

ROLLPILATES

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ABOUT PROJECT

The team of three lecturers from the University Sports Centre at the Faculty of Sports Studies, Masaryk University are the authors the project aiming to open and introduce a new sports course named Rollpilates. The course introduces the involvement of the sports aid called “roller” in exercising. The project is based on the experience with the Pilates method, its positive influence on the core muscle strengthening and stretching, on the posture and the muscle dysbalance removal. It also reacts to the interest of university students in Body and Mind exercise forms. The newly established course will be integrated in the regular compulsory and optional semestral offer of the sports courses at the Sports University Centre in the spring term 2016. The course will be taught both in Czech and English language, and it will be offered to Czech students and foreign students coming to the university to study their studying programmes in English here. The ground of the course is the Pilates method, but it focuses on the exercise with rollers primarily. The exercise is enriched with the fascia-oriented training, which is a new kind of exercise based on the use of different stretching methods. The fascia-oriented exercise is gradually being introduced in various sports fields, mainly abroad so far. The opening of the new course was also initiated by the university students’ increasing concern in the modern and interactive conception of the sports education based on the remedial exercise. This is in accordance with the long-term goal of the university to support students’ active and healthy lifestyle, and to encourage university students for the body and health care, and the health prevention.

ROLLPILATES

The name Rollpilates consists of two words. The word *roll* means rolling, wheeling and *Pilates* is a widely spread and popular exercise method. Rollpilates is a system combining Pilates and the fascia-oriented training, whose ground is based on various types of stretching, and which incorporates rollers into the system.

Pilates

The basis of Rollpilates is the Pilates method. Its founder J.H.Pilates (1880-1967) was born in Germany and in 1926 left for New York where he opened his exercise studio with the support of his wife. Their first clients were dancers mainly, but sportspeople, actors, actresses and higher-class people started coming soon too.

The method became very popular because it is a complex exercise set suitable for everybody without any age, fitness or skill restrictions. The programme is suitable for beginners, pre-intermediate or advanced individuals. The emphasis is put on the correct posture, breathing and the core stabilization. The core muscle (powerhouse) initiation is the first step in Pilates. The method involves lateral breathing, which helps to activate the abdominal muscle during exercising. We should never hold the breath. We should inhale through the nose and exhale through the mouth, even when doing the most difficult exercise. The Pilates system helps to correct posture and muscle dysbalances, to create new and correct locomotory stereotypes without any muscle tension. It supports the fitness, and it shapes the body. Another goal is to balance both body and mind.

Pilates is used for some treatments in rehabilitation, by sportspeople in their training and it is popular in the public. In its basic form it is a kind of exercise on mats. To improve the quality and increase the efficiency, different types of equipment and sports aids are used. Various balance aids are popular these days to increase the instability. They support better the involvement of the core muscle system and increase the level of the difficulty of exercise. People should master the basic versions of the exercise correctly first, because incorrect exercising might cause wrong breathing, dysbalances and other health problems. The system was really well-developed by Joseph Pilates, but it is constantly enriched with a new scientific knowledge. The Pilates lectures have opened the system to modern inputs and they are incorporating the knowledge of the fascia-oriented training in it nowadays too. The influence of the Integrated Systems Model (ISM) by Diane Lee, the Canadian therapist, who

introduced new information about the core stabilization, the connective tissue and the fascial network, brought new trends into Pilates. The Fascial-Oriented Pilates Training started in 2001 and the system is enriched by the training of the neuromyofascial net. In accordance with the Pilates and Fascia-Oriented Training principles new movement sequences are formed and long myofascial chains are involved in the exercise process. The movements are multi-directional and their rhythm, frequency and pace change. It is a young system, which is still in progress and it aims to establish a comprehensive programme working with complex neuromyofascial meridians.

Stretching

Stretching is the basics of the fascial fitness, so we would like to introduce it a bit deeper. Originally, stretching is an English word meaning “protraction, expansion, elongation, stretch”. It is a special kind of exercise which extends flexibility and mobility, helps to prepare the body for motion load and strain, but it also prevents against injuries.

According to Buzková (2006) the main goal of stretching is “to stretch muscles optimally and to develop the range of motion without any negative effects, to decrease muscular tension after motion activities and to maintain muscles flexibility.” It optimises the shape of the neuro-muscular system before sports performances, prevents muscles from their possible injuries and some muscular diseases. It also supports the prevention of joints. Stretching prepares the body for the strain and locomotion and sports performance.

Stretching Types

According to Nelson & Kokkonen (2007), stretching may be divided into four basic kinds:

- Static stretching
- Dynamic stretching
- PNF stretching (proprioceptive neuromuscular facilitation)
- Ballistic stretching

Besides the above mentioned types, Buzková (2006) defines some other stretching types:

- Active stretching
- Passive stretching
- PIR method (post-isometric relaxation)

- Rhythmic stretching
- Repetitive stretching
- Power stretch
- Balance stretch

Static Stretching

It is a stretching method which does not require much energy expenditure and gives enough time to “shift” the possibilities of the stretch reflex. The method uses dwells and has two parts. First, the muscular tension is released and consequently the flexibility is increased. The danger of injury is very low during the static stretching. The muscle is stretched ultimately and then, the dwell for 20 seconds – 2 minutes is recommended according to some reference sources. In the static stretching to hold the breath is not advisable. The range of motion is extended when you breathe out. The static stretching can be used for the improvement of flexibility (Alter, 1994, Buzková, 2006).

