PÉCSI TUDOMÁNYEGYETEM
ÁLTALÁNOS ORVOSTUDOMÁNYI KAR

The principles of functional training

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slido

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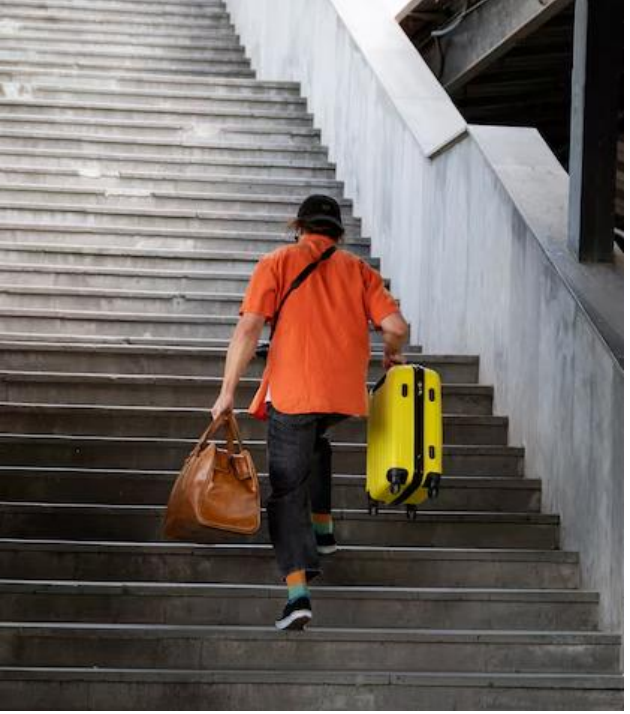
Write a functional movement from your daily life!

ⓘ Start presenting to display the poll results on this slide.



Activities of Daily Living

- Unique for everyone
- What is the most effective functional training for an individual largely depends on ADL

What is functional training?

„Integrated multi-planer movements that involve joint acceleration, stabilization, and deceleration, with the intent of improving movement ability, core strength, and neuromuscular efficiency.”

Principles of functional training

Principle: Mobility–Stability Continuum

The human body is organized as an alternating series of joints whose primary role is either mobility or stability. Examples:

- ankle – mobile
- knee – stable
- hip – mobile
- lumbar spine – stable
- thoracic spine – mobile

Functional training supports this pattern and aims to reduce compensatory movements that can lead to pain or dysfunction.

