

# *7. Various types of physical activity and exercise*

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## *Types of activity*

There are a number of activities that can contribute to improving the individual's physical capacity. The emphasis of this chapter is on the most common types of activities offered at various fitness centres, by sports associations, private actors or that can be done on one's own. The activities are presented in alphabetical order.

### *Aerobics*

Aerobics is group exercise with step combinations, running and jumping. This form of exercise can also include strength and flexibility exercises, but this is most often not the case. Mainly, coordination and aerobic fitness are trained comprehensively. Aerobics is sometimes divided into low impact, that is to say without running and jumping, and high impact, which includes these components. A combination of low and high impact is most common. Several different types exist, such as step-aerobics, which is group training to music where one climbs up and down on a step-up board during the session. This type of aerobics involves aerobic and coordination training, that also provides a strengthening effect on the leg and gluteal muscles.

### *Aquarobics*

In aquarobics, the water acts as resistance and one can regulate the resistance oneself by decreasing or increasing the intensity. Aquarobics is a good alternative for those who are untrained or overweight since the risk of injury is minimal. Both aerobic fitness and strength are trained in a low-impact manner.

### *Aqua running*

Running in a pool with a vest or belt for greater lift and an optimal position in the water is a low-impact form of training. Aqua running is excellent for rehabilitation after injury, as well as an effective form of condition training at all levels. Greater frequency and stride provide an increased load on both muscles and the oxygen-transporting organs.

### *Ball, netball and racquet sports*

There are a number of ball/netball games and racquet sports that can affect physical fitness in various ways. Most have a positive effect on aerobic fitness, muscle strength and coordination. Activity examples include football (soccer), handball, basketball, volleyball, floorball, tennis, squash, badminton and table tennis.

### *Callisthenics*

The Nordic countries have a strong tradition with regard to various forms of group callisthenics. These have often been organised by callisthenics associations and athletic associations, as well as various private organisers. Men and women most often participate in separate training groups with different emphases. Nordic callisthenics were not originally focused on aerobic fitness and consequently differ from aerobics. The main emphasis was dynamic flexibility training, stature, balance and strength training as well as rhythm and aesthetic movements.

With a background in the blossoming fitness and aerobics wave in the U.S. in the 1970s and 1980s, new callisthenic models were developed in Scandinavia with a focus on the training of aerobic fitness. Friskis&Svettis was developed in Sweden (1) and Gymnastikk i tiden in Norway (2). Both models are based on the training of all components of physical fitness, such as aerobic fitness, muscle strength, flexibility and relaxation during an exercise session of approximately 60 minutes. In Gymnastikk i tiden, continuous aerobic training is used in accordance with the U.S. aerobics model. Friskis&Svettis uses the interval training principle with alternating aerobic, strength and flexibility exercises. Both types of exercise use music and step combinations inspired by various forms of dance and exercise.

### *Cross-country skiing*

Cross-country skiing is an activity that requires a high endurance capacity, muscle strength and balance. Cross-country skiing involves all of the major muscle groups in the body and at the same time also involves many small muscle groups in a gentle manner. Cross-country skiing requires snow, while roller skis or roller blades can be used on snowless ground. The latter two have the same movement patterns as cross-country skiing and have the same physical requirements. All three forms are technically demanding and the practitioner needs some time to learn the right technique and movement pattern.

## *Cycling*

Cycling primarily involves all major muscle groups of the legs and has a good aerobic fitness-enhancing effect. Compared with running, cycling is significantly milder on joints and muscles, which makes it a suitable conditioning activity for the untrained to begin with. In cycling, one does not need to bear one's own weight, which can make it easier for overweight persons. By cycling with higher resistance, one can also achieve good muscular training mainly of the thighs and calves. Cycling can be done outdoors on a regular bicycle or indoors on an exercise bike. Outdoor cycling requires good balance.

**Spinning** is indoor-cycling to music on exercise bikes in a group session. The instructor provides encouragement, but the individual determines how hard he or she wants to exercise by regulating the resistance on the wheel. Spinning can be effective aerobic training that also provides a strength-training effect, primarily on the legs and the gluteus muscles, but does not demand a great deal of coordination. Spinning can therefore be an alternative for those who do not like difficult movements, and the training is also non-weight bearing.

## *Dance*

Dance is a type of activity that places high demands on several components of physical fitness, such as coordination, balance, flexibility, aerobic fitness and muscle strength. Dance is most often done to music or some other form of rhythm accompaniment. There are a number of different forms of dance, such as boogie-woogie, disco/freestyle, hiphop/break, rock'n'roll, salsa, sport dance, street jazz/funk, capoeira, cheerleading, country and line dance, drill dance, flamenco, folk dance, old-time dance and ballroom dance.

