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# **Implementing a Program at National Level to Prevent Sports Injuries in Adolescents**

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# Injuries in Physical or Sportive Activity



- 7.000 fatal sport injuries in European Union (EU27)
- 600.000 hospital admissions in EU27
- 5.200.000 hospital outpatients in EU27
- Risk of injury among athletes is up to 1000-times higher compared to that in an average occupational setting.

**Majority of these could be prevented!**



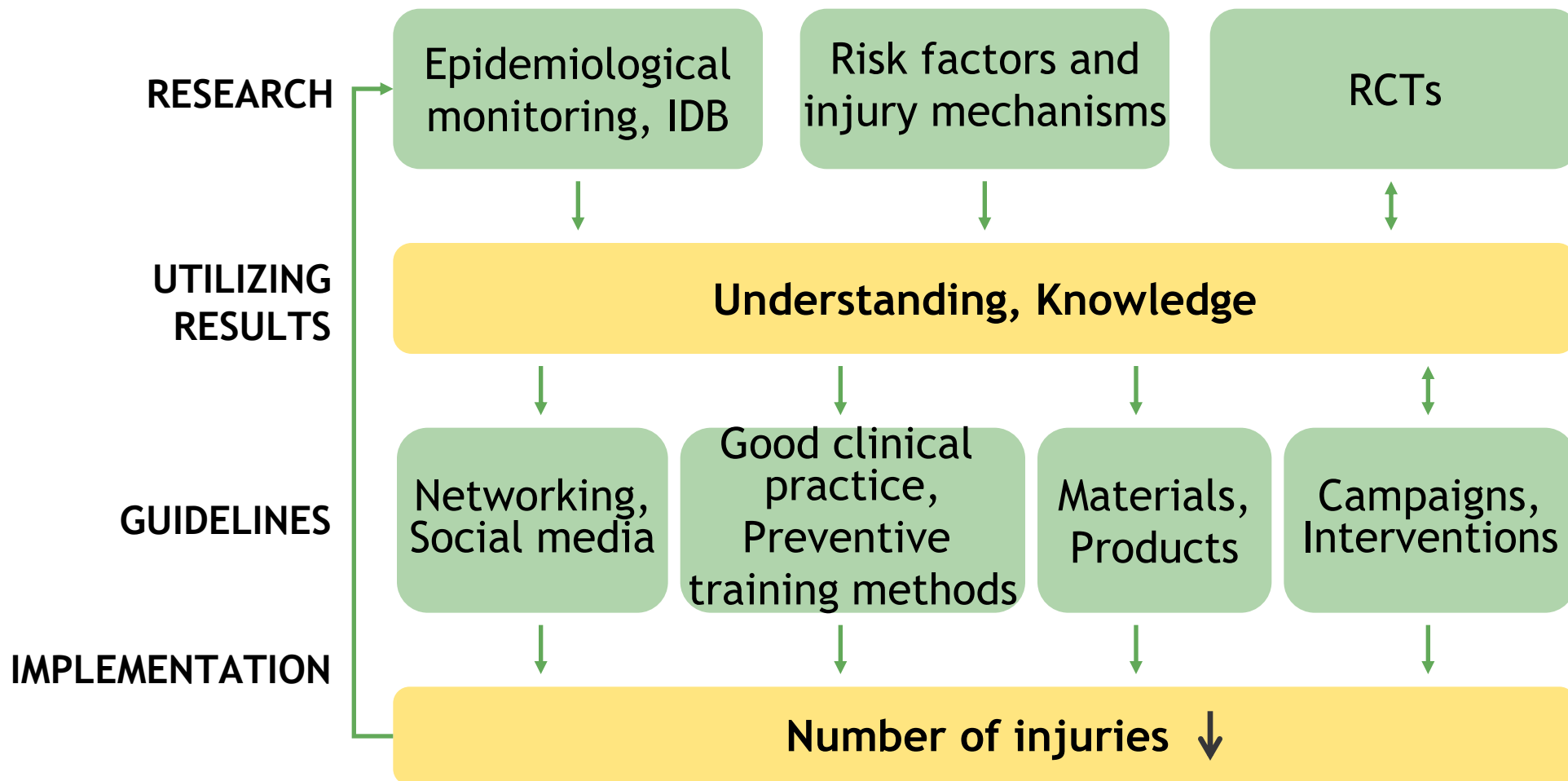
# Injuries in Physical or Sportive Activity