Dynamic Stretching

Dynamic stretching is a pointed kind of stretching, which uses the kinetic energy, and where we fluently move from one pose to another. The controlled moves of the given range and speed predominate. Dynamic stretching is preferred more and more for warm-ups, because it is suitable for their specific requirements. In this kind of stretching we gradually increase the speed of movement or the range of motion, or both these aspects simultaneously. This is a relatively new stretching method which is used for the improvement of the joint mobility and it can also be used for the lengthening of warmed-up muscles, if it is necessary to maintain the increased pulse rate. It requires more repetitions. The advantages of dynamic stretching are the possibilities to transfer movement patterns and the range of motion to given sports activities and to improve dynamic flexibility (Buzková, 2006, Cacek & Bubníková, 2009).

PNF Stretching (Proprioceptive Neuromuscular Facilitation)

It is an active stretching method connected with the method PIR. After the muscle contraction, the phase of release follows with the subsequent muscle lengthening. The strain loads the muscle in a static way first for 5-10 seconds, and then it relaxes for 3-5 seconds. Subsequently the muscle is lengthened in a static way again for 10-15 seconds. When dwelling in the pose it is essential to breathe in. When releasing or moving for another pose it is essential to breathe out. This is probably the most effective stretching method, which is not used enough and which deserves more attention and a wide use (Buzková 2006, Cacek, Grasgruber, Bubníková & Strachová, 2008). A certain disadvantage of the method is that it is time-consuming and to perform the method correctly, a high level of proprioception is vital (Slomka & Regelin, 2008).

Ballistic Stretching

It is a swinging and springing kind of stretching, where the impulse is applied at the beginning of movement and then it is performed in an inertial way. One of the disadvantages of this method is a short period of dwelling in the ultimate pose. Another substantial disadvantage is the high probability of possible injuries. It is vital to perform this method very carefully. Primarily the method is used by professional athletes. It perfectly prepares warmed-up muscles for the load, but it does not extend the range of motion and flexibility (Buzková, 2006).

Other stretching methods and their characteristics according to Buzková (2006):

Active Stretching

Stretching is performed without any extrinsic power influence. It is a method where dwelling in the ultimate pose is performed intentionally. The period of 30-60-second dwelling in the ultimate pose is advised.

Passive Stretching

The method is used in rehabilitation and it is performed with the use of the extrinsic power influence (the body weight plus the other person). When the method is applied, consideration and communication between the involved people is absolutely essential, because it prevents possible muscle damage.

PIR Method

The post isometric contraction is performed first, with no changes in the muscle fibre length during the muscle activation. This phase lasts about 8 seconds with the subsequent release for about 3 seconds. Then the muscle lengthening for 20-30 seconds is employed.

Rhythmic Stretching

It is a combination of the static and dynamic stretching. There are several ways of its performance. Most frequently the first phase involves dynamic stretching followed with the static one. After several repetitions, the movements stop, and the person stays in the static pose.

Repetitive Stretching

Mini-bounces are employed in the ultimate position, which means that muscles are elongated when they are active.

Power Stretch

The core muscle activation and stabilization is stressed during exercising. The muscles in the lumbar area are activated, and the spine is elongated when inhaling. Power stretch involves dynamic and passive stretching, the power of antagonists is involved as well as the changes of the close and open positioning of pelvis. Besides flexibility, the method develops the power and balance, improves muscle dysbalances and supports the posture.

Balance Stretch

To increase demands and to stimulate deep core muscles, the method uses balance poses. If we want to increase the demands more, it is possible to extend the range of motion, to close the eyes, or to involve the arms.

Static vs. Dynamic Stretching

Polemics about the suitability and appropriateness of stretching before sports performances are quite frequent these days. Generally, the use of the static stretching before the sports performance, the development of flexibility with the use of static stretching after the sports performance and the positive influence of dynamic stretching focused on the dynamic power before the sports performance are accepted (Cacek & Bubníková, 2009).

Static stretching applied after the sports performance has a positive impact on the improvement of flexibility in the long-term context. Because stretching is employed after the performance, it does not have any negative impacts on it. The optimally developed flexibility enables to perform the intended movement at the full range. This kind of stretching should be involved in the training process regularly. Nevertheless it should not be a part of warm-up, but it should be employed after the sports performance (Cacek & Bubníková, 2009, Foretník 2010).

