

Press release, Monday 11 May, 2020

What impact does self-isolation and home-confinement have on the human body?

[A recent position-point paper](#) by a group of experts published in *European Journal of Sport Science* looks at the impact of sedentarism, i.e. reduced physical activity, on the human body in terms of the muscular, cardiovascular, metabolic, endocrine and nervous systems. The paper informs the reader on the minimum amount and type of physical activity and nutritional intake required, together with other practical recommendations, to preserve health across these systems.

Key points and exercise advice:

- Sedentarism causes a very rapid loss of muscle mass, detectable within two days from the onset of inactivity.
- Avoid prolonged sitting (i.e. >2 hr) and move around the house for 10 min between sitting periods.
- Daily exercise based on a combination of aerobic as well as low to medium-intensity high volume strength training, are likely to offer protection against neurodegenerative changes, muscle atrophy and loss of aerobic capacity.
- Circuit training seems a good form of exercise to achieve these goals.
- Start monitoring your physical activity (smart phone, wearables).
- Strive to achieve > 5,000 steps per day, i.e. walking or running.

Practical nutritional advice:

- It is important to reduce caloric intake by 15-25% of the usual.
- Consume more fresh vegetables, good quality protein sources (fish, poultry, lean meat).
- Avoid refined foods.
- Reducing your meal frequency, regular meals and a long fasting period between dinner and breakfast (i.e. more than 12 hours) may have benefits.
- Consume more energy during breakfast (~ 40% of daily total), less during lunch (30% of daily total) and dinner (30% of daily total).

Full details can be found in the article (currently free to access):

<https://www.tandfonline.com/doi/full/10.1080/17461391.2020.1761076>

Article

[*Impact of Sedentarism due to the COVID-19 Home Confinement on Neuromuscular, Cardiovascular and Metabolic Health: Physiological and Pathophysiological Implications and Recommendations for Physical and Nutritional Countermeasures*](#)

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About the Journal

European Journal of Sport Science (EJSS) is the official Medline- and Impact Factor-listed journal of the European College of Sport Science. The editorial policy of the Journal pursues the multi-disciplinary aims of the College: to promote the highest standards of scientific study and scholarship in respect of the following fields: (a) Applied Sport Sciences; (b) Biomechanics and Motor Control; c) Physiology and Nutrition; (d) Psychology, Social Sciences and Humanities and (e) Sports and Exercise Medicine and Health. The Journal publishes original research as well as review articles of topics of contemporary importance or interest from across the world and can be accessed online at www.tandfonline.com/ejss.

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