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TRAINING MATERIAL APAS FOR FUNCTIONAL TRAININGS AND CARDIO FITNESS FOR PEOPLE WITH SPINAL DISTORTION AND FLAT FOOT

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Introduction

The training material for functional training and cardio fitness is designed for trainers and fitness instructors, as well as for inexperienced beginners who want to gain knowledge of the basics of training for people with spinal deformities and flat feet.

The content of the prepared material includes descriptions of the exercises that are used in functional training and cardio fitness and training program.

Within the description of the program are presented a total of 55 exercises that are used in functional training using appropriate equipment, such as: dumbbells, bars, TRX, KO 8 -lastic system, rowing machine, medical balls, Elastic suit, elastic bands, pudovka, etc.

The training program is for 40 hours of exercises adapted for people with spinal deformities and flat feet with appropriate equipment and appliances. Within the program, exercises are given for each individual hour, including the number of the exercise that is performed, then the scope of the training, ie. the number of sequences and repetitions. Also described are cardio fitness training and equipment used such as cones, fast stairs, mats, rowing machines.

EXERCISES FOR FUNCTIONAL TRAINING

In the main phase, a total of 55 exercises are presented, as well as detailed descriptions of their implementation with equipment. Each device can be used for several exercises, so for each exercise is given an accurate description related to the activation of the muscles of a particular part of the body.

As for people with spinal deformities, the coach helps in performing the exercise. Exercisers who, due to their disability, do not have a strong enough grip and cannot hold dumbbells, barbells or other equipment will perform the exercises using weights placed around the wrists. As for the TRX straps, they will be placed in the hands or around the wrists of the trainer and the exercises will be performed with the assistance of the trainer who has the role of holding the straps.

EXERCISES WITH Dumbbells

Exercise 1: Folding from a standing position - Folding the arms with dumbbells is a good exercise for building biceps muscle mass. The movement takes place only in the elbows, while the other joints remain immobile. You can do the exercise with one or both hands, from a seat, from an upright position, lying down or semi-lying down. The technique of execution is elementary and therefore the exercise is suitable for beginners and advanced. When you are in an upright position, take two dumbbells of appropriate weight and place your hands next to your body, palms facing forward. Begin to bend at the elbows, keeping your hands close to your body. Hold for a few seconds and then return to starting position. We recommend that you do 3 sets of 12 reps.

Exercise 2: Concentrated flexion - Concentrated flexion puts the most strain on the top of the biceps. The exercise is performed with only one hand from a sitting position. To do it properly, you need to support your elbow on the inside of your thigh, near the knee. He must remain still throughout the exercise. After taking the necessary standing position, take dumbbells and begin to bend at the elbow to the chest. Then lower your arm to your knee. Be

careful not to move your back and elbow. Do 10-12 reps and change hands. For maximum load, perform 3 sets of the exercise.

Exercise 3: Triceps extension with dumbbells - lying on your back on a flat bench, dumbbells are held in both hands with outstretched arms over the body. Inhale and fold the forearms while gradually bending the elbows towards the head and then return to the starting position and exhale at the end of the movement.

Exercise 4: Triceps extension of one arm with dumbbells - sitting or standing position, with a dumbbell in one hand and extended to

head arm. Inhale and bend the elbow to lower the dumbbell behind the head to neck level. Return the dumbbell to its original position and exhale.

Exercise 5: Push-ups with a dumbbell - sitting position with straight back, the dumbbells are held with a reach at shoulder level. The thumbs are inside. Inhale and properly stretch the arm up and exhale at the end of the movement.

Exercise 6: Opening the arms with dumbbells to the side - standing or sitting position with straight back and slightly extended legs. The arms are next to the body and a dumbbell is held in each hand. The arms are raised with slightly bent elbows to shoulder height. Return to starting position.

Exercise 7: Alternate stretching of the arms forward - standing or sitting position, the dumbbells are taken with a reach, the hands are placed on the upper legs. Inhale and consistently raise the upper arm to eye level. Exhale at the end of the movement.

Exercise 8: Kickback - kickback forms the outer and inner heads of the triceps. Watch out for technique. The exercise seems misleadingly simple. You can do it with one or two hands, depending on how you prefer. Lean your body forward so that your armpits are parallel to the floor. The movement is performed from the elbow joint and the other parts of the arm are immobile. Begin to extend your arm as far back as possible until you feel tension in the triceps. Then bend your arm forward again, returning to the starting position. Do 3 sets of 10 reps for each hand.

Exercise 9: Stretching with dumbbells - lying on your back. Dumbbells in both hands with arms outstretched above the chest. Inhale and open the arms to the horizontal plane or to the plane. Lifting the arms to the starting position and exhaling.