Fascialfit: fascia-oriented training

Connective tissue works in the human body as one interconnected whole, it is omnipresent and goes deeply from the surface into the core, where it wraps all body structures and organs. It is spread from top of our head to the tips of the toes. Its cells vary in the shape and function, but they support our anatomical integrity. The fascial network plays an inevitable role in every human body. It interconnects its structures and organs and enables them to glide smoothly against each other thanks to its elasticity, plasticity and flexibility. It has many other functions in the body, such as supporting or mechanical one. It supports the intake of nutrients and the waste substance flow, the water circulation. It protects the body against the outer unwelcome impacts. In the course of life the tissue undergoes

histological, morphological and other changes. Negative impacts, diseases, injuries, stress, painful and inflammatory processes influence its condition. They reduce its elasticity and some types of the connective tissue even become matted. Research findings show that a healthy fascial network is highly elastic and if the elasticity decreases it is possible to train it with the use of the correctly selected exercise. It remodels its architecture, rehydrates the tissue and restores the elasticity. The exercise also supports the involvement of the fascial kinetic energy in locomotion, which improves the locomotive performance and capacity.

How exactly can we train the fascial network? The problem is still under wide research, both in the lab and gym. But we know that we can train this net. This training does not bring any new type of exercise, we use what we know, and we only adopt these well known kinds of exercise slightly. The training has its basic principles formed in accordance with the research findings done in the field of the connective tissue.

It is sufficient to train for 15-20 minutes twice or three times a week only. The fascial net reacts more slowly, the first changes come after three months and the whole process can take up to two years. The induced changes are more durable than in the muscular tissue, though.

The fascia-oriented training can have different goals and these tasks influence the training structure. We use and change different forms of stretching to improve the elasticity, remodel the tissue architecture, or to learn how to use the fascial kinetic energy more efficiently. Long-lasting utilization of one stretching form and endless repetitions of the same exercise is not suitable. We use slow and fast dynamic stretching, the active and passive, bouncing, rhythmical and repetitive forms of stretching. It is vital to engage the balance exercise to increase a level of the difficulty, to offer more variety and diversity and to stimulate proprioception. The creativity and experience of lecturers is desirable, because slight modifications are effective. The longest possible myofascial chains should be involved and stretched, multi-directional motions and rotations and twists applied. One exercise battery without any modifications does not work in the fascia-oriented training. Rollers and other balance aids ought to be integrated into the stretching sequences. The utilization of a specific self-massage is included if the fascial rehydration and release are focused on. It is a slow massage in which an individual positions themselves on top of a roller and rolls over it. The slow, fluent and multi-directional accomplishment as well as the appropriate loading is very important and absolutely essential. The loading can be regulated by different positioning of various body areas on a roller. The massage might seem a bit painful first, but shortly the first discomfort disappears, and the conditions of the fascial network improve, soreness retreats. The fascial release can be also performed without the roller. The slow, pleasant, smooth, relaxed and nonviolent stretching in lying, sitting or standing poses with multi-directional motions and rotations fulfils this function too. The concentration on the deep

breathing and the feel of a mat, chair or ground should be involved, yawning is advisable. This stretching is similar to the stretching activity we naturally do in bed in the morning after waking up.

Main principles

Gracefulness

Motions should be utilized in a relaxed, fluent, soft and quiet way with minimum force. Jerky movements, violent and rash changes or excessive loading does not support the process of the fascial network remodelling.

Variability

The fascia-oriented training means using as much variability when exercising as possible, which means modifications, changes in rhythm, pace and positioning. Repetitive, recurring and cyclical programmes are not appropriate.

Comprehensiveness

Complex movements are significant. We should not train isolated muscles or muscle groups, but the longest possible myofascial chains.

Consciousness

Movements are performed consciously. We should fully concentrate on the performance. There are many proprioceptors in the fascial network and their activation influences the restoration of the net.

Preparatory countermovement

If we want to consume the kinetic energy of the fascia, it is advisable to start movements with the preparatory countermovement. We start it with slight pretensioning in the opposite direction. The fascia becomes actively pretensioned and its dynamic recoil action supports the muscle work and enhances the performed movement.

Fascial Rebound and Fascial Stretch

These principles include stretching. Slow dynamic stretching is used to stretch the tissue and fast dynamic stretching is used to involve the kinetic energy of the fascia in the process of locomotion, exercise or the sports performance.

Foam rollers

The first person who used rollers in physiotherapy was Mr. Feldenkreis, his first rollers were wooden. In the 1970's he met foam rollers and started to use them. Another promoter was a physiotherapist Mike Clark, who worked with professional athletes. He used rollers for acupressure, and later recommended them to athletes to release the muscular stiffness and tension and promoted them as a reasonably cheap alternative to self-treatment and soft tissue therapies. He also used rollers to work with trigger points, small tight areas within the muscle tissue, painful in palpation. Today foam rollers are used in various types of exercise for self-myofascial massage or as sports balance aids. They enable more effective core muscle work, promote the blood circulation, and thus improve the intake of nutrients and take waste substances away in cells more efficiently. They support stretching and body shaping, help to unblock problems in the neck spine area. The massage with rollers releases muscles and fascia, and restores balance in the whole locomotive system.

