



*Keeping trim without the effort of exercise: the Arasys units, already used in beauty salons, could be put to work in hospitals to tone the muscles of bedridden patients*

## Fighting the flab without sweat

A SCIENTIST has invented a machine he claims will keep people trim without the need for exercise and could help reverse muscle-wasting conditions such as multiple sclerosis, writes Sean Hargrave.

The Arasys exerciser unit (fARADic SYStem), developed at London's South Bank University Technopark, is already being sold to health clubs and beauty salons for those who want to lose weight without putting in the effort.

Now the machine's designer, Gerry Pollock, is searching for hospitals and clinics that could help him test the system on disabled patients who are unable to exercise. He believes Arasys could prevent the muscle wastage common among those confined to bed or a wheelchair.

The machine flexes muscle by passing tiny electric currents through nerve endings at either end of muscle

groups. This makes the tissue contract for two seconds, as if it were being put through a gym workout.

A typical session with the machine lasts 17 minutes. Pollock says this is because people can feel tired if they have a longer stint and do not notice as much benefit as from a shorter session. He claims each treatment is the equivalent of doing 300 sit-ups and that three sessions are all that are needed until weight loss can be measured.

The Arasys system can treat four sets of muscle simultaneously. In cosmetic use these are normally the stomach, bottom, thighs and calves. In medical use, this would change to exercise the parts of the body a patient cannot move.

Pollock, a chemist, claims his technology is superior to machines that make similar claims of effortless

weight-loss because of the electric wave form he designed. He says his electronics expertise, that was used in the development of the first pacemaker, ensures the muscles are exercised at the correct speed for the optimum duration.

This involves controlling electrical impulse to avoid suddenly jerky muscle movements. To achieve this, Arasys generates smooth rather than spiked electrical signals so that the muscle is stretched in a manner more similar to way it behaves during real exercise.

"We only discovered how long and intense the signal should be through trial and error during the system's five-year development," says Pollock. "Just passing any old electrical signal across a muscle simply doesn't work."

Besides helping the disabled, Pollock believes his machine could be used to return strength to the elderly

and those who suffer from multiple sclerosis.

His niece, Angela Sylvester, a qualified nurse, regularly uses Arasys on four ME sufferers who are unable to exercise. She claims they all report they feel stronger.

"One of the ladies used to be a fitness instructor, but because of her condition she cannot work out any more," says Sylvester. "she benefits from being able to stay trim and exercise muscles that would otherwise be hardly used."

Pollock hopes his invention will soon be put to its original healthcare use and is keen to talk with clinics and hospitals that believe they could help him tailor the system for individual conditions.

"I need to talk with experts so that we can decide if the present electrical signal is appropriate or if it needs changing," he says.