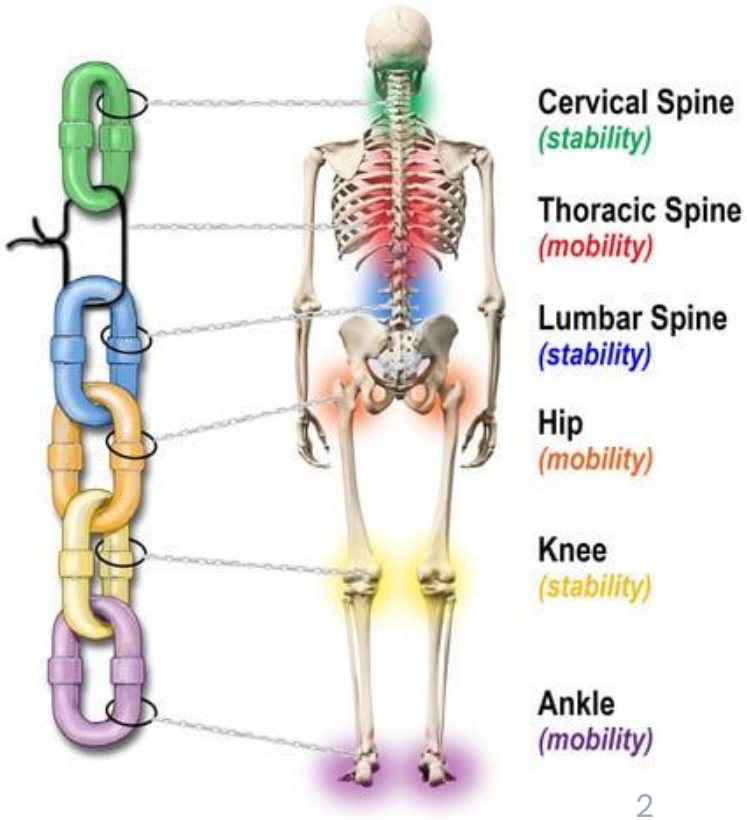


Image 1. Immobile t-spine = Weak Link ©erikdalton.com

The principles of functional training

- We are not training muscles, we are **training movements**
- Each movement involves **more joints**
- Each movement takes place **in at least two planes**
- Every movement engages the **sensorimotor system**
- Movements are often initiated from neutral body or joint positions
- When we exercise, we **first stabilize** before starting to move
- The **quality of the movement** determines the performance and the number of repetitions
- All movements have to be performed in a way and at a pace that the athlete can **control**

The principles of functional training

Core as the Central Stabilizer

- The core includes far more than the abdominal muscles
- Effective core training relies on optimal breathing mechanics plus trunk stabilization, not on “pulling the belly in.”

Movement Patterns over Muscle Groups

- Key functional movement categories include: - squat patterns - hip hinge patterns (e.g., deadlift type) - lunge and stepping patterns - push and pull movements - rotational and anti-rotational tasks
- These patterns enhance neuromuscular coordination and posture control.

The principles of functional training

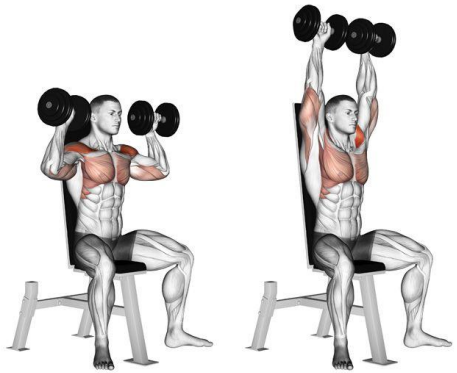
Transferability

- A movement is functional only if it improves performance or daily function for the person doing it.
- The value lies in real-world transfer, not in complexity for its own sake.

The progression of functional training

- 1. Supported to unsupported or destabilized
- 2. Bilateral to unilateral
- 3. Fixed lever to free moving lever

The advantages of functional training over traditional weight training



Traditional training:

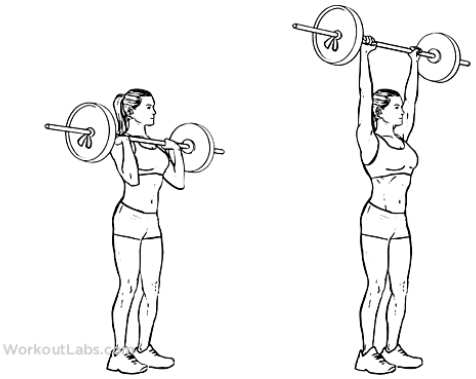
- focuses on one muscle
- performed in a seated or supported position
- isolated and less functional movement patterns
- less impact on the circulatory system
- on machines, the joint ligaments need less stabilization due to the guided movement

The advantages of functional training over traditional weight training

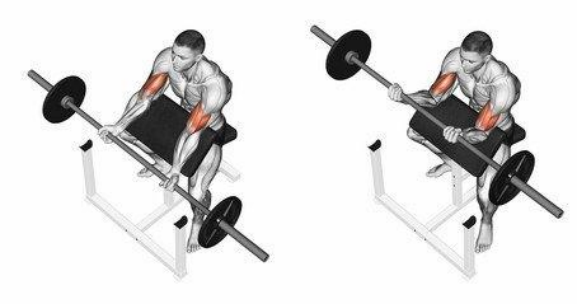
Functional training:

- stimulates several muscles at once
- the core muscles are stabilized and thus developed at the same time
- practical, functional movement patterns
- heavy load on the circulatory system
- joint ligaments are also actively involved in stabilization

https://www.youtube.com/watch?v=-yfqnebBbW0



- 1-Deadlift
- 2-Bend-over row
- 3-Overhead press
- 4- Chest press
- 5-Biceps curl



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Thank you for your attention!

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