

PRESS RELEASE

For immediate release

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New Large-Scale Study to Investigate Running Shoe Cushioning and Injury Prevention

Luxembourg Institute of Health and Decathlon Collaborate on Innovative Research Involving Over 1,000 Runners

The Physical Activity, Sport and Health (PASH) research group at the Luxembourg Institute of Health (LIH), in partnership with French sporting goods retailer Decathlon, is launching an ambitious new study to explore the role of running shoe cushioning in injury prevention. This large-scale project will analyze the impact of different cushioning solutions on injury risk in a cohort of over 1,000 runners over a six-month period.

The study will specifically examine how cushioning material at both the rear and front of running shoes influences the likelihood of injury. Three different shoe versions will be tested, with each participant receiving a free pair of running shoes and sharing their running data via their sports watch. Participants will also report any injuries weekly through a dedicated web application and return the shoes at the end of the study for further analysis.

“This new study builds upon a long and fruitful collaboration with Decathlon and aims to provide fresh insights into the effect of cushioning on injury risk,” said Dr. **Laurent Malisoux**, PASH group leader at the LIH.

Decathlon’s **Cédric Morio** added: *“As a leading designer and manufacturer of sports equipment, Decathlon and Kiprun are delighted to collaborate with the LIH on this important study. Understanding the role of running shoe construction in injury prevention will help improve the health and well-being of runners worldwide.”*

This research follows a previous large-scale study conducted by the LIH and Decathlon from 2017 to 2020, which analyzed over 24,000 running sessions covering 220,000 km in 800+ leisure-time runners. The findings revealed that greater cushioning was associated with a lower risk of running-related injuries. Notably, runners wearing shoes with lower cushioning had a **52% higher injury risk**, and injuries predominantly affected the **ankles (26%), knees (22%), and lower legs (18%)**. These insights underscore the significance of shoe design in preventing injuries, particularly for lighter runners, who appeared more susceptible to injuries when using less cushioned shoes.

With this new study, LIH researchers aim to further understand the properties of cushioning, especially new “extra soft” foam cushions at both the rear and the front of the shoe, and how they affect the risk of injury. The results are expected to provide valuable guidance for both runners and shoe manufacturers, influencing future designs to enhance injury prevention and running performance.

The researchers encourage any interested participants to apply to join the study [on the LIH website](#).

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.

About Decathlon and Kiprun

KIPRUN is a specialist brand from the DECATHLON group, dedicated to road and trail running. Its engineers, designers and product managers develop ever more technical and innovative products, as well as services to make road and trail running easier. KIPRUN covers 100% of runners' needs and allows them to concentrate solely on the thrill of running!

DECATHLON is an innovative manufacturer and designer of sporting goods for all skill levels. With 101,000 teammates and 1,750 stores worldwide, DECATHLON and its teams have been working ever since 1976 to fulfill an ongoing ambition: Move people through the wonders of sport, to help them be healthier and happier in a sustainable future.

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