

# Compensatory Exercises and Regeneration

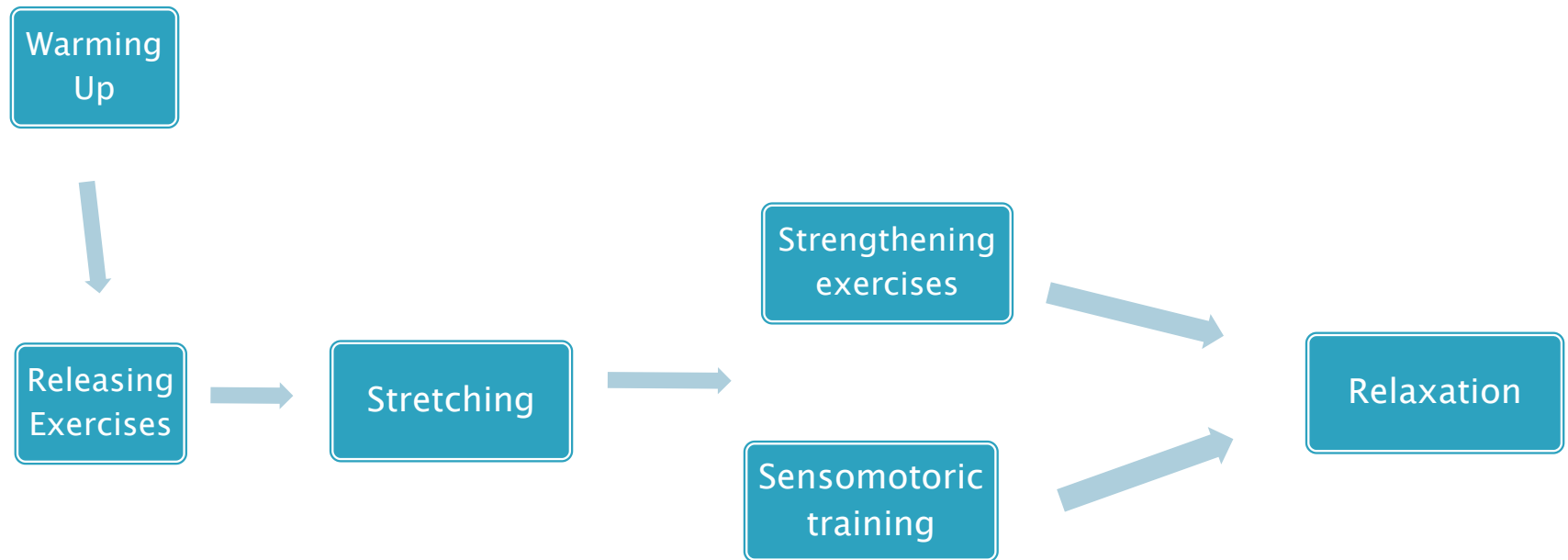
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# Why Compensate

- ▶ Periodic compensation significantly reduces
  - Muscle imbalances
  - Chronic musculoskeletal injuries
  - Nonspecific pain of locomotor apparatus
  - Acute musculoskeletal injuries
- ▶ Significantly increases
  - Neuromuscular coordination
  - Power endurance
  - Flexibility
  - Proprioception

