on the computer screen. Instead of an uncomfortable experience such as pneumoencephalography, a CAT scan can provide a clear picture inside the body.

A physicist's tool—nuclear magnetic resonance (NMR) or magnetic resonance imagery (MRI)—can detect differences between healthy tissues and some kinds of cancerous tissues. In 1977 its designer, Dr. Raymond Damadian, hoped it could also treat cancer. High-powered microscopes capable of magnifying nerves and blood vessels up to forty times, scissors with tiny blades, miniature forceps, and surgical thread so thin it was nearly invisible to the naked eye are used to reattach severed limbs in feats rarely possible before the 1970s.

The overall price tag of the new technology also stirred debate. Dr. Seymour Perry, the acting head of HEW's National Center for Health-Care Technology, commented, "Americans have long had a love affair with technology.... Our aim should be to make sure that medical technology is our servant and never becomes our master."

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