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EXERCISE BATTERY

EXERCISE 1 THE
HUNDRED

EXERCISE 2 ROLL UP

EXERCISE 3 ROLL
OVER

EXERCISE 4 SINGLE
LEG CIRCLES

EXERCISE 5 SINGLE
LEG LIFT

EXERCISE 6 DOUBLE
LEG LIFT

EXERCISE 7 SCISSORS

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EXERCISE 9 ROLLING
LIKE A BALL

EXERCISE 10 SINGLE
LEG STRETCH

EXERCISE 11 DOUBLE
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EXERCISE 12 CRISS
CROSS

EXERCISE 13 SPINE
STRETCH

EXERCISE 14 SAW

EXERCISE 15 SWAN

EXERCISE 16 BRIDGE

EXERCISE 17 SPINE
TWIST

EXERCISE 18 TEASER

EXERCISE 19
SWIMMING

EXERCISE 20 LEG PULL

EXERCISE 21 LEG PULL
FRONT

EXERCISE 22 SIDE
KICKS

EXERCISE 23 PUSH UPS

EXERCISE 24 FASCIAL
MASSAGE

EXERCISE 25 - 28
FASCIAL STRETCH,
ELASTICITY,
ELASTICITY REBOUND -
video



EXERCISE 1 THE HUNDRED

Setup: lie with the back on the roller, the legs bent and at hip-distance apart, the feet on the ground, the arms stretched long to the sides (photo 1).

Action: move your arms up and down (photo 2).

Modification 1: roll the spine up as far as the bottom part of the blades (photo 3), move your arms up and down (photo 4).

Modification 2: lift the R/L bent leg (photo 5), move your arms up and down (photo 6).

Precision Points: keep the pelvis in neutral position, breathe in or out for 2-5 pumps.



photo 1



photo 4



photo 2



photo 5



photo 3



photo 6

EXERCISE 2 ROLL UP

Setup: lie with the back on the roller, the legs bent and at hip-distance apart, the feet kept on the ground, the arms long and lifted to the ceiling (photo 1).

Action: roll up vertebra by vertebra as far as you sit (photo 2 - 4).

Precision Points: roll up fluently, do NOT jerk and do NOT lift the shoulders towards the ears.

Purposes: stretching of the back muscles, strengthening of the abdominal muscles, spine release.



photo 1



photo 3



photo 2



photo 4

EXERCISE 3 ROLL OVER

Setup: lie with the sacrum on the roller, lengthen the legs long to the ceiling, the arms long to the sides with the palms holding the roller (photo 1).

Action: lift the pelvis, breath out and roll the low back part of the spine over as far as the legs are parallel with the ground. Breathe in and flex the feet (photo 2), breathe out and reverse the motion to roll back down slowly and fluently.

Precision Points: engage the abdominal muscles, do NOT jerk when rolling the low back up.

Purposes: strengthening of the abdominal muscles, strengthening and stretching of the gluteal, back and femoral muscles.



photo 1



photo 2

EXERCISE 4 SINGLE LEG CIRCLE

Setup: lie with the back on the roller, the legs bent, one foot on the ground, the other leg lifted to the ceiling, the arms long to the sides with the little finger edges on the ground (photo 1).

Action: circle the lifted leg, the knee is leading the motion.

Modification 1: lengthen one leg long to the ceiling (photo 2) and circle it.

Precision Points: breathe in when doing the first semi-circle, breathe out during the other semi-circle, keep the pelvis motionless in face of a moving leg, the motion starts in the hip joint.

Purposes: strengthening of the abdominal muscles, hip release.



photo 1



photo 2

EXERCISE 5 SINGLE LEG LIFT

Setup: lie with the back on the roller, one legs bent, the foot on the ground, the other leg stretched to the ceiling, the arms long to the sides with the little finger edges on the ground (photo 1).

Action: breathe in and move the stretched leg lower to the other knee (photo 2), breathe out and reverse the motion, move the leg back.

Modification 1: breathe in and move the stretched leg lower to the other knee, the foot is flexed (photo 3), breathe out and reverse the motion, lift the leg back.

Modification 2: breathe in and move the stretched leg lower to the other knee, the foot pointed, breathe out and reverse the motion, lift the leg back, the foot is flexed, or vice versa.

Precision Points: keep a perfectly still torso and the pelvis motionless, do NOT tilt the head back.

Purposes: stabilization and strengthening of the core muscles, strengthening and stretching of the leg muscles.



photo 1



photo 3



photo 2

EXERCISE 6 DOUBLE LEG LIFT

Setup: lie with the sacrum on the roller, lengthen both legs long to the ceiling, the feet pointed, the arms long to the sides with the palms holding the roller (photo 1).

Action: breathe in and lower long legs a little (photo 2), breathe out and move the legs back.

Modification 1: with the feet flexed (photo 3), breath in and lower long legs a little (photo 4), breath out and move the legs back.

Modification 2: lie with the back on the roller, lengthen both legs long to the ceiling, the feet flexed, the arms long to the sides (photo 5). Breathe in and lower long legs a little (photo 6), breathe out and move the legs back. You can move the legs with the feet pointed (photo 7).

Precision Points: do NOT move your lower back, keep a perfectly still torso and the pelvis motionless, do NOT tilt the head back. If you cannot keep the position, reduce the range of motion.

