HEALTH BENEFITS OF EXERCISE REPORT

A Lifetime Of Running May Be Good For Your Tendons

Endurance exercise over the long term is well recognized for its ability to counteract the normal deterioration of cardiovascular function and protect against premature death. A study in the Dutch journal *Age* looked at the impact of endurance training on connective tissue and the accumulation of advanced glycolated end products (AGE's), which are associated with aging and lifestyle-related disease.

The study compared four groups of healthy men, including 15 masters athletes who participated in endurance running, 12 untrained older men, 10 young endurance runners, and 12 young, untrained men. Results showed a lower buildup of AGE in the tendons, and both younger and older athletes had thicker patellar tendons (the tendon that attaches the kneecap to the shinbone) than the untrained men. This data suggests that life-long endurance running could partially counteract some of the aging process in the connective tissues and leads to tendon tissue hypertrophy, which can help lower stress on the tendon and reduce the risk of injury.

Health clubs provide a safe, supportive place for endurance runners to be active especially when the weather prohibits outdoor running.

Aerobic Exercise Improves Mood, Cognition, Quality of Life In Parkinson's Sufferers

A study in the journal *Neurology* set out to assess the effects of aerobic exercise on motor function, cognition, and quality of life in people with Parkinson's Disease. The study also compared the tolerability and feasibility of continuous moderate exercise and interval training (alternating between light and vigorous exercise). However, due to greater adverse effects in the interval group, the study focused predominately on continuous exercise. Participants walked for exercise three times per week for 45 minutes over a six-month period.

The results showed that 81% of participants completed the study, and those who did experienced improvements in aerobic fitness, walking speed, fatigue, depression, and quality of life. This research suggests that walking in a community setting was safe, tolerated well by participants, and improved aerobic function, mood, cognition, fatigue, and quality of life. Health clubs provide a safe, supportive community environment for people with Parkinson's Disease to walk and pursue an active life.

Leisure Time Physical Activity Reduces The Risk Of Premature Death

Physical inactivity has been a major public health issue for some time, but it was not well understood whether vigorous intensity exercise was more beneficial than lighter intensity exercise in preventing premature deaths. A study in *PLoS One* reviewed data on middle-aged men and women aged 40-60 from the City of Helsinki Employee questionnaire. Respondents were grouped into three categories based on their responses: low moderate, high moderate, and vigorous intensity exercise.

The results showed that compared with low moderate intensity exercisers, those who completed vigorous exercise had a lower risk of premature death. A higher volume of physical activity overall was also associated with lowered premature death risk. The authors concluded that, for middle-aged men and women

who participate in some physical activity, vigorous exercise may provide greater health benefits in preventing premature death.

Health clubs provide a convenient, safe space to engage in exercise at all intensities, with most offering low and vigorous intensity group exercise options.

SOURCES

Couppé C1, Svensson RB, Grosset JF, Kovanen V, Nielsen RH, Olsen MR, Larsen JO, Praet SF, Skovgaard D, Hansen M, Aagaard P, Kjaer M, Magnusson SP. Life-long endurance running is associated with reduced glycation and mechanical stress in connective tissue. Age (Dordr). 2014 Aug;36(4):9665. Epub 2014 Jul 5.

Uc EY1, Doerschug KC2, Magnotta V2, Dawson JD2, Thomsen TR2, Kline JN2, Rizzo M2, Newman SR2, Mehta S2, Grabowski TJ2, Bruss J2, Blanchette DR2, Anderson SW2, Voss MW2, Kramer AF2, Darling WG2. Phase I/II randomized trial of aerobic exercise in Parkinson disease in a community setting. Neurology. 2014 Jul 2.

Lahti J, Holstila A, Lahelma E, Rahkonen O. Leisure-time physical activity and all-cause mortality. PLoS One. 2014 Jul 2;9(7):e101548. doi: 10.1371/journal.pone.0101548. eCollection 2014.