# Scheme of Compensatory Exercises



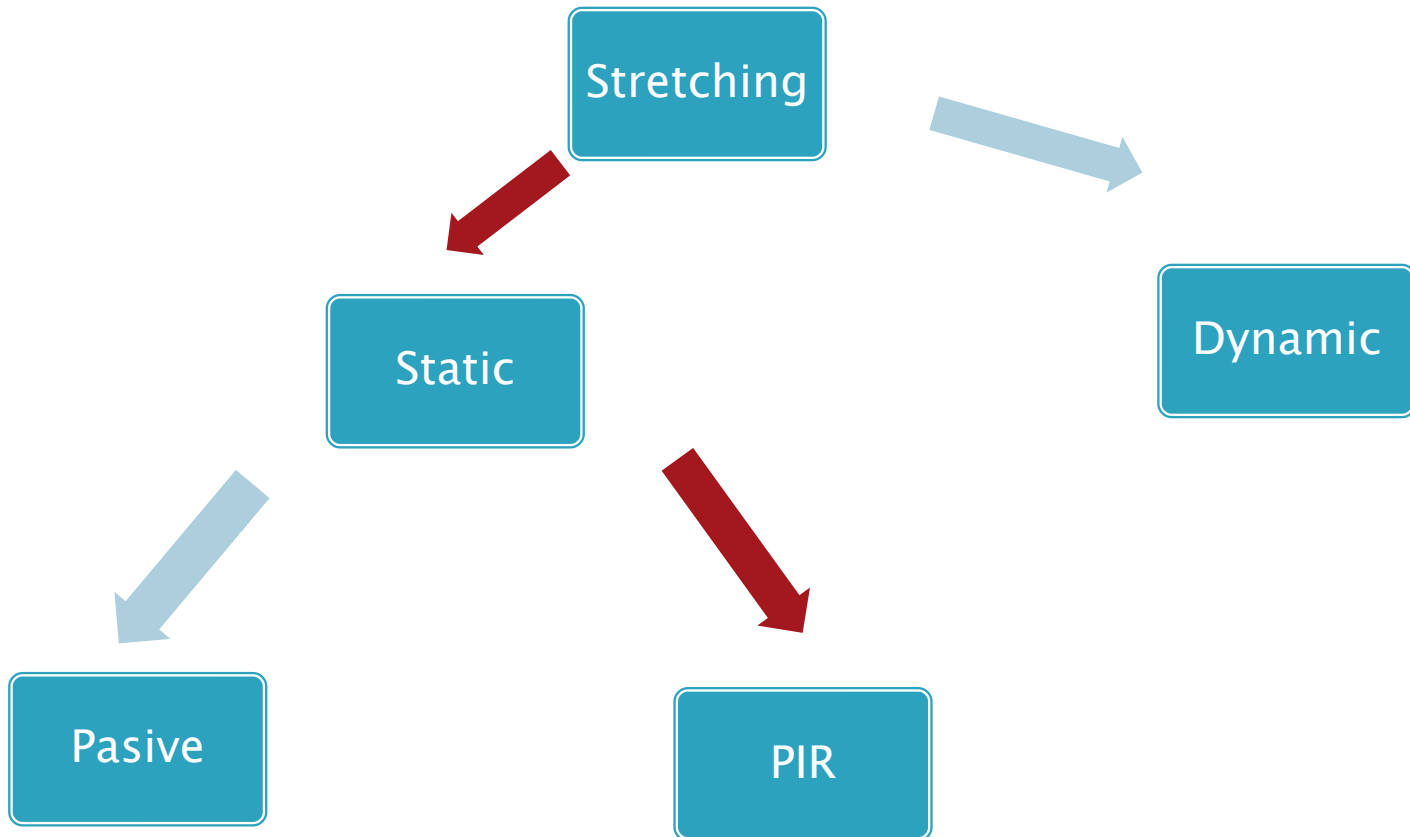
# Releasing exercises

- ▶ Releasing exercises are always directed to a particular joint or motion segment. It allows better blood flow to soft tissues around the joint.
  - ▶ Improved blood circulation and circulation of synovial liquid has generally positive effect on the mechanical features of soft tissues and cartilage.
  - ▶ When making releasing exercises the movement is passive rather than active. Range of motion should correspond to the current functional capabilities of the joint.
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# Releasing Exercises



