



Fitness & Wellnessclub



## **HiT-Training principles**

Our training principles are based on the findings of medical research and sports science.

### **1. Train once or twice a week**

Each training programme should cover the entire body and have a maximum of 10 exercises. Research into the science of training has shown that one or two sessions per week is enough to train most muscle groups provided that each exercise is done to local fatigue. If doing strength training for health, all parts of the body must be included because the transfer effect to non-trained parts is marginal.



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## **2. Train lower body muscles first**

Start by training the larger muscle groups as this quickly activates the nervous system, metabolism, hormonal circulation and cardiovascular system. Overall, this method produces a higher training stimulus. In addition, it is often easier to do exercises for the larger muscle groups correctly at the beginning of the session than at the end.

## **3. Select a training weight with which you can do each exercise for 60 - 90 seconds**

The positive phase of the exercise - lifting the weight - should take a minimum of 4 seconds. The negative phase - lowering the weight - should similarly take 4 seconds. Between the two phases, hold the complete contraction for 2 seconds.

The level and duration of tension produced in the muscle are crucial to the success of strength training. If the exercise is done as slowly as possible, this increases the level of tension in the muscle and increases the strength gain.



## **4. Avoid jerky or «explosive» movements; they are dangerous and counterproductive**



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The faster the speed of the exercise, the less control you have over it. High levels of torque increase the risk of injury. If exercise speed is increased, this reduces the level of tension in the muscle and with it the training gain.

**5. Do each exercise until the muscles involved reach local fatigue, i.e. you cannot complete another repetition**

If you can do the exercise for more than 90 seconds, make a note on your training card to increase the weight at your next session by about 5%. Similarly, if you are unable to manage 60 seconds, reduce the weight by 5%. The key to successful strength training is a gradual but regular increase in training weight. At each session, either try to extend the length of time before reaching muscle fatigue or increase the training weight. The final repetitions of each exercise are the most strenuous and the most important. It is when training intensity is at its highest and the maximum possible number of muscle fibres are required to work.

**6. Avoid help from other parts of the body, i.e. do not turn, wriggle or swing the body**

Such evasive action multiplies the force on muscles and joints and increases the risk of injury.

**7. Isolate the relevant muscles as much as possible**

That means releasing the tension in muscles not involved in the exercise. In particular, keep the muscles of the hands, neck and face relaxed.

Unnecessary static muscle contractions have a detrimental effect on output because they use energy, trigger inhibitory processes in the nervous system and put a greater strain on the cardiovascular system.



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**8. Don't hold your breath during the exercise and do not attempt exhalation against closed air passages (Valsalva manoeuvre)**

The rhythm of breathing does not have to coincide with the rhythm of the exercise.

If effort levels are too high, breathing tends to be forced. This increases pressure in the abdominal cavity and causes major variations in blood pressure.

**9. If possible, move briskly from one machine to the next for additional cardiovascular benefit**

Active muscle effort increases the oxygen requirement and so strength training increases the heart and respiratory rate. To keep both at an elevated rate during the entire session, keep the time between individual machines to a minimum.



**10. Train each muscle to local fatigue in one set**

It makes no sense to do multiple sets as training stimuli are not cumulative. All well-controlled studies using the right methodology have shown that multi-set training produces no significant benefit.



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**11. Don't increase the weight at the expense of quality**

Increases in weight should not result in a reduction in your personal range of motion (ROM). Nor should it result in evasive movements. Training over the entire ROM ensures that increases in muscle strength are in balance. Output is maximised as is the protection against injury.

**12. Enter the weight for your next session on your training card**

Clear training records make it easier for you and your instructor to monitor and plan your training.



**13. Before, during and after training, drink sufficient water - without additives**

Intensive muscle effort makes you sweat and much of this is water. Sweating, therefore, increases the concentration of electrolytes in your body. This means that it is more important to drink sufficient water during and after training than it is to add electrolytes.

**14. To give your muscles time to recover allow at least 48 hours between training sessions**



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The reduction in physical capacity after strength training is a combination of local muscle fatigue and fatigue of the central nervous system. The amount of time the body requires to regenerate can be several hours or several days; the length of time depends upon personal ability to recover and training intensity .