

Health Related Aspects of PA & Sport/Running



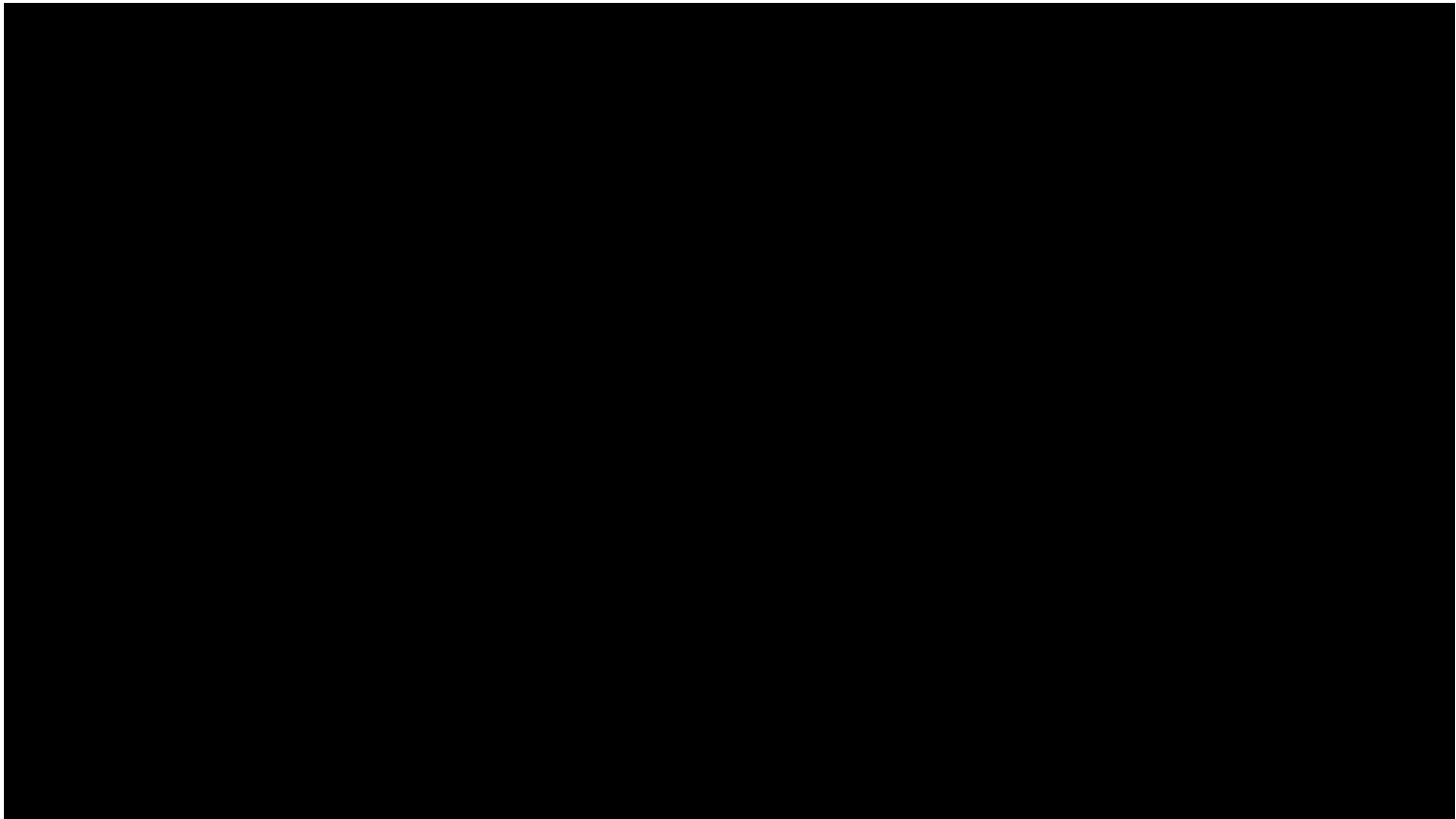
Johan de Jong, PhD

Hanze University of Applied Sciences Groningen

Outline

1. Introduction
2. PA inactivity
3. Pros and cons of Sport & PA
4. Running
5. Facts & figures
6. Assignment

Designed to move



PA inactivity kills

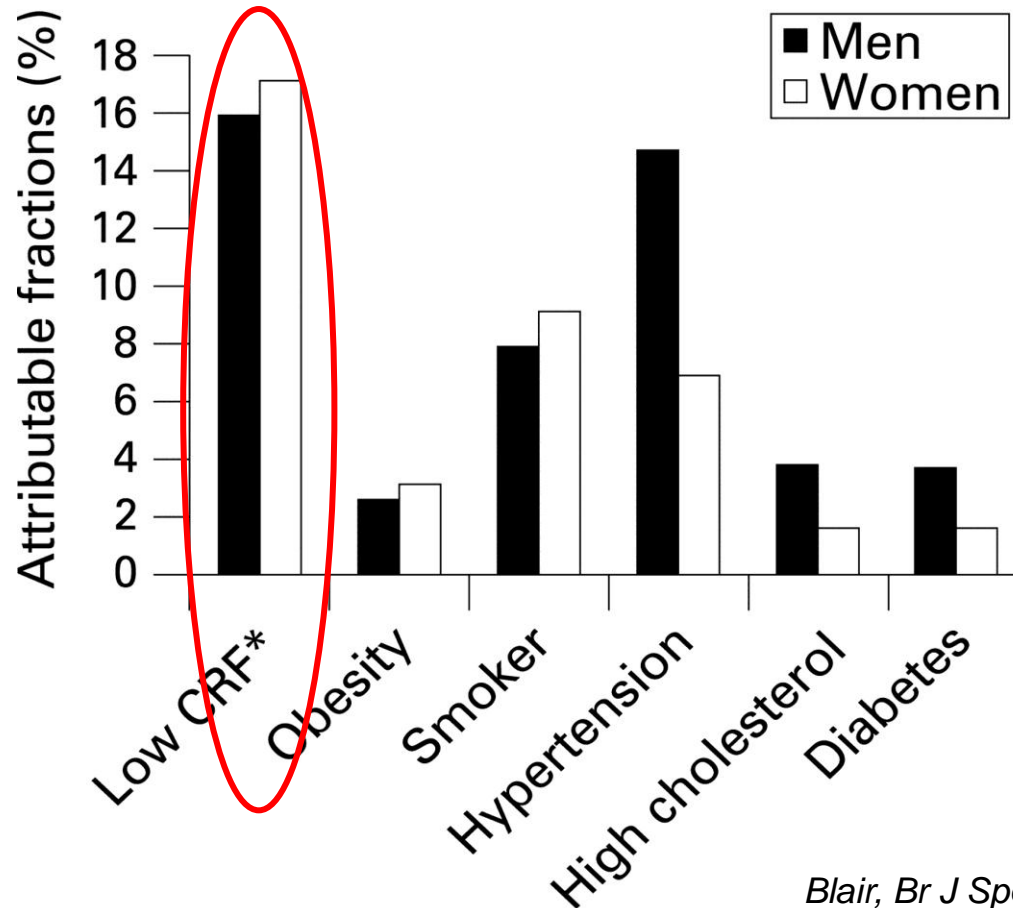


PA is deadlier than smoking



Research shows....

Attributable fractions (%) for all-cause deaths in 40 842 (3333 deaths) men and 12 943 (491 deaths) women in the Aerobics Center Longitudinal Study.



Research shows.....

- Inactivity causes 6-10% non-communicable diseases (coronary heart disease, diabetes mellitus type 2, breast and colon cancer)
- Inactivity 4th place premature mortality
- Globally on average 0.68 (0.41-0.95) year older when PA was banned

Lee, Shiroma, Lobelo, Puska, Blair & Katzmarzyk, the Lancet 2012;380(21):219-229.

Research shows.....

- From public health perspective Sport & PA play an important role in battle lifestyle related health problems

Physical inactivity: the biggest public health problem of the 21st century

Steven N Blair



So move....

- Because it is healthy
- And because it is fun!



Modes of (leisure-time) PA

- Sport: organized, intentionally, competition/mostly intensive → effect on fitness
- PA: cycling, walking etc. → effect on health
- Combination is most interesting (transfer)
- Package of three:
 - Don't sit
 - Be active all day
 - Do sport



Running hype

- 2.5 million in NL
- Everywhere/time/place
- Few equipment
- Good for fitness/health
- Technology



RunKeeper

Track, Measure, and Improve Your Fitness.

Running facts

Olympic Marathon Athens 1896 2:58:50!

Oldest Boston marathon (1897)

Biggest marathon New York over 50.000 participants

Beginning only male elite athletes (3hours), now 40% female

Change elite → mass sport (3.00 → 4:45h)

