



UNIVERSITY OF PÉCS  
MEDICAL SCHOOL

# Traumatologic physiotherapy

Dorottya Szabó  
Physiotherapist MsC  
Pécs University Medical School  
Sportmedicine Center

Pécs, 30.03.2023



# Principles

## 1. We can handle

- injuries in conservative or surgical way
- due to guidelines
- in teamwork

How long should a fracture be fixed?

# Rehabilitation of injuries

## Aim (What to do...?)

- Improve range of motion
- Strengthening muscles
- Functional development
- Reach healthy condition

## Methods (How to do...?)

- Exercise therapy
- Physiotherapy (electrotherapy, ultrasound, ESWT, laser, etc.)
- Manualtherapy



# Rehabilitation of injuries



Maximal  
protective  
session

Moderate  
protective  
session

Minimal  
protective  
session



# Rehabilitation of injuries

Maximal protective session (early posop.period – approx. 7-10 days)

- Thromboembolism prophylaxis
- Compression bandage
- Venous gymnastics
- Respiratory gymnastics
- Strengthening of the opposite limb
- Use of CPM
- Mobilisation
- Assistive device training (orthosis, crutches)
- Walking training (stair climbing)



# Rehabilitation of injuries

## **Maximal protective session (late posop.period – approx. 6 weeks)**

- Thromboembolism prophylaxis
- Rehabilitation protocol (unloading lower extremities)
- Increase active and passive ROM
- Muscle strength development in unloaded position (possibly electrotherapy)
- Restoration of walking
- Gradual loading
- Restoration of activities of daily living



# Rehabilitation of injuries

## **Moderate protective session (approx. 6-12 weeks)**

- Increase active and passive ROM (reach total ROM)
- Improving static and dynamic stability
- Improving maximum muscle strength
- Increase muscletrophy
- Restoring movement patterns, reducing compensatory movements
- Aerobic exercise (bike)
- Preparation for straight line jogging
- Avoiding twisting, shearing movements (lunging, changing direction)
- Weekly periodization!



# Rehabilitation of injuries

## Minimal protective session (approx. after 12 weeks)

- Functional development
- Maximum strength development
- Development of static and dynamic stability
- Running in a straight line
- Stretching, changing direction in time according to guideline
- Plyometric exercises
- Sport-specific exercises

## Follow-up (+ 1 year)

- Reducing the risk of re-injury
- Achieve previous fitness and performance levels





# Rehabilitation of injuries – Intensive therapy

## Polytrauma

the injured person suffers injuries to different parts of the body or organ systems at the same time, at least one of which, or a combination of them, leads to **a life-threatening condition**

- Early rehabilitation from the first treatment (fracture fixation, deformity, contracture prevention)
- Complex physiotherapy treatment can be started immediately after life-saving first treatments



# Rehabilitation of injuries – intensive therapy

## Aims (What to do...?)

- Thromboembolisation profilaxis
- Pneumonia prevention
- Contracturalisation prevention
- Decubitus prevention

## Methods (How to do...?)

- Laying, turning techniques
- Passive mobilisation
- Secretum mobilisation (chest physiotherapy)
- Venous exercises, improve circulation
- Mobilisation (sitting, standing as soon as possible)
- Technical rehabilitation
- Supporting self-sufficiency





UNIVERSITY OF PÉCS  
MEDICAL SCHOOL

# Thank you for attention!

Pécs, 30.03.2023.