- 25 % of the sport injuries affect young people in the age of 15 to 24 years in EU27.
- More men (67 %) are injured than women.
- 'Team ball sports' account for about 40 % of all hospital treated sports injuries in EU27
- Ranking order in EU27: soccer (74 %), basketball (8 %), volleyball (7 %), handball (3 %)
- Majority occur in non-organized sports.

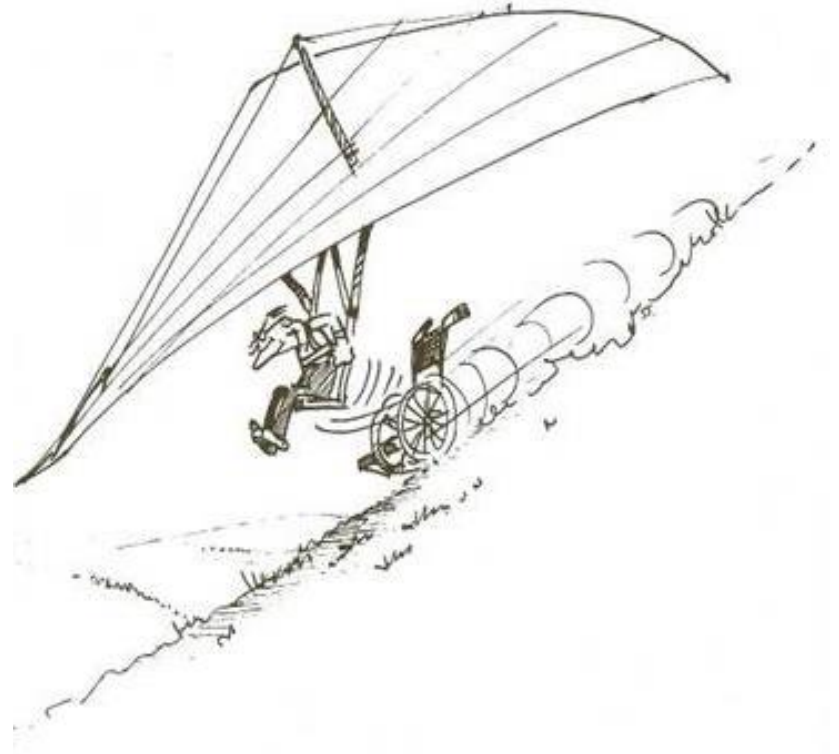
# Sports and Exercise Safety in Finland (LiVE)

## Steps in Sports Injury Prevention



# Means of Injury Prevention

- Changes in rules and legislation
- Changes in environment and equipment
- Changes in behaviour (voluntary, e.g. training)



# A Systematic Literature Review and Meta-analysis of Randomized Controlled Trials

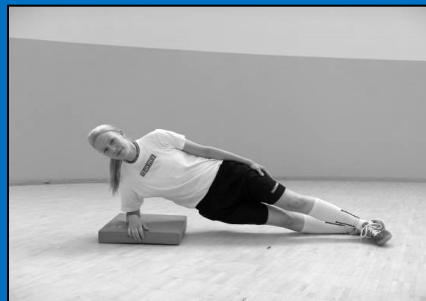


- Sports injury prevention method, which effectiveness has been most clearly shown by RCTs, include specific neuromuscular training (NMT).
- The effective training improves the motor skills and movement control of adolescents and makes loading of their joints and ligaments safer.
- Neuromuscular training programs can be implemented as a part of a warm-up without additional equipment, and have positive effects for not only to reduce injuries but also to improve sports performance.