## *Nordic walking*

Compared with regular walking, Nordic walking involves more muscles in the body because the upper body is used more actively. This way, the heart rate, oxygen consumption and energy expenditure can be increased, which provides a good effect both on aerobic and muscular fitness. In addition, the hip, knee and ankle joints are unloaded to some degree when walking in hilly terrain if poles are used. Use the poles rhythmically, and walk with a skiing stride (right foot-left arm, left foot-right arm). Choose a pole length that provides a good hold and a pleasant pendulum movement. To obtain the right pole length, the body height can be multiplied by 0.7. Preferably choose poles of an adjustable length.

## *Pilates*

Pilates is a type of activity that consists of a system of exercises developed by Joseph Pilates in the early 20th century. In pilates, muscle strength and flexibility are combined with a focus on concentration, balance, breathing and relaxation. Pilates training has the objective of building up strength in the entire body with an emphasis on the abdominal and the back muscles. The aim is to achieve bodily control by working with calm and precision. Great

importance is placed on active breathing and the execution of the movements. Pilates can be done as group training on mats with various types of preps, such as balls, rings and weights, or individually with or without special equipment.

### *Qigong*

Qigong is an old Chinese form of therapeutics that is practiced by millions of Chinese for health-prevention purposes in accordance with the philosophy of traditional Chinese medicine. Qigong combines soft and slow movements with relaxation, concentration and breathing exercises to strengthen and balance the entire body. Qigong is a tool for relaxation and to reduce stress.

### *Rowing/canoeing*

Rowing and canoeing provide a good exercise effect, especially in terms of aerobic fitness, but also in terms of muscle strength. Both types of activity involve most major muscle groups in the entire body. However, rowing also involves the leg muscles to a greater extent than canoeing, and can also be practiced indoors on a rowing machine.

### *Running*

Running is an activity that places great demands on aerobic fitness due to the involvement of major muscle groups. Running can be done year-round both indoors and outdoors, which makes the activity easily accessible. The disadvantage of running is that it impacts the muscles, ligaments and joints relatively hard, which can lead to overload and attrition injuries. Those beginning to run should remember to proceed cautiously, in other words begin with shorter distances and gradually increase the distance of the exercise route and the number of exercise sessions per week.

### *Step-machine/cross-training*

Training on a step-machine is based on the same movement pattern as walking up stairs, while cross-training creates a movement pattern that is a mixture between running, cycling and cross-country skiing. Cross-training involves a softer movement pattern without the high impact that regular running provides. The strength training effect is somewhat less than in cycling, but with the active addition of the muscles in the upper part of the body. In step-up and cross-training, it is primarily aerobic fitness that is improved. The continuous, soft movements provide a moderate muscle load and low impact on, for example, joints. Thus, this form of exercise can be valuable in rehabilitative training after injury.

### *Strength training in a group session*

Strength training can be practiced individually or in a group, with or without equipment. Fitness centres often offer group training with weight bars, barbells or special rubber-bands to music. The participants each work with their own equipment and if one wants to increase the intensity, additional weights or heavier barbells/rubber bands are added. This is a comprehensive form of strength training where large parts of the body are activated with an emphasis on muscular endurance and a unique alternative for those who want to become thoroughly trained without building large muscles. Everyone works according to their own ability. However, correct lifting technique is important.

### *Swimming*

Swimming can be done both indoors in a pool or outdoors. The most common disciplines are the breast stroke, back stroke and crawl. Swimming is a non-weight bearing activity and a good alternative for overweight people, in part because there is little risk of injury.

### *Yoga*

Yoga means union, and is an old mental and physical form of activity with roots in Asian culture. The objective of yoga is to find inner peace. There are several branches in yoga and the one that has become most renown in the Western World is the physical yoga that is based on body positions (*asanas*), breathing (*pranayama*) and meditation (*dhyana*). By using physical exercises/positions, breathing techniques, deep relaxation and meditation, one tries to strengthen the body and mind in a balanced and natural way. An exercise session consists of a number of different exercises. Some exercises are easy and others a little more difficult, but the exercises can always be individualised. The exercises are combined with breathing, by inhaling and exhaling through the nose. The desired effect of yoga is less stress and tension physically, mentally and emotionally, as well as greater flexibility and strength.

### *Walking*

Walking is often viewed as the simplest and most natural form of exercise. Walking is mild on muscles and joints, and at the same time an activity that most people can do and requires a minimum of equipment – only a pair of good shoes. When walking, large muscle groups, mainly in the legs, are involved. For the untrained, it can be an advantage to begin with a brisk walk on a flat surface, while the slightly more trained should choose more hilly terrain. Walking on a steep incline involves the gluteal, thigh and calf muscles to a greater extent, which places considerable demand on the oxygen transporting organs. For those who cannot run, but still want to have real aerobic training, walking on a treadmill with an incline is an alternative. Also see the section on Nordic walking.

## *References*

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