

UNIVERSITY OF PÉCS MEDICAL SCHOOL

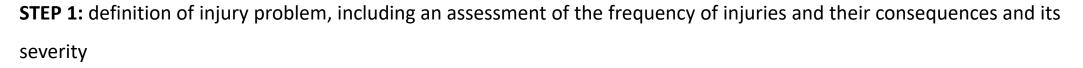


# **Researches on sportphysiotherapic field**

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## 4 steps of effective prevention methods



**STEP 2:** determining the aetiology and mechanism of injury, the physiology of pathological conditions associated with injury

**STEP 3:** designing and implementing preventive interventions

**STEP 4:** evaluating the effectiveness of the methods introduced, comparing them with results of STEP 1, identifying the changes that need to be made



#### Sportphysiotherapy

### Example for a wrong study

**STEP 1:** a definition of the injury problem

Treatment possibilities of Achilles tendinopathy



Achilles tendinopathy is a degenerative, non-inflammatory condition most commonly seen in recreational and competitive running and jumping sports, but also occurs in sedentary people

**Incidence rate**: 2,35/1000 in 21-60 age group, 35 % in relation to sport **consequences**: Achilles rupture

In our sample: 100 % frequency of occurance

**STEP 2:** determining the aetiology and mechanism of injury, the physiology of pathological conditions associated with injury

Intrinsic factors	Extrinsic factors
<ul> <li>age</li> <li>gender</li> <li>Body weight</li> <li>Temperature of tendon</li> <li>Strenght of muscle</li> <li>Flexibility</li> <li>Statical condition of foot</li> <li>Anatomic variation</li> </ul>	<ul> <li>overload</li> <li>Chemicals (steriod)</li> </ul>



#### Sportphysioterapy

**STEP 2: Materials and methods** 



Sample	Examination methods
Over 18-aged patient with Achilles pain (avg. age 44,7 years)) N=13 6 females, 7 males Height 177,07 cm Weight 84,79 kg BMI 26,46	<ul> <li>VISA-A questionnaire</li> <li>Wall test</li> <li>Sit&amp;Reach test</li> <li>Physical examination</li> <li>ultrasound</li> <li>EOS</li> </ul>

**STEP 3:** designing and implementing preventive interventions

- 3x6 weeks, 3x 30 min/week progressive program
- progressive strengthening and stabilisation of the muscles of the trunk
- eccentric exercises for the knee flexors and m. triceps surae
- proprioceptive training of the lower limb
- stretching of the flexor muscles of the knee and the lumbar spine muscles, supplemented by stretching
  of the triceps surae muscle



**STEP 4:** evaluating the effectiveness of the methods introduced, comparing them with Step 1 the results of the first step, identifying the changes that need to be made

- Frequency of Achilles pain
- Results of VISA-A
- Wall test
- S&R test
- Results of EOS and ultrasound

#### Conclusions

- improved structural and functional status of patients
- The frequency and intensity of pain is also reduced
- Yet results cannot be published due to lack of comparability and poor sample selection







# **Thank you for attention!**

