



University sports

TRAINING BASICS



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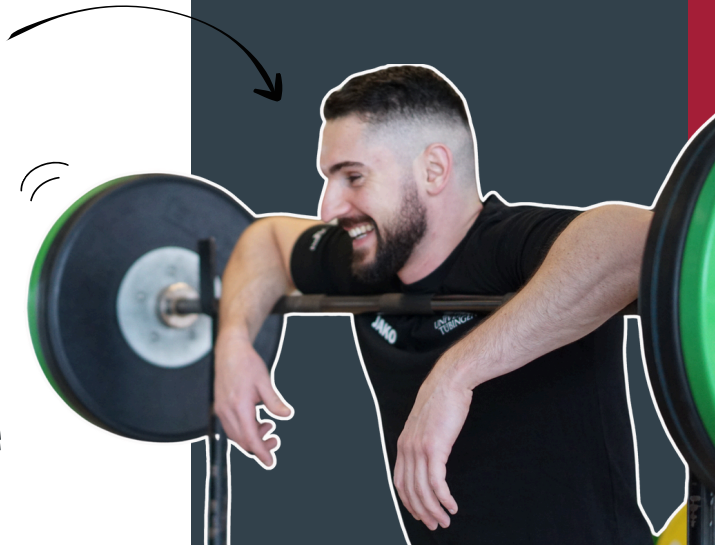


START YOUR JOURNEY

This manual explains everything you need to know

To help you get to grips with the basics, we've put together this handy "Training Basics" guide.

We get how confusing all the information on the internet can be, and we'd like to offer you some scientifically based recommendations for structuring your training. This manual is especially aimed at beginners who are just starting out with strength training.



INDIVIDUALIZED TRAINING PLANNING

How to find the right training plan for you

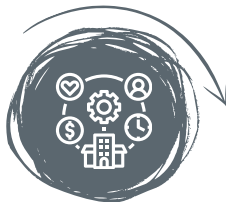
Setting training goals

Basis for targeted training planning



Consideration of individual circumstances

temporal capacity, spatial and material resources, living conditions



Individual training plan

exercise selection, strain control



Analysis of the current situation

training level, physical and mental condition: Deficits and potentials



Analysis of individual resilience

stress management, tolerance threshold of physical resilience & recovery ability





INJURY PREVENTION

How to stay fit and healthy in the long term



WARM-UP

- 5-10 min
- increasing intensity
- general warm-up followed by specific preparation

[4-5]

SAFETY

- safe technique
- maximum strength with safety equipment
- respect your own boundaries
- sufficient rest

RECOVERY

- sleep and stress management
- massage & compression
- gentle movement
- cold or contrast shower
- hydration
- post-workout nutrition

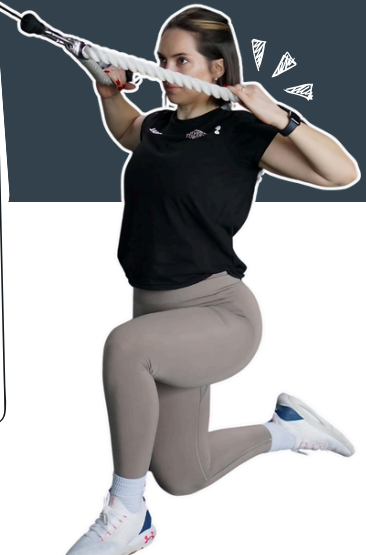
[6-11]

PROGRESSIVE OVERLOAD

How to make sustainable progress in training

- ✓ training progress requires increasing stimulation
- ✓ supercompensation is the process by which an organism adapts to new requirements at the neuromuscular and structural levels.
- ✓ progressive overload can be achieved by increasing the intensity, training volume or training frequency

[12-16]



TRAINING FREQUENCY

How often should you train a muscle group

- ✓ train each muscle group optimally at least twice a week
- ✓ between training sessions of the same muscle group there should ideally be 36-48 hours
- ✓ the appropriate frequency can depend on your training experience, intensity and volume, as well as individual resilience and recovery capacity

• [17-20]



