

## Happiness Through Health

# New X-Ray Machine Lets Doctor See Heart Beating, Blood Flowing

By Otto McClarrin

What promises to be the ultimate X-ray machine, one that could find tiny cancers or heart defects long before they cause trouble, is now being built at the giant Mayo Clinic in Rochester, Minn.

This advanced X-ray scanner that for the first time can show human organs, heartbeats, and blood flow in three-dimensional motion, is a \$5 million, seventeen-ton, doughnut-like device that will whirl 28 X-ray machines around a patient to make thousands of images a second. The images will be fed to a computer to reconstruct any part of the body. In a period of a few seconds, with no more X-ray exposure than a few chest X-rays, the machine will electronically slice open any part of the body or any organ in any direction, transfer a series of images to magnetic tape and display them on a TV-like screen for immediate or leisurely examination.

The picture will show the organ in three dimensions almost as if a surgeon had removed it. The machine can also display the organ's interior, as if the surgeon had then cut it open.

Such organs as the heart, blood vessels and lungs will

be seen at work, with blood and oxygen flowing through them.

The scanner, the brainchild of Mayo Clinic scientists and engineers, has been in the works for more than three years and was first thought of nearly twenty years ago.

The scanner, with a seventeen-ton X-ray equipped revolving gantry, will help doctors carry out such studies as these:

- Detecting coronary artery disease, including narrowing or clogging of arteries;
- Diagnosing complex congenital heart defects;
- Furnishing accurate information on the extent of heart

muscle damage after a heart attack;

- Pinpointing potentially fatal aneurysms, balloon-like weaknesses in vessels that can kill if they rupture, but which can be surgically repaired in most cases if detected in time;
- Locating tumors, especially hard-to-find growths that affect vascular anatomy or blood flow within an organ;
- Isolating and identifying lung cancer tumors one-fifth inch in size more reliably than can be done now, thereby improving chances of successful radiation or surgical treatment.

Animal and human trials of the \$5 million device, known as a dynamic spatial reconstructor, will be car-

ried out for the next three years, according to clinical researchers.

No date has been set for routine clinical use of the scanner, but Dr. Erik Ritman, a physiologist and chairman of Mayo's biodynamics research unit, said people with certain types of heart problems, such as calcification or artificial valve implants, might be scanned experimentally by the end of the year.

The scanner's gantry is designed to hold up to 28 X-ray "guns" and the same number of television image intensifiers, along with TV cameras to capture the multiple view X-ray pictures in a hundredth of a second.

The images shown by the scanner are life-size and three-dimensional, such as a doctor would see if he opened a patient and held an organ in his hand. The device allows medical investigators to examine single organs like the heart in detail and at their own pace.

The director of the project, which was funded mainly by the National Institutes of Health, is Dr. Earl Wood, a radiologist. Other key members of the team include Dr. Riunan and Richard Robb, a computer scientist.

## VISTA

(Continued from Page 9)

VISTA volunteers Rex and Neva Erickson have helped them receive property tax refunds that they did not previously know were available.

"We came down from Michigan and are entering our ninth month as VISTAs with the Watershed," says Rex, explaining that the Watershed Agency is a community outreach service founded by Rev. Hezekiah David Stewart and his wife, Rev. Marsha Stewart, ministers at the Mount Nebo African Methodist

Episcopal Church in College Station. Rev. Marsha Stewart is director of the Watershed, which serves community needs in multifarious ways.

Since their arrival, the Ericksons have established a monthly community newsletter, *The Paper Works*, which reaches every household in town. They set up a general education diploma (GED) course that thus far has enabled 29 people to pass state high school equivalency exams, and they have established a

library. "So far, eighty children have taken out cards," says grant-writer Neva, noting that a \$1,000 Winthrop Rockefeller Foundation grant will provide the library a part-time employee.

Over the holidays, the Erickson team will, according to Rex, "be helping elderly citizens who call us with problems, such as no money to pay utility bills. We also do some hauling for seniors," he continues, "and help the Watershed run a large thrift shop that sells clothing and appliances, charging ten cents for children's things and 25¢ for adult apparel."

In every case, VISTA and Older American volunteers will brighten the holidays of thousands of Americans. But it is not only once yearly that their service makes a difference; the spirit and accomplishment of volunteers serving in ACTION programs extend throughout the nation year-round.