Purposes: stabilization and strengthening of the core muscles, strengthening and stretching of the leg muscles.



photo 1



photo 3



photo 2



photo 4



photo 5



photo 7



photo 6

EXERCISE 7 SCISSORS

Setup: lie with the sacrum on the roller, lengthen both legs long to the ceiling, the feet pointed, the arms long to the sides, the palms holding the roller (photo 1).

Action: move one leg toward your shoulders, while letting the other one lower half way to the floor, the feet pointed (photo 2) or flexed (photo 3).

Modification 1: lie with the back on the roller, lengthen both legs long to the ceiling, the feet pointed, the arms long to the sides on the ground (photo 4). Move one leg toward your shoulders, while letting the other one lower half way to the floor, the feet pointed (photo 5-6) or flexed.

Modification 2: lie with the back on the roller, lengthen both legs long to the ceiling, the arms long to the sides on the ground, switch moving the legs to the sides, the feet pointed (photo 7) or flexed (photo 8).

Precision Points: breathe regularly, do NOT hold the breath. If you move the legs too much, you cannot keep the powerhouse. Do NOT move your lower back, keep a perfectly still torso and the pelvis motionless, do NOT tilt the head back.

Purposes: stabilization and strengthening of the core muscles, strengthening and stretching of the leg muscles, the improvement of coordination.



photo 1



photo 3



photo 2



photo 4



photo 5



photo 7



photo 6



photo 8

EXERCISE 8 BYCICLE

Setup: lie with the back on the roller, the legs bent, one foot on the ground, the other leg lifted to the ceiling, the arms long to the sides with the little finger edges on the ground (photo 1).

Action: breathe in and stretch the lifted leg (photo 2), continue moving the leg down (photo 3), breathe out and bend the leg, move it toward your face (photo 4), and back (photo 5), switch the legs. You can reverse the direction of the motion.

Precision Points: concentrate on the leg stretch.

Purposes: stabilization and strengthening of the core muscles, strengthening and stretching of the leg muscles, the improvement of coordination.



photo 1



photo 3



photo 2



photo 4



photo 5

EXERCISE 9 ROLLING LIKE A BALL

Setup: sit with the legs bent and above the ground, hold the roller under the knees (photo 1).

Action: look down to your navel, and maintain your back in an even C-curve, breathe in and roll back (photo 2), breathe out and roll up (photo 3).

Modification 1: with the roller in your hand and between the ankles (photo 4), look down to your navel, and maintain your back in an even C-curve, breathe in and roll back (photo 5), breathe out and roll up (photo 6).

Precision Points: keep the curve, tilt your head forward, keep your eyes on your belly, the feet are lifted just above the ground. When rolling back, direct the feet up to the ceiling. Keep your head off the floor! Do not jerk, roll with the work of your abdominal muscles.

Purposes: Massages and release of the spine and back.



photo 1



photo 3



photo 2



photo 4



photo 5



photo 6

EXERCISE 10 SINGLE LEG STRETCH

Setup: lie with the back on the roller, the bent legs lifted to the ceiling, the arms long to the sides with the little finger edges on the ground (photo 1).

Action: breathe out and reach one leg out long, the knee of the other leg move toward your face (photo 2). Breathe in and start switching the leg, breathe out when reaching the other leg out long (photo 3). Keep switching the legs fluently.

Modification 1: sit on the roller, the legs bent and at hip-distance apart, the feet on the ground, the arms on the ground behind the roller (photo 4). Lift both legs, move one knee toward the face and reach the other leg out (photo 5), switch the legs (photo 6).

Modification 2: sit on the roller, the legs are bent, hold the roller with your hands. Keep lifting the bent legs up alternately (photo 7-8).

Precision Points: lift the leg with the work of your abdominal muscles. The hip, knee and ankle are in the same line. If you manage to keep your pelvis motionless, you can lower the stretched leg.

Purposes: strengthening of the abdominal, femoral and gluteal muscles, the improvement of coordination.



photo 1



photo 3



photo 2



photo 4



photo 5



photo 7



photo 6



photo 8

EXERCISE 11 DOUBLE LEG STRETCH

Setup: lie with the back on the roller, the bent legs lifted to the ceiling, the arms long to the sides with the little finger edges on the ground (photo 1).

Action: breathe in and reach both legs out (photo 2), breathe out and bend both knees back toward your chest (photo 3).

Modification 1: lie with the back on the roller, roll your head and spine as far as the low thoracic vertebrae up, lift the bent legs to the ceiling, the arms long to the sides with the little finger edges on the ground (photo 4). Breathe in and reach both legs out (photo 5), breathe out and move the legs back toward your chest.

Precision Points: extend your legs just as high as they allow you to keep your pelvis motionless, move the knees toward your chest with the work of the abdominal muscles.

Purposes: strengthening of the abdominal, femoral and gluteal muscles.



photo 1



photo 3



photo 2



photo 4



photo 5

EXERCISE 12 CRISS CROSS

Setup: lie with your back on the roller, one leg is reached out and pointed, the other one bent, the foot on the ground, the arms long to the sides with the little finger edges on the ground (photo 1).

