

## PRESS RELEASE

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### **Get up! New study reveals average Luxembourger spends half the day sitting**

**Although Luxembourg ranks highly in the EU in terms of physical activity, residents are inactive 12 hours a day on average.**

*In the first objective assessment on physical activity (PA) in Luxembourg, researchers from the Dept. of Precision Health at the Luxembourg Institute of Health (LIH) found that while overall adherence to recommended levels of PA is high, sedentary time is as well.*

In 2021, Luxembourg officially adopted the World Health Organisation's (WHO) guidelines for adult physical activity (PA). These amount to 150-300 minutes of moderate PA and 75-150 minutes of vigorous PA per week. It is common knowledge that PA is necessary and highly beneficial for overall health, and that any kind of PA is preferable to being sedentary. In our modern digital world, high levels of sedentariness are a major issue that all developed countries, including Luxembourg, are struggling with.

In this vein, the Physical Activity, Sport and Health Research Group led by Dr Laurent Malisoux at the Luxembourg Institute of Health (LIH) performed a study to measure how well the nation matches up to the WHO guidelines. Although the WHO has no official guidelines regarding sedentary time, the group measured this as well. They obtained data from roughly 1100 adult participants that wore accelerometers on their wrists for one week as part of the ORISCAV-LUX 2 study on cardiovascular health risk. Accelerometers measure movement and by using them, the group was able to calculate and analyse a variety of metrics related to both PA and sedentary behaviour. The participants were also surveyed about their lifestyles, including whether or not they do sports. The group also split the data up and analysed the results based on age, sex, education, and other parameters in order to understand the demography of PA.

Previous surveys regarding PA and sports have consistently ranked Luxembourg as one of the most active countries in the EU and the data from this study corroborates that. The researchers show that over 98% of Luxembourg residents adhere to the WHO PA guidelines, comparable to Finland or Germany. However, they also show that on average, residents spend over 12 hours a day sitting. These seemingly paradoxical metrics become clear when one looks at the duration of time spent being active. According to the researchers, if only bouts of PA over 10 minutes are considered valid, the proportion adhering to WHO PA guidelines drops to just 25%, meaning that three quarters of residents don't allot much dedicated time to PA. Making things worse, the study shows that more than one quarter of total sedentary time is done in time spans of over an hour, whereas in other EU countries it is around 6 to 10%. In a high income post-industrial economy like Luxembourg where two thirds of the jobs are sedentary, this is perhaps not very surprising. Regarding sex differences, the results show that women perform more low intensity PA and men are more sedentary

yet perform more high intensity PA. Younger people also rank very highly in PA and as one would expect, it decreases as one gets older. However, the study also reveals some interesting stats including that former smokers were more active than people who had never smoked. Dr Paul Collings, lead author of the study, explains that *“this is likely due to multiple reasons, including the fact that smokers who are physically active tend to have greater intention and success in quitting.”* He adds that *“we also know that most smokers quit for medical reasons, which means they may be more likely to engage in PA as part of the clinical management of conditions, or they may have started to prioritise healthier lifestyle behaviours in response to a health scare.”*

The researchers advise that due to the established knowledge that long bouts of sedentary time are detrimental to health, public health initiatives in Luxembourg should encourage breaking up sedentary time with periods of low intensity PA, especially in people aged 50 and over. They cite other studies that show that this would not impair productivity at work and that the health benefits would be considerable. They also suggest that people dedicate more time to PA in general, especially low intensity PA. *“For most people it will be possible to replace some daily sedentary time with low intensity PA and evidence suggests that this will help reduce the risk of cardio-metabolic disease”* states Dr Collings. The researchers also admit some limitations in their study, such as the fact that the accelerometers may register some standing time as sedentary, as they have no way to measure posture.

The study was published on Dec. 29<sup>th</sup> 2022 in the International Journal of Behavioral Nutrition and Physical Activity; it can be accessed [online here](#).

### **About the Luxembourg Institute of Health (LIH)**

*The Luxembourg Institute of Health (LIH) is a public biomedical research organisation focused on precision health and invested in becoming a leading reference in Europe for the translation of scientific excellence into meaningful benefits for patients.*

*The LIH places the patient at the heart of all its activities, driven by a collective obligation towards society to use knowledge and technology arising from research on patient derived data to have a direct impact on people’s health. Its dedicated teams of multidisciplinary researchers strive for excellence, generating relevant knowledge linked to immune related diseases and cancer.*

*The institute embraces collaborations, disruptive technology and process innovation as unique opportunities to improve the application of diagnostics and therapeutics with the long-term goal of preventing disease.*

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