

# A new approach to running style analysis using a pressure-sensitive insole device: a small step towards injury prevention

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## **A New Approach to Running Style Analysis using a Pressure-sensitive Insole Device: a Small Step towards Injury Prevention**

Robert Michael Mann, 6 juli 2015

1. Runners having sustained a running-related injury during the previous 12 months display less randomness in stride-to-stride correlative patterns during running than their uninjured counterparts.  
- This thesis
2. Running speed has a significant effect on the spatiotemporal parameters of running.  
- This thesis
3. Ten minutes of running on a treadmill is too short to induce any adaptations in the running strike pattern with first-time minimalistic shoe use.  
- This thesis
4. Combining epidemiology with biomechanical analyses is the answer to furthering our understanding of determinants of running-related injury.  
- This thesis
5. Pressure-sensitive insole devices are an effective tool for analysing running style over prolonged periods of running and in the runner's habitual environment.  
- Valorisation
6. When it comes to running analysis and running-related injury prevention, researchers should strive to acquire multiple, consecutive steps, to ensure more representative data and to better understand the biomechanical phenomenon.  
- Valorisation
7. "The act of measurement should not change the quantity being measured." (Kelvin's Law, adapted from Cavanagh et al., 1992 – In-shoe plantar pressure measurements: a review)  
- Science of running
8. An understanding of mechanisms and risk factors of overuse injury may not be enough. We should also focus on educating runners and teaching them to "*listen to the language of their body.*" (adapted from Van Mechelen, 1992 – *Running injuries: a review of the epidemiological literature*)  
- Science of running
9. It is the runner, not the shoe, who determines the running style. The shoe may encourage a particular style, but the runner ultimately decides.  
- Science of running
10. "An athlete cannot run with money in his pocket. He must run with hope in his heart and dreams in his head."  
- Emil Zatopek