Action: breathe out and roll your head and spine as far as the low part of the blades up (photo 2). Keep your spine long, breathe in and put your left hand under your head. Breathe out and rotate the torso and left shoulder toward the bent right knee (photo 3), breathe in and move back. Repeat several times and then switch the side.

Precision Points: engage and challenge the abdominal muscles.

Purposes: strengthening of the abdominal muscles and the torso rotators, the femoral and gluteal muscles in the stretched leg, the improvement of coordination.



photo 1



photo 3



photo 2

EXERCISE 13 SPINE STRETCH

Setup: sit tall on the roller, the legs stretched, the feet flexed and the arms straight out toward the feet, the spine and pelvis in neutral position (photo 1).

Action: breathe in and lengthen the spine, breathe out and roll forward vertebra by vertebra (photo 2). Breathe in and roll back up vertebra by vertebra.

Modification: lie on the mat, the feet flexed, the arms stretched to the ceiling and holding the roller (photo 3). Roll up gradually (photo 4) and fluently as far as you sit (photo 5). Continue rolling forward (photo 6) and roll back vertebra by vertebra to the mat.

Precision Points: do NOT slump the pelvis, rolling starts in the neck spine, reach forward "up and over a big ball", roll your shoulder blades away from your ears.



photo 1



photo 4



photo 2



photo 5



photo 3



photo 6

EXERCISE 14 SAW

Setup: sit tall on the roller, the legs slightly wider than your shoulders, the feet pointing to the ceiling, the arms stretched to the sides (photo 1).

Action: breathe in and lengthen the spine. Breathe out and twist the upper part of the torso, head and the right arm to the left, lean forward gradually. The right little finger is pointed toward the left little toe (photo 2). Breathe in and roll back up, breathe out and switch the sides (photo 3).

Precision Points: Keep your curve as you reach and keep your pelvis motionless.

Purposes: improvement of the spine mobility, strengthening of the torso rotators and back muscles, strengthening and stretching of the back muscles in the legs.



photo 1



photo 3



photo 2

EXERCISE 15 SWAN

Setup: Lie on your stomach, the arms stretched out on the roller, the palms facing each other. The legs lengthened on the ground, the forehead on the ground, the pelvis in neutral position, the spine long (photo 1).

Action: press the hands against the roller and roll your shoulder blades away from your ears. Breathe in and gently roll up (photo 2), breathe out and roll back fluently.

Precision Points: the legs slightly wider than your shoulders, the spine stretched out as doing the exercise, the head in prolongation.

Purposes: strengthening of the back and gluteal muscles.



photo 1



photo 2

EXERCISE 16 BRIDGE

Setup: lie on the back, the legs bent and slightly wider than your shoulders, the feet on the roller, the pelvis in neutral position, the arms long to the sides with the little finger edges on the ground.

Action: breathe in and push the feet into the roller. Breathe out and tilt the pelvis (photo 1), breathe in and roll up vertebra by vertebra (photo 2) to the bridge, the shoulders, pelvis and knees diagonal-wise (photo 3). Breathe out and roll back down to the ground vertebra by vertebra: your upper back, mid back, low back, and finally your tail bone.

Modification: only lift the pelvis off the ground and put it back down (photo 1).

Precision Points: anchor your shoulder blades into the mat and the feet into the roller.

Purposes: strengthening of the leg and gluteal muscles, spine release.



photo 1



photo 3



photo 2

EXERCISE 17 SPINE TWIST

Setup: sit on the roller, the legs bent and slightly wider than your shoulders, the feet on the ground, the arms stretched to the sides, palms facing forward (photo 1).

Action: breathe in and stretch the spine out, breathe out and twist the torso to the right (photo 2). Breathe out and twist back to the midline, switch to the left side.

Modification 1: to ease the action, lay your hands on the forehead, the arms folded, twist to the right (photo 3) and left.

Precision Points: anchor sit bones to roller, keep the spine long as twisting, the torso, arms and head rotate as one block.

Purposes: improvement of spine mobility, strengthening and stretching of the back and abdominal muscles.



photo 1



photo 3



photo 2

EXERCISE 18 TEASER

Setup: lie with the back on the roller, the legs bent and at hip-distance apart, the feet on the ground, the arms stretched long to the sides with the little finger edges on the ground (photo 1).

Action: breathe in, lift and stretch one leg toward the other knee (photo 2), breathe out and move the leg back, breathe in and lift the other leg.

Modification 1: lift and reach right/left leg out (photo 3), breathe in and lift the arms off the ground, breathe out and roll the head and upper back up (photo 4), stay and breathe in, breathe out and return.

Precision Points: the knees are in the same line as reaching one leg out, move fluently, do NOT jerk.

Purposes: strengthening of the abdominal muscles, stretching and release of the spine.



photo 1



photo 3



photo 2



photo 4

EXERCISE 19 SWIMMING

Setup: knee down, the hands on the roller, long spine and the head prolonged (photo 1).

Action: breathe out and raise the right arm and left leg, lengthen them away (photo 2). Breathe in and return, switch to lift the opposite arm and leg.