TRAINING VOLUMES

This is how many sets you should complete

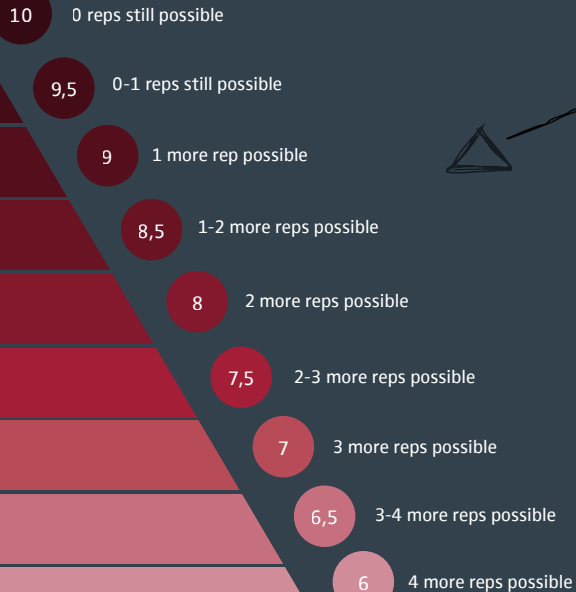
- ✓ recommended are 8-12 sets per muscle group per week – with a maximum of 12 sets per muscle group per session
- ✓ a rep range of 6–15 is time-efficient and practical – more important than the number of reps is sufficient intensity (each set close to muscle failure)
- ✓ the appropriate volume can vary depending on your training experience, intensity and frequency, as well as individual resilience and recovery capacity

[21-30]



TRAINING INTENSITY

This is how hard you should train



- ✓ the intensity can be defined as $\%1\text{-RM}^*$ or the RPE scale
- ✓ aim for an RPE of 6-8 (close to muscle failure)
- ✓ training to complete muscle failure should only be used in doses
- ✓ you can tell whether you are training hard enough by looking at your speed and your ability to speak

[30-41]

*Percent of one-repetition maximum weight

1 choose a weight that feels comfortable so that you can focus on performing the exercise correctly

2 perform the exercise with this weight until 2–4 repetitions close to muscle failure (RPE 6–8)

3 using this value, you can now refer to the %-1-RM table to determine the appropriate weight for an 8–12 repetition range

[30–41]

TRAINING WEIGHT

How to find the right weight for you

1 Whl. 100 %

2 Whl. 97 %

3 Whl. 94 %

4 Whl. 92 %

5 Whl. 89 %

6 Whl. 86 %

7 Whl. 83 %

8 Whl. 81 %

9 Whl. 78 %

10 Whl. 75 %

11 Whl. 73 %

12 Whl. 71 %

13 Whl. 70 %

14 Whl. 68 %

15 Whl. 67 %

16 Whl. 65 %

17 Whl. 64 %

18 Whl. 63 %

19 Whl. 61 %

20 Whl. 60 %

21 Whl. 59 %

22 Whl. 58 %

23 Whl. 57 %

24 Whl. 56 %

25 Whl. 55 %

26 Whl. 54 %

27 Whl. 53 %

28 Whl. 52 %

29 Whl. 51 %

30 Whl. 50 %

MULTI-JOINT VS. ISOLATION EXERCISES

How to find the right exercises

✓ for muscle building, the exercise itself is less important; training volume, frequency, intensity, and progressive overload are the crucial factors here

✓ both multi-joint and isolation exercises have their benefits

➡ focus on multi-joint exercises and choose targeted isolation exercises

! multi-joint exercises are best done at the beginning of training, as this is when the most energy and concentration are available

MULTI-JOINT EXERCISES



✓ exercises that involve multiple joints and muscle groups simultaneously



✓ advantages: high training stimulus, efficient full-body training, enhance strength and coordination

ISOLATION EXERCISES



✓ exercises that specifically target a single joint and therefore primarily a single muscle group

✓ advantages: targeted training, lower systemic stress, useful for weak spots or in rehabilitation



SET REST

How long should you rest between sets?

- ✓ for isolation exercises, a 2-minute break between sets is a good guideline
- ✓ For complex, multi-joint exercises, plan to take a 3-minute break between sets
- ✓ a longer set break of at least 4–5 minutes is required for particularly high intensities and heavy lifting
- ✓ a work-rest ratio of 1:1 or even 2:1 is recommended for training sessions designed to improve anaerobic endurance or for short, high-intensity workouts

[42-47]



TRAINING FOR BEGINNERS

You can start right away with these training plans



FULL BODY 1

A machine-focused full body workout - 8 exercises that specifically strengthen all muscle groups.



FULL BODY 2

Looking for a change? Here you can find another machine-based full body plan.



UPPER BODY

A machine-focused upper body workout with exercises for strong arms, shoulders, chest and back.



LOWER BODY

Train your lower body and core - 8 exercises to strengthen your legs, hips and core.



ISOLATION EXERCISES FOR THE UPPER BODY

How to adjust your training plan to prioritize upper body muscles



BICEPS



**BACK
vertical**



SHOULDERS



**ROTATOR
-cuff**



TRICEPS



**BACK
horizontal**



CHEST





QUADS



ISOLATION EXERCISES FOR THE LOWER BODY

How to train your core and lower body in isolation



HAMSTRINGS



ABDUCTORS



CALVES



GLUTES



ADDUCTORS



CORE



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