# Scheme of Stretching



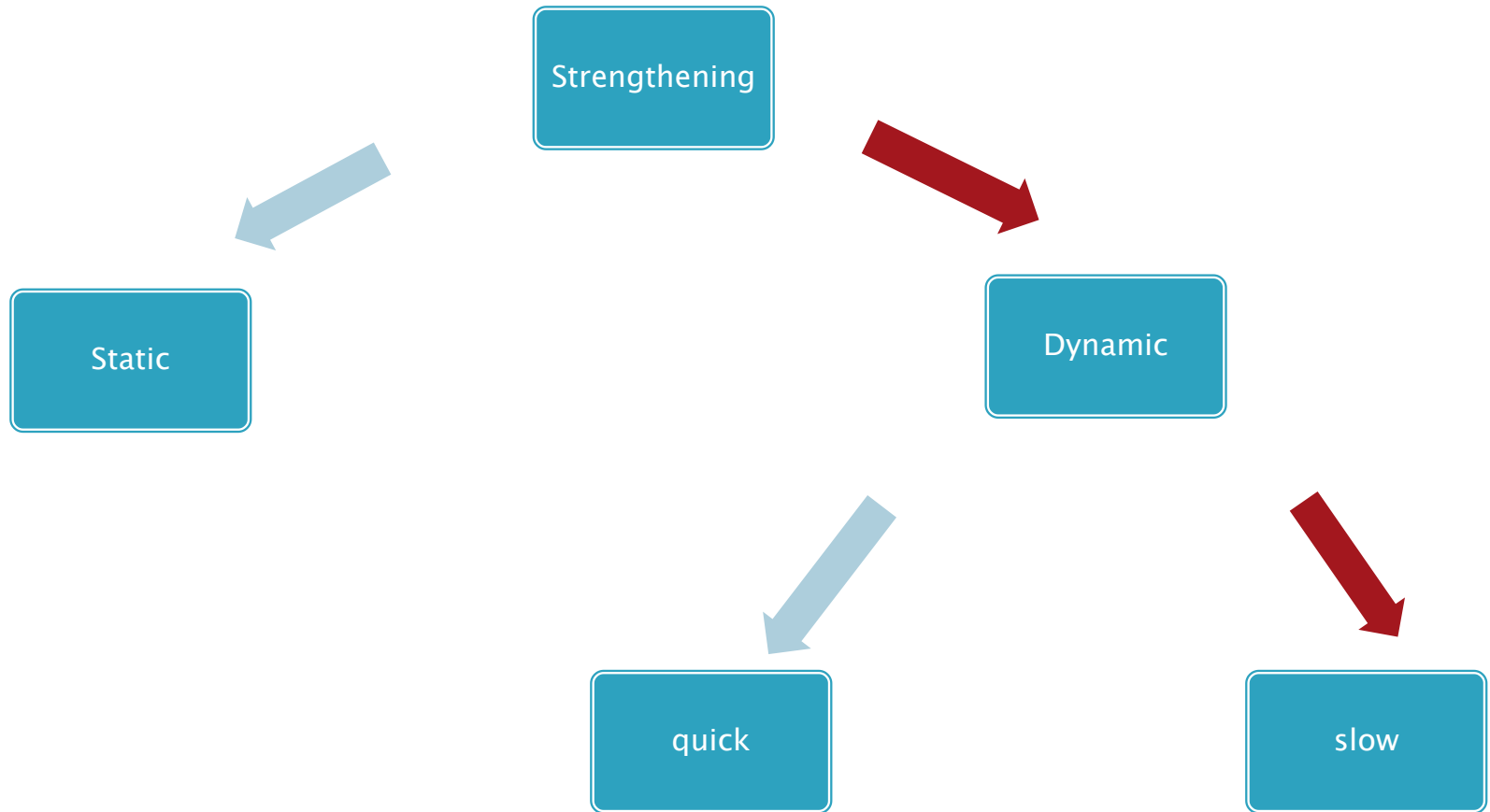


# Stretching

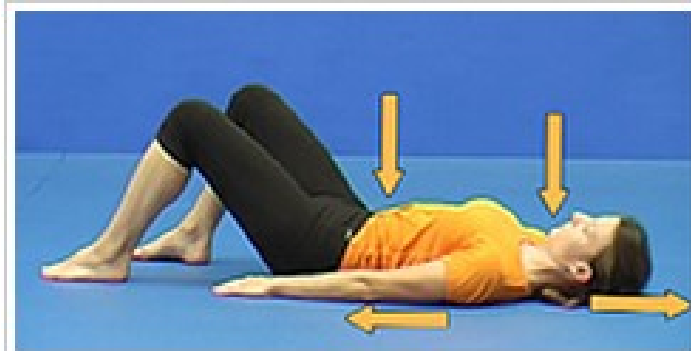




# Scheme of Strengthening Exercises



# Strengthening exercises



# Balance and Sensomotoric Exercises



# Relaxing exercises

- ▶ <https://is.muni.cz/auth/do/fsps/e-learning/ztv/pages/09-kardiovas.html>



# Principles of compensatory exercises

1. Keep right sequence of exercises
2. Proceed from the lightest to the heaviest exercises
3. Comply strictly correct starting position and course of movement
4. Correct breathing (diaphragmatic breathing, exhale during the contraction)
5. Sufficient frequency and intensity of exercise
6. Stretching exercises every 24 to 48 hours / length of extension at least 30 seconds.
7. Strengthening exercises at least 2 times a week (optimum 3 times a week) 2-4 sets of 10 -20 repetitions per exercise based on an individual abilities of the individual
8. To vary exercises for each muscle group
9. Sometimes less is more!

# Regeneration

- ▶ Regeneration is a biological and social process, which aims to restore balance and reversible decrease in functional abilities and individual body organs.
- ▶ This is manifested by fatigue
  - Physical
  - Mental
  - Physiological (local, general)
  - Pathological (acute, chronic)



# Regeneration

## ▶ Passive

- Sleep (and most effective natural method of regeneration)

## ▶ Active

- Other than the physical activity of sports (eg swimming, cycling, yoga ...)
- Drinking regime
- physical therapy
- Thermotherapy (sauna, cryotherapy)
- Massage (sports, regeneration, relaxation)

THANK YOU FOR ATTENTION