Senior Companion and Foster Grandparent volunteers must be at least sixty years old. The programs are designed for low-income persons but

annual income guidelines vary from state to state. Volunteers receive a modest, tax-free stipend to cover the cost of volunteering, a transportation allowance, a hot meal where possible, insurance while serving, and an annual physical exam.

Anyone retired and age sixty or over can be a RSVP volunteer. Retired Senior volunteers serve without compensation, but may be reimbursed for expenses such as transportation. Insurance protection is provided volunteers while on assignment.

A VISTA volunteer must be a resident of the U.S. or one of its territories and in good health. A physical disability does not disqualify one from VISTA service. For more information about VISTA programs, contact 1-800-424-8580, ext. 93, toll free.

Persons wishing further information on Foster Grandparent, Senior Companion, or RSVP volunteer programs may write: Older American Volunteer Programs, ACTION, Washington, D.C. 20525. Include a phone number where you can be reached.



## KEEPING THE DREAM ALIVE

By Don McEvoy

Recent news reports tell us that Jesse

Manhattan Bank president Rockefeller has been warmly received by South American business and political leaders as he has traveled around the hemisphere assuring them that things are going to be better for them under the new administration of President Reagan.

That's fine. Let's all hope that trade balances are made more equitable, that commercial relationships are strengthened and that inflation is brought under control. The monetary stability of the world is of great importance to us all.

But the basis on which Rockefeller made his encouraging forecast is chilling. What apparently most heartened his Latin American hearers was the promise that the incoming administration could be counted on to reverse the current U.S. policy of linking political and financial concessions to domestic human rights policies and practices in the countries with which we do business. That seems to have been what really turned them on.

If these reports are true, then every American citizen, liberal and conservative, should be concerned. The protection and extension

of human rights must be the keystone of this country's foreign policy, whether foreign or domestic.

America is a great nation. But its greatness lies not in its economic prowess, its nuclear arsenal or any other material category which could be mentioned. The true greatness of this nation is in its moral commitments. For the more than two centuries of our national existence, the pre-eminent gift of America to the world has been a dream of freedom and a concept of human dignity. We haven't always lived up to that promise, not by any means, but that is what we have stood for. That is what the other nations of the world have looked to.

My visit to the Soviet Union this past summer and extensive meetings there with dissidents in that oppressive society reconfirmed my belief that the human rights emphasis of the past years is America's primary contribution to the family of nations. To a person, the dissidents expressed their appreciation of the concern expressed by the American people and the American Government. Their most fervent plea was that we keep the pressure on their leaders in every possible way.

## MISPLACING OUR PRIORITIES

The beleaguered masses of South America depend on that American lifeline, and we simply cannot permit the centrality of human rights concerns to be compromised. To do so would be to default on our own integrity as a people.

(Don McEvoy is Senior Vice President of the National Conference of Christians and Jews. The opinions expressed are his own.)

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## How to get the most from your bank

By Fred Tate

Beginning December 31, a new service will be offered at many banks and savings and loans: checking accounts which earn interest. This new service is called NOW (Negotiable Order of Withdrawal) accounts and is almost identical to the automatic transfer accounts which some banks have been offering since late 1978.

Both types of services offer the highest interest rate allowed by the federal government for this type of account. Similar services are available at some credit unions and brokerage firms.

With NOW and automatic transfer accounts, a minimum daily balance is often required to avoid service charges. Individual banks determine that minimum. Customers can also avoid service charges at some banks by maintaining an average monthly balance above a certain level.

Those who do not maintain the minimum balance may still be able to earn interest above the cost of the service charges. The break-even point depends upon the average balance and the number of checks paid during the month.

Banks will continue to offer regular checking accounts. In non-interest paying checking accounts, there is usually a smaller minimum balance requirement to avoid service charges. Some people may prefer this kind of checking account.

Also, regular passbook and statement savings accounts will still be offered for people who want to keep their savings funds separate from their checking.

With NOW accounts and automatic transfer accounts, you never have any funds lying idle. And in these days of inflation, idle funds don't make much sense. These two accounts make it possible for you to say, "All of the money I have in my bank is earning interest."

Fred Tate is vice president and city executive for Wachovia Bank and Trust Company in Elizabethtown. He has been with the bank since 1963.



Fred Tate

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