



Musculoskeletal

Risk factors for injuries in recreational runners

What are the risk factors for injuries in short- and long-distance runners?

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Current quality of evidence in regard to risk factors for running related injuries (RRIs) is low.

To comprehend the mechanisms of developing a RRI, we need to further unravel the complex interaction of possible risk factors.

Running is an increasingly popular form of physical activity and has many health benefits. But unfortunately, also RRIs occur. To develop an injury prevention strategy, we first have to find out which (or what combination of) risk factors is responsible for the high incidence of RRIs.

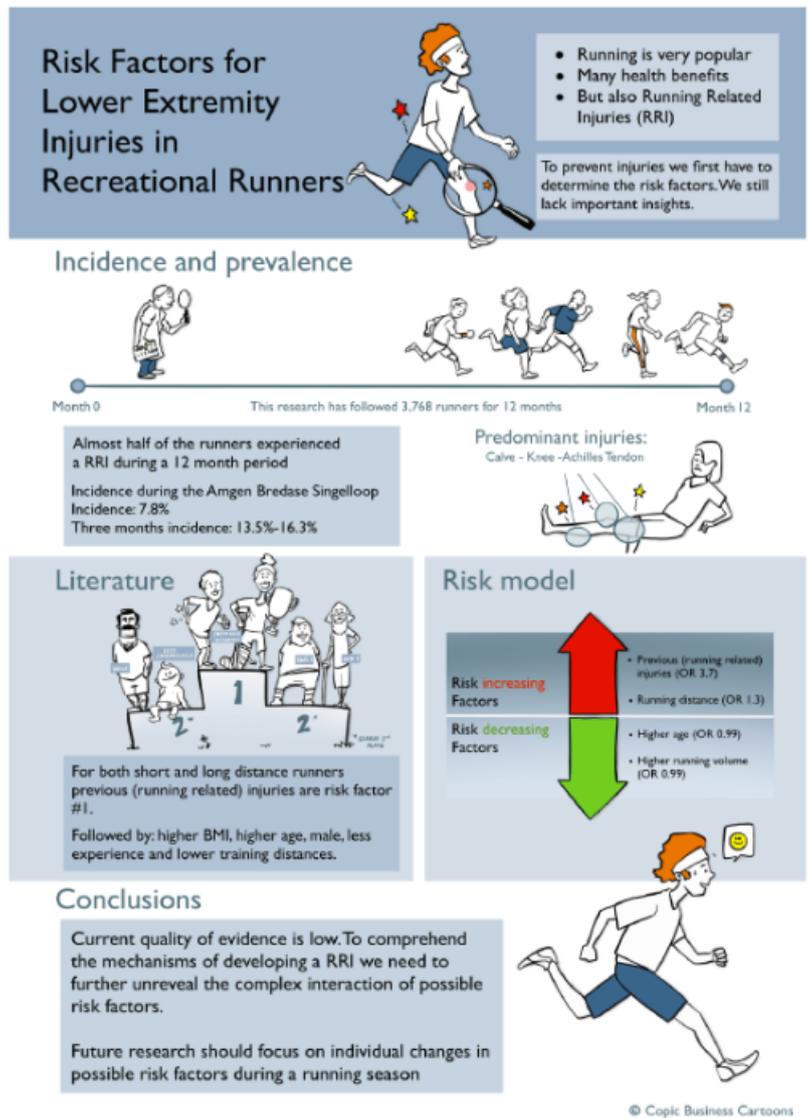
In this thesis, we included 3,768 runners in a prospective cohort study and followed these runners for 12 months during 4 large running events. Runners were asked to report information about demographics, training related variables and health related variables.

The first questionnaire was returned 4 weeks before the start of the running event, and a follow up questionnaire was returned every 3 months (for a year). We found that almost 50 percent of the runners experienced an RRI. Predominant sites of injuries were knee, calf and Achilles tendon.

In previous literature, previous RRIs (strongest), higher BMI, higher age, less experience and lower training distance were found as risk factors. Our risk model included previous RRIs (strongly increased risk), higher running volume (minimally protective), higher age (minimally protective) and higher running distance (slightly increased risk).

Despite the large amount of data collected, it was difficult to determine to what extent runners were exposed to possible risk factors during a 12-month timeframe, as runners use a micro- and macro periodisation during a running season in preparation for an event.

Future research should focus on individual changes in possible risk factors during a running season.



Additional references

For the additional publications from this thesis, please see the additional references below:

1. Van Poppel et al. Risk models for lower extremity injuries among short- and long distance runners: a prospective cohort study. *Musculoskelet Sci Pract* 36 (2018) 48-53.
2. Van Poppel et al. Risk factors for lower extremity injuries among half marathon and marathon runners of the Lage Landen Marathon Eindhoven 2012: A prospective cohort study in the Netherlands. *Scand J Med Sci Sports* 26 (2016) 226-234.
3. Van Poppel et al. Prevalence, incidence and course of lower extremity injuries in runners during a 12-month follow-up period. *Scand J Med Sci Sports* 24 (2014) 943-949.

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