Modification 1: knee down, the knees on the roller (photo 3). Breathe out and raise the right arm and left leg, lengthen them away (photo 4). Breathe in and return, switch to lift the opposite arm and leg.

Modification 2: lie with the hips on the roller, the forearms and little finger edges on the ground, the legs long (photo 5). Breathe out and raise the right arm and left leg, lengthen them away (photo 6). Breathe in and return, switch to lift the opposite arm and leg.

Precision Points: stabilize the low back, engage the abdominal muscles, keep your head prolong, do NOT move the pelvis. To stabilize the shoulder blade as raising the arm, the little finger edge faces the ground.

Purposes: strengthening of the back, gluteal, femoral, and arm muscles.



photo 1



photo 3



photo 2



photo 4



photo 5



photo 6

EXERCISE 20 LEG PULL FRONT

Setup: press-up with the hands on the roller, the palms under shoulders, the fingers pointed forward (photo 1).

Action: breathe in and raise one leg, lengthen it away (photo 2), breathe out and return the leg, switch to the other leg (photo 3).

Modification 1: press-up with the forearms on the roller (photo 4), breathe in and raise one leg, lengthen it away (photo 5), breathe out and return the leg, switch to the other leg (photo 6).

Precision Points: head to heel like steel, roll your shoulder blades strongly away from your ears, keep wide shoulders, lengthen your neck away, the pelvis and hips stabilized.

Purposes: strengthening of the core, gluteal, arm and leg muscles, stretching of calf muscles including Achilles tendon.



photo 1



photo 4



photo 2



photo 5



photo 3



photo 6

EXERCISE 21 LEG PULL BACK

Setup: sit on the ground with the legs on the roller, the fingers pointed forward (photo 1).

Action: push the palms into the ground, breathe in and lift your body up (photo 2). Breathe out, raise left leg and lengthen it away (photo 3), breathe out and return. Breathe in and switch to the right leg (photo 4).

Precision Points: the head prolonged, palms under shoulders, the chin moved slightly back, do NOT relax or twist the pelvis.

Purposes: strengthening of the abdominal, gluteal and femoral muscles, the muscles around the shoulders and triceps.



photo 1



photo 3



photo 2



photo 4

EXERCISE 22 SIDE KICKS

Setup: lie on the forearm with the roller under the hip (photo 1).

Action: breathe in and lift one leg 30-40cm above the ground, lengthen it away (photo 2), breathe out and return back.

Modification 1: flex the foot, breathe in and lift one leg 30-40cm above the ground, lengthen it away, (photo 3), breathe out and return back.

Modification 2: breathe in and lift one leg 30-40cm above the ground, lengthen it away (photo 2), breathe out and tip forward (photo 4), breathe in and close the legs, breathe out and tip behind the body (photo 5).

Modification 3: knee down one hand on the roller, the leg lengthened away (photo 6). Breathe in and raise the leg (photo 7), breathe out and return back.

Modification 4: knee down one hand and knee on the roller, the leg lengthened away (photo 6). Breathe in and raise the leg (photo 9), breathe out and return back.

Precision Points: keep the spine long, the head is prolonged, roll the shoulder blades away from your ears, stabilize the torso. In modification 1 and 2: keep the hips in the line one above the other. You can tip several times before raising the leg up and flex the foot (photo 10) in modification 2.

Purposes: strengthening of the core, gluteal and leg muscles, development of equilibrium.



photo 1



photo 2



photo 3



photo 7



photo 4



photo 8



photo 5



photo 9



photo 6



photo 10

Transitional pose:

This exercise can be used when switching to the other side.

Setup: press-up with the forearms and little finger edges on the ground, the roller under the thighs, the legs lengthened away.

Exercise 1: breathe in and part the leg slightly to the sides (photo 11), breathe out and flex the feet (photo 12), close the legs.

Exercise 2: as pressed-up, scissor the legs up and down (photo 13-14).



photo 11



photo 13



photo 12



photo 14

EXERCISE 23 PUSH UPS

Setup: press-up with the hands on the roller (photo 1).

Action: with the arms at shoulder-distance apart, breathe in and lower to the ground (photo 2), breathe out and return.

Modification 1: press-up with the hands on the roller and the knees on the ground (photo 3), breathe in and lower to the ground (photo 4), breathe out and return.

Modification 2: press-up with the hands on the roller and legs bent (photo 5), breathe in and lower to the ground (photo 6), breathe out and return.

Precision Points: you can do this exercise with the arms at wider-distance apart (photo 7-8) or with the shins on the roller (photo 9). Head to heel like steel, do NOT move the butt up, keep the head prolong and shoulder blades stabilized.

