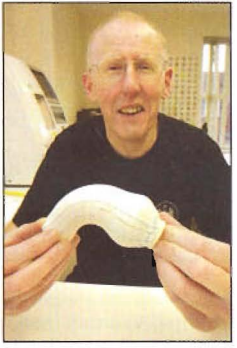
The engineer who saved his own life with polyester



Engineer Tal Golesworthy was always a practical man. So when he was diagnosed with a rare and potentially fatal genetic condition known as Marfan syndrome, and doctors told him he would need major surgery, and would then have to take anti-coagulant drugs for the rest of his life to prevent blood clots, he decided there had to be a better way – and set about inventing one.

Marfan syndrome can cause abnormal growth of limbs, but, crucially, it also weakens connective tissue. The result is that the aorta, the body's main artery, gradually widens under the burden of carrying oxygenated blood to the body – and in some cases splits, causing instant death. The conventional treatment is to cut out the damaged section of aorta, and replace it with a piece of tubing. "I just thought the operation sounded awful," Golesworthy, 54, from Tewkesbury in Gloucestershire, told The Times. "The doctors were being asked to do an engineering job when they weren't engineers." His solution was not to replace the aorta, but to cover it with a tiny polyester sleeve (right) to prevent it expanding. This would require a far less invasive operation, and would eliminate the need for patients to take anti-coagulants for the rest of their lives. In 2004, Golesworthy became the first person to undergo his treatment, and the operation proved so successful that it is now being made available to others with the condition (there are up to 12,000 in the UK alone). Nineteen such operations have so far been successfully carried out at Royal Brompton Hospital in London.