Nowadays 12.5% NL population (2 million runners) runs

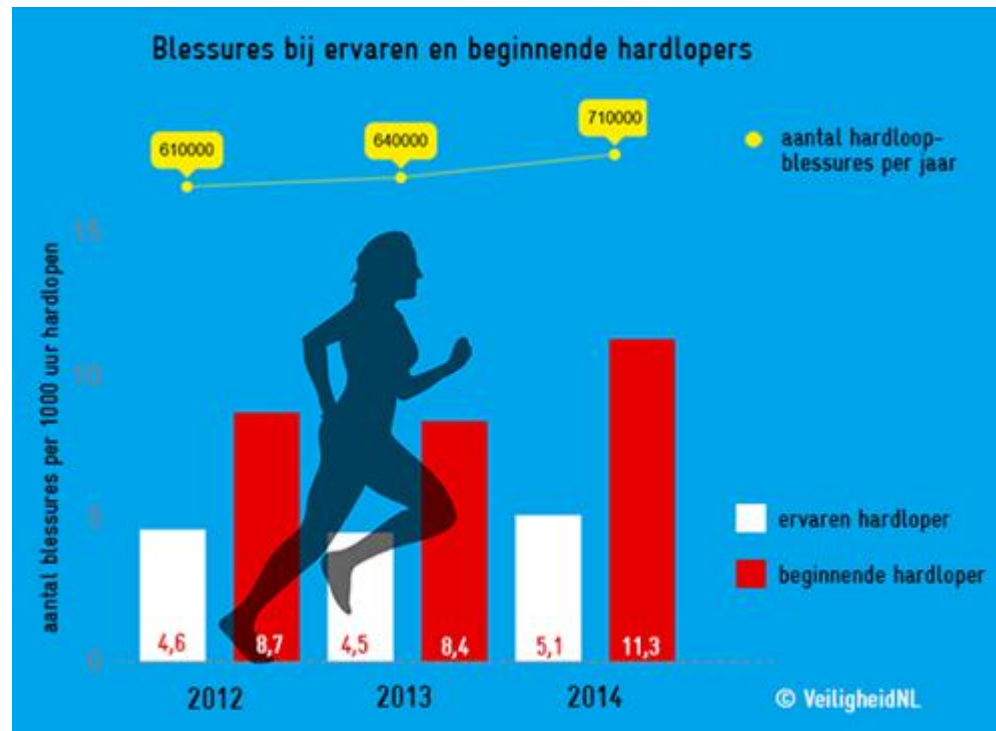


Running facts

- More popular than ever in NL
- Company
- Charity
- Trail runs
- Ultra runs
- Cross



Negative aspects running



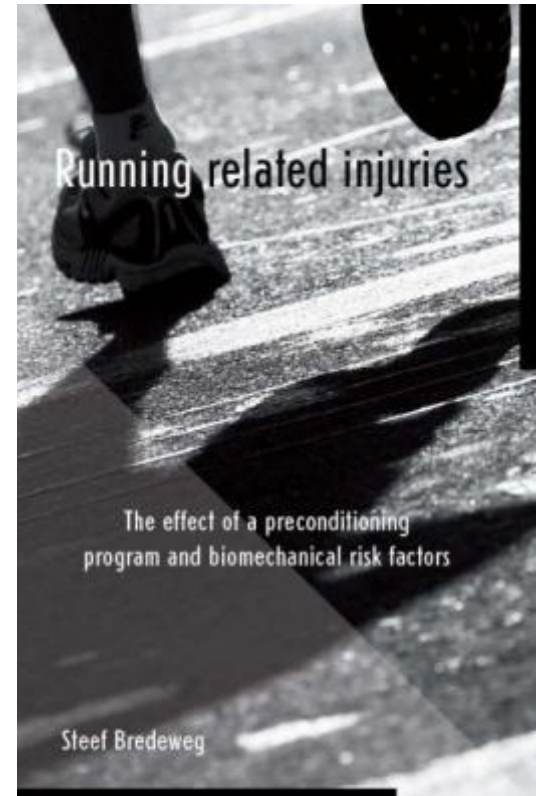
Injury facts & figures

- 20% of 2.5 million injuries
- Optimum seems (2-3 times/week; 1-3 hour/week)
- 4-5x body weight; 30 minutes running → 500.000kg impact lower extremities
- High risk for novice runners, especially no-leg impact sports (swimming, cycling): RR 2.0
- Too much too soon



Injury facts & figures

- Scientific research shows **NO** effect of:
 - Warming-up
 - Stretching
 - Asymmetric running posture
 - Running shoe!

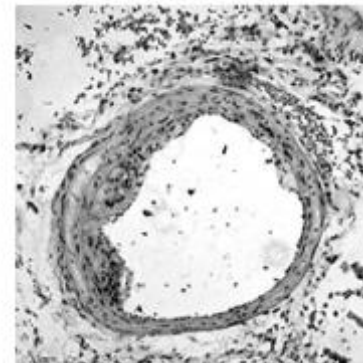
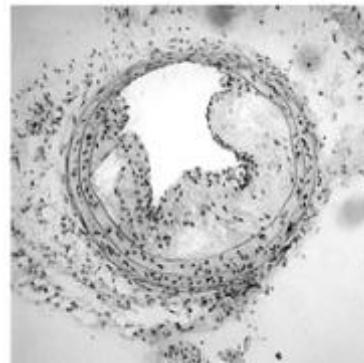


Risks during mass running events

- 1,5 on 100.000
- Genetic
- Lifestyle related > 35 yr. men
- Overheating

Dode bij halve marathon: is hardlopen wel zo gezond?

© 21 10 MAART, 10:37 BINNENLAND



Assignment: prevention plan

- Make a prevention/action plan for a mass running event to combat injuries/sudden death
- Before-during-after the event
- English /Arial 11 pnt / minimum 2-4 pages
- Time: 1 hour
- Upload into system before 16:30



Jo.de.jong@pl.hanze.nl



@sportwetenschap

Thank you for your
attention!