Purposes: strengthening of the torso and arm muscles, modification 1 a 2 work the triceps, strengthening of the pectoral muscles as the arms at wider-distance apart.



photo 1



photo 3



photo 2



photo 4



photo 5



photo 8



photo 6



photo 9



photo 7

EXERCISE 24 FASCIAL MASSAGE

Action: Rolling with foam rollers is a kind of massage, when you roll over various areas of your body using our bodyweight, which brings the connective tissue and muscular release (self-myofascial release). Rolling means slow and fluent multi-directional motions. You should stay for 20-30 seconds in tight or painful areas, letting your bodyweight work, or change the position to increase the press slightly and should rotate a bit in a sore area. In the beginning you can feel the massage in some areas a bit painful. You should learn to listen to your body to distinguish if the pain is sharp and dart. This kind of pain needs medical treatment. The massage helps if the pain signalizes tissue stiffness. This kind of pain finally disappears if you perform massage in the long term. The massage of the whole body is time consuming, but you can focus on one or two smaller areas of the body, which are stiffed more, after each workout. Remember to breathe regularly as performing the massage, do NOT hold breath. You can use any roller, they differ in their length and firmness. If possible, choose a less firm roller first and gradually adapt for firmer ones and the ones with a coarsen surface.

Modification 1: foot massage

Place one foot on the roller (photo 1) and roll over the foot. Because of the size, the foot massage is better to perform with a small ball. Start pushing the heel into the ball (photo 2) and then roll forward toward particular toes separately (photo 3-4) and back. As rolling, you can stop in a tender place, letting your bodyweight work, or move the foot over the roller to the sides with the heel on the ground (photo 5) or slightly off.

Modification 2: calf massage

Sit with the legs positioned on top of the roller parallel or crossed (photo 6) and roll slowly. You can increase the press, if sitting off the ground, the legs parallel (photo 7) or crossed (photo 8). The easier position is to sit with one leg other roller and the other bent with the foot on the ground. Stay in areas of tightness and rotate at ankle (photo 9) or move the calf over the roller to the sides and multi-directionally (photo 10-12).

Modification 3: shin and peroneal massage

Position your shins on top of the roller (photo 13) and use the weight of your body to slowly roll back and forth over it. The easier position is to kneel down, one shin on the roller (photo 14). Then sit and place the peroneal area on the roller, roll the peroneal area over the roller multi-directionally (photo 15).

Modification 4: back and outer thigh massage

Sit with the thighs on the roller (photo 16) and slowly roll back and forth over it. The back thigh is a big area, so divide it into two halves and roll the area near the knee joint first and then roll the upper area. The outer thigh is a problematic and highly stiff, painful area in most people. Divide this area into two parts too and focus on the lower (more painful) area first, then continue rolling the upper area (photo 17). Roll really slowly, stay longer and use multi-directional motions.

Modification 5: front and inner thigh massage

Position yourself on top of the roller with the quadriceps on it (photo 18) and slowly roll back and forth over it. The area is big, so divide it into two parts and roll over the lower area, then the upper one. The easier position is with one leg bent and positioned on the ground (photo 19). Next place the roller under the inner area of the thigh (photo 20) and roll near the knee first and closer to the hip later.

Modification 6: buttock massage

Sit on top of the roller (photo 21). You can cross your legs to increase the press, if necessary (photo 22). Here you can find another problematic zone – the deep rotators of the hip joints placed in the pelvic floor – it is more effective to massage it with a small ball (photo 23). The motions should be tiny. The firmer the ball is, the deeper it works.

Modification 7: back massage

Sit with the roller positioned just above the low back (photo 24), roll the low area of the back forth and back over it, and to the sides (photo 25-26). Next roll the upper area of the back (photo 27). The easier position is with the arms folded over your chest (photo 28).

Modification 8: torso, arm and neck massage

Lie on the side on the roller and roll the side of your torso as far as the armpits (photo 29). Place the roller under the arm and its back area (photo 30). Lie on the stomach with the roller under the arm and roll the front area of the arm (photo 31). Lie on your back, the roller under the neck (photo 32) and slowly turn your head to the sides (photo 33-34), and use small multi-directional motions. The area of the shoulder can be massaged with a small ball (photo 35-36).

Precision Points: Do NOT use the self-myofascial massage every day, 2-3 times a week is appropriate. The changes in the tissues are based on the production of collagen, which is subordinate to biochemical principles. One of them is a 1-2 day rest phase after massage. If you roll every day, the tissue is not given a sufficient time and chance to release, rehydrate and remodel. Be persistent instead, the changes come after six months – two years of a regular and constant exertion.

Purposes: relaxed, hydrated and correctly modelled soft tissue enables smooth glides of all body organs and structures. Rolling is one of the methods, which can help as a prevention of injuries in the locomotory system. It also accelerates the healing process after injury and return to a healthy and fully functional organism.



photo 1



photo 4



photo 2



photo 5



photo 3



photo 6



photo 7



photo 12



photo 8



photo 13



photo 9



photo 14



photo 10



photo 15



photo 11



photo 16



photo 17



photo 22



photo 18



photo 23



photo 19



photo 24



photo 20



photo 25



photo 21



photo 26



photo 27



photo 32



photo 28



photo 33



photo 29



photo 34



photo 30



photo 35



photo 31



photo 36

EXERCISE 25 -28 FASCIAL STRETCH, ELASTICITY, ELASTICITY REBOUND video

The videos are samples of the fascia-oriented exercise and you can watch them on the project web pages.



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