# Injury Preventing Warm-up Program



- Warm-up sessions are carried out just before practices with low-to-moderate intensity.
- The program should include different types of exercises:
  - 1) Running technique exercises 5–7 min
  - 2) Balance and body control exercises 5–7 min
  - 3) Plyometric exercises 5–7 min
  - 4) Strengthening exercises 5–7 min
- The exercises should have different variations with diverse difficulty and intensity.
- One warm-up session takes 20–30 minutes.





# **Sports and Exercise Safety in Finland Programme 2006–2016**

## Funding

- Ministry of Social Affairs and Health
- Ministry of Education and Culture
- Federation of Finnish Insurance Companies





# 3 Nationwide Safety Implementation Programmes



HEALTHY ATHLETE

HEALTHY ATHLETE  
13+ YEAR-OLDS  
2006–



SAFETY IN SCHOOL SPORTS  
10–15-YEAR-OLDS  
2010–



SAFETY IN VOCATIONAL  
SCHOOLS  
16–19-YEAR-OLDS  
2014–

# Frameworks of the Programmes



## HEALTHY ATHLETE

**Ten-point circle** provides information and know-how on smart, healthy and safe sports and exercise.



[terveurheilija.fi](http://terveurheilija.fi)

## SAFETY IN SCHOOL SPORTS

**The Element-wall** is a framework for the Implementation programme.



[tervekoululainen.fi](http://tervekoululainen.fi)

## SAFETY IN VOCATIONAL SCHOOLS

**The Element-wall** is a framework for the implementation program.



[smartmoves.fi](http://smartmoves.fi)

Dimensions: physical – psychic – social

# Healthy Athlete



## Aims

- to foster coaching and training which
  - supports physical, psychic and social growth of the adolescents
  - develops motor skills widely
  - promotes health and wellbeing & prevents injuries
- to implement information and know-how to daily practises in sports clubs

## Main target group

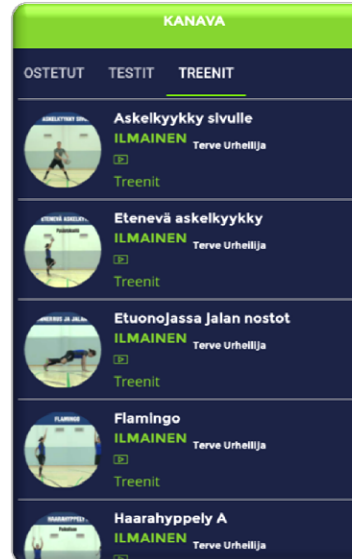
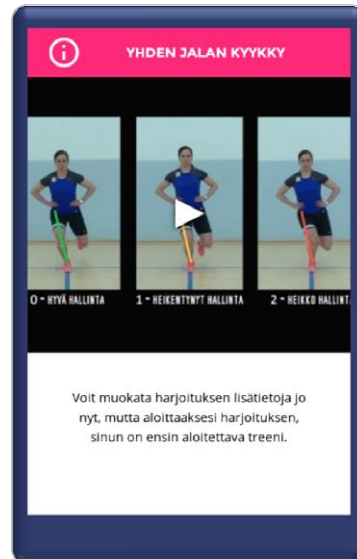
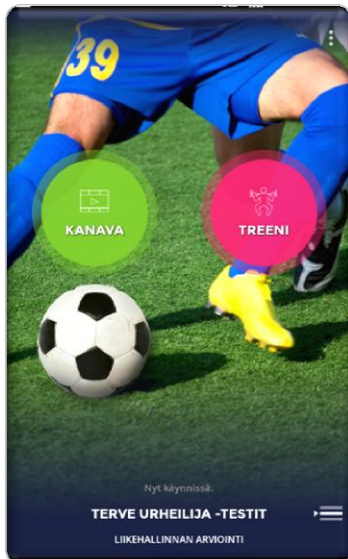
- coaches and instructors
  - young athletes (13+ years) and their families
- ❖ Healthy Athlete tutors
- ❖ Sport nutrition professionals' network

# Wide Range of Activities and Materials Mobile Applications



## *Terve Urheilija* (Healthy Athlete) Mobile Application

- Videos and training programs on assessment and improvement of movement control
- Videos available also at [program websites](#) and in YouTube on [Terve Urheilija channel](#)



(Developer: Sport Connect)

# Safety in School Sports (TEKO)



## Aim

- to promote sport safety in school settings.

