Exercise Key to Healthy Living as We Grow Older

British Association Festival of Science

IF YOU WANT to live longer and stay healthier, then get out of your chair and start exercising. This is just as true for older people and provides a way to delay the impairments that can come in later life and even reverse them.

The message on exercise is not new but a fresh analysis from Dr Gladys Pearson of Manchester Metropolitan University is perhaps one of the most in-depth studies yet attempted to show how exercise and diet helps the older population to stay healthy.

She presented her comprehensive analysis yesterday at a session on the closing day of the annual British Association Festival of Science, this year taking place in Liverpool.

"Our aim was to study how to use nutrition and exercise in older people to try and reverse some of the negative aspects of ageing," Dr Pearson said. She undertook a pilot study of 78 subjects with funding from the UK body that promotes age-related research called Sparc, Strategic Promotion of Ageing Research Capacity.

"We were trying to look at the type of exercise and the intensity of the exercise and at the social aspects of the routine to assess how likely they were to participate in the experience," Dr Pearson said.

The 78 participants were healthy, independent-living and aged from 65 and 92. They were randomly assigned to five groups with variables including involvement in low, medium and high levels of exercise and whether they took nutritional supplements in association with their exercises.

The low level of exercise taken by one group once a week and using exercise machines found in any gym would hardly be enough to make a person perspire, while the high level of exercise was taken twice a week and involved high-intensity resistance training, Dr Pearson said.

The supplements were no more than a carbohydrate drink before and during exercise, taken to provide energy for the activity, and a protein source taken within 30 minutes after exercise. This provided the body with amino acids and other nutrients needed by the body to repair the "micro tears" in muscle tissues after any exercise, Dr Pearson said.

She measured an enormous array of factors before, during and after the eight to 12 week programme. These ranged from skeletal muscle mass, body mass index and muscle tendon strength, through hormone levels and levels of inflammatory substances called cytokines in the blood stream. "We are really the first to do this kind of work in older people.

"We also did functional tasks such as how quickly they could get up from a chair and cross a room or how long to get up if lying down.

"We did a lot of postural balance work. We did a lot of work on challenging their balance, for example standing on one leg and Tai Chi."

The results were really quite striking, she believes. All groups showed improvements, but those who did best were the groups doing low to moderate exercise and who took the carbohydrate and protein supplementation. These did better than those who did the exercise but did not take the

supplements.

There were improvements in skeletal muscle mass of up to 30 per cent, improvements across the board in functional tests and the inflammatory cytokines "were greatly reduced".

Those undertaking the heavy exercise also saw improvements, Dr Pearson said, but these were not as striking, showing that regular low to moderate exercise was sufficient to improve mobility, reduce the risk of falls and promote activity in older age.