Exercise 10: Rowing with one hand - holding the dumbbell with one hand, the palm is directed inwards, and leaning with the opposite hand and knee on a bench that serves as a support. Inhale and lift the arm and elbow as close to the body as possible. Exhale at the end of the movement.

Exercise 11: Shoulder lift - upright or sitting position, upright or slightly bent head, armpits to the body and dumbbells in both hands. Shoulder lift and return to starting position.

BAR EXERCISES

Exercise 12: Folding the forearm - upright position with straight back, the barbell is held with a distance greater than the width of the shoulders. Inhale and lift the barbell by bending the elbows, taking into account the stability of the chest and spine by performing isometric

contraction of the gluteal, abdominal and spinal muscles. Exhale at the end of the movement.

Exercise 13: Triceps stretching - lie on a flat bench on your back and grab the barbell with a stretch with outstretched arms above the head. Inhale and lower the barbell to the head or behind the head, bending the elbows. Return to starting position. Exhale at the end of the movement.

Exercise 14: Rear push-ups - sitting position with straight back, the barbell is held with a reach behind the neck. Inhale and push the bar up while keeping the back upright. Exhale at the end of the movement.

Exercise 15: Front push-ups - sitting position with straight back, the barbell is held with a reach and is supported on the upper part of the chest. Inhale and push the bar up. Exhale at the end of the movement.

Exercise 16: Bench presses - lying on your back on a flat bench with your feet on the plane. Gripping the bar with a distance slightly greater than the width of the shoulders. Inhale and lower the barbell to the chest with controlled movement. Opening the armpits and exhaling at the end of the movement.

Exercise 17: Bench press with a narrow grip from a bench - lying on your back on a flat bench, with your feet on the board. The barbell is held with a reach, and the arms are placed at a distance of 8 to 40 cm, depending on the flexibility of the arms. Inhale and lower the barbell with controlled movement on the chest, with elbows facing the field. Opening the armpits and exhaling at the end of the movement.

Exercise 18: Rowing with a barbell from a forward tilt - standing position with slightly bent legs and holding the barbell with a shoulder-width extension. Upright back, leaning forward from the level of the pelvis, at an angle of 45 degrees, the barbell is at the level of the knees. Inhale and hold the breath during the isometric contraction of the abdominal muscles and then pull the barbell to the chest. Return to starting position and exhale.

Exercise 19: Squat - the barbell is placed behind the head at the level of the trapezius muscle. Firm grip on the barbell, with elbows facing back. The feet are parallel, leaning forward from the level of the pelvis, bending the back is avoided to prevent injury. From this position a squat is performed. When the thighs occupy horizontal position, the lower legs straighten and the torso is raised to the starting position. Exhale at the end of the movement.

EXERCISES ITH TRX

Exercise 20: TRX Chest Press - grasp the handles, move away from where the TRX strap is tied, and spread your legs shoulder-width apart. Extend your arms in front of your chest and take a few steps back so that your body is bent forward. Keeping your body upright, bend your arms and lower your chest until your arms are parallel to the ground. Then go back to starting position. Complicate the exercise by moving your legs away or lifting one leg off the ground.

Exercise 21: TRX Rowing - Grasp the handles and turn your face to where the TRX strap is tied, placing your feet shoulder-width apart. Extend your arms and take a few steps forward so

that your body leans back. Keeping your back straight, pull your chest toward the handles and then return to the starting position. Make the exercise more difficult by bringing your legs closer and performing rowing with one hand.

Exercise 22: TRX squat - take the same position as in TRX rowing, but instead of arms outstretched, place your hands next to your body at chest level and at a 90-degree angle to your elbows (slightly tightened straps). Squat so that your hips are parallel to the ground and then return to the starting position. Make the exercise more difficult by performing a one-legged squat and an explosive jump after a squat.

EXERCISES WITH KO8

Exercise 23: Double wave - the feet are placed at the width of the thighs, the toes are turned forward, the knees are slightly bent. Grasp with the palms facing the floor, and both hands move up and down simultaneously, using the full range of motion.

Exercise 24: Wool with one hand, with squats - the feet are placed at the width of the thighs with toes facing forward, deep squats, thighs parallel to the floor. Hold with palms facing the floor. Maintaining a squatting position, alternating hand movements.

Exercise 25: Hip toss - Hold with the palms pointing inward so that both hands are close to the right thigh. Move from the right thigh up and over the body in a semicircle to the left thigh. Focus so that you keep your torso straight and your abdominal muscles tight.

Exercise 26: Triple wave with push-ups and jump - starting position in half squat. Make three quick waves with your hands, then release to do a push-up, then jump and do three quick waves with your hands again.

Exercise 27: Circles with hands - hold with palms facing the floor, arms outstretched with elbows near the ribs. Three circular movements of the hands inwards, then three circular movements outwards.

HYPEREXTENSION OF THE BACK ON THE BENCH

Exercise 28: Hyperextension - lie on the device, leaning on the thighs to the fold in the hip joint. The lower legs are fixed. The body is lowered below the horizontal position and the arms are crossed on the chest. Inhale and hold the air. From this starting position, slowly lift the body up, above the horizontal position and exhale to the upper upper position. Then return to the starting position, inhale and repeat the movement.

MEDICAL BALL EXERCISES

Exercise 29: Russian twist - sit on a mat with your feet in front of you and your knees slightly bent. Tilt your torso 45 degrees and hold the medicine ball to your chest.

Rotate to one side, then return to starting position and rotate to the other side.

Exercise 30: Pushing with a medicine ball - start the exercise by holding the medicine ball on your chest and squat with your back straight. Then stand up and stretch your arms high above your head, holding the medicine ball over you.

Exercise 31: Ball - wall - move a few steps away from the wall, holding the medicine ball to your chest. Bend your knees before throwing the ball up against the wall with an explosive

move. You can let the ball fall to the floor and repeat the exercise, or try to catch it by bending your knees to soften the blow and repeat.

Exercise 32: "Lumberjack" with a medicine ball - this exercise should start from an upright position with the ball touching the chest. Hold the ball in both hands and lift it over your left shoulder so that it is close to your head. Then, lowering yourself to a squat, lower the ball so that it is in the end position next to your right foot. Repeat the exercise several times on one side, then change sides.

Exercise 33: Stepping forward and turning the body - the medicine ball is held on the chest. Take a step forward with your left foot, bending your right knee to the ground and turning your body to the left. Return to starting position and take a step forward with your right foot.

EXERCISES WITH Bulgarian Bag

Exercise 34: "Halo" - in an upright or sitting position, hold the bag with your hands above your head and successively swing it over your head on one side and then on the other.

Exercise 35: Rotating movements in front of the body - hold the bag by the two handles and make rotating movements with it in front of the body, slightly bending the knees when the bag passes through the lowest point. Keep a steady pace and change direction after a certain number of seconds.

Exercise 36: Side swing - swing the bag to shoulder height, then gently step to one side and swing the bag to that side, similar to swinging a hair. Repeat on the other side. Repeat, alternating sides.

Exercise 37: Power Swing - Slightly squat, swing the bag between your legs and then lift it so that it passes in front of your body and reaches your shoulders behind your head. Squat down, then remove the bag from your shoulders when standing up and do the next repetition immediately.

EXERCISES WITH PUDDING

Exercise 38: Squat - stand with legs spread shoulder-width apart and hold the pudovka with both arms outstretched at chest height. Without bending your body forward, slowly bend your knees until you squat, ie. until the thighs reach a parallel position with the floor, and then return to the starting position.

Exercise 39: Swing with a push-up - Spread your legs a little more than shoulder-width apart, with your feet slightly turned outwards and the push-up placed right in the middle of the front. Bend your hips and knees and grasp the handle of the heel with both hands. Straighten your knees and swing the pudovka between your legs, up to eye level.

Exercise 40: High lift - stand with legs spread hip-width apart, with a push-up between the feet. Bend your knees, hips should be moved back and hold the handle with both hands, which is the starting position.

While lifting the push-up, straighten the knees and move the thighs forward, while raising the push-up to shoulder height (the arms are also raised so that they are at a 90 degree angle to the torso), then return to the starting position.

Exercise 41: Jumping jacks - jumping exercise, performed by jumping with both legs, in which the legs are spread wide to the side, and at the same time raising the arms up and out so that they almost touch above the head, followed by returning to the starting position with hands on both sides.

TARGET MUSCLES OF THE ROWING MACHINE

Exercise 42 Rowing the machine focuses on multiple muscles in one workout, using the following actions: catch, drive, finish and recover. During the catch, the triceps works to lengthen the arms and muscles of the flexor in the handles around the handles of the rowing machine. Your hip flexors are used to move your torso forward. This is followed by a drive where powerful leg muscles such as the quadriceps initiate the action of pushing your legs off the machine platform. The shoulder and back muscles contract as your biceps pull the handles of the rowing machine to move towards your abdomen. At the same time, your erector spinae, glutes, quadrangles, and hamstrings engage to extend your body away from the machine. Finally, your upper body leans back slightly as it is supported by your core muscles. Your legs are straight, with your hands holding the handles of the rowing machine close to your body, close to your lower ribs. Your grip is relaxed as your shoulders are low and aligned with your wrists, which are parallel to the ground.

ROWING FOR BETTER HEALTH