## Main target group

- PE and health education teachers
- ❖ Large network with national co-operators; Schools on the Move -program, universities, teacher and sport federations





# Wide Range of Activities and Material Videos

Large range of videos to support learning:

- sitting: disadvantages and ways to reduce sitting and sedentary time
- PA: importance and ways to add physical activity
- sport safety: aspects of safety, warm-up and first aid of sports injuries
- nutrition: meal frequency and healthy snacks for adolescents



[tervekoululainen.fi](http://tervekoululainen.fi)

[Animated video on sports safety](#)

[Playlist in YouTube](#)





# Smart Moves

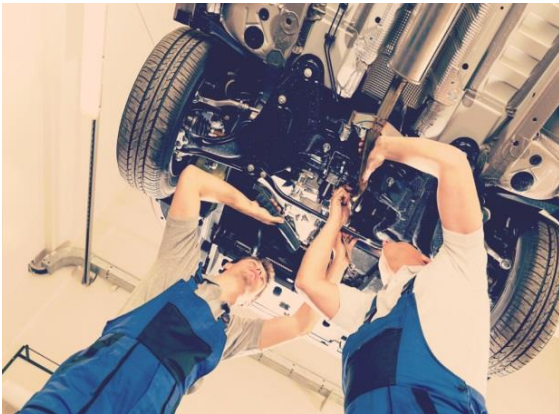


## Aim

- increasing healthy and safe PA
- reducing sedentary behaviour
- preventing sports and free time accidents and injuries

## Main Target Group

- PE and health education teachers in vocation schools
  - young adults studying in vocational schools
- ❖ Students of different professions are involved strongly in the program implementation.

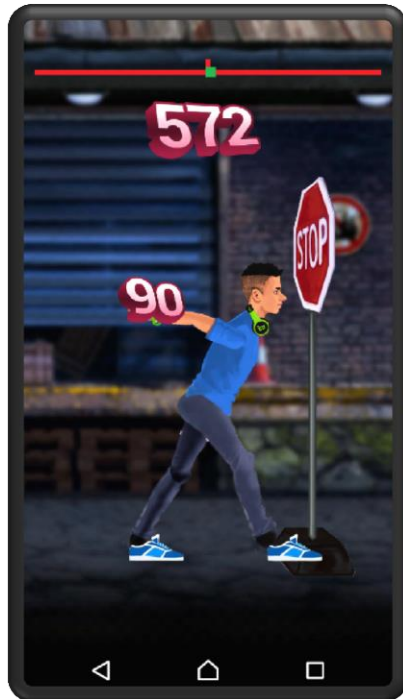




# Wide Range of Activities and Material Mobile Games

Freely available for Android smart phones

- SpineBlast Inc: ergonomics
- Safety Santa: sports injury prevention



Other game themes:  
PA, sitting breaks,  
nutrition, sleep and  
work ability





# Programmes in Web and Social Media



## Web page visits year 2015



198 000



121 000



13 000

## YouTube

videos 180

views 380 000

## Facebook followers



2 000



500



180

## Twitter followers



500



150

## Newsletter subscribers



1 400



1 700



300

Population 5,5 M



- The reach of the target groups has been promising (web and social media).
- The contents of free electric material has received good feedback from the target groups (target group inquiries).
- Continuous updating of the material on the basis of scientific evidence is needed.
- Continuous development of the implementing (digitalization) and teaching methods is needed.



# **Accidents Don't "Happen" – Know the Dangers and Control Them!**



**Safety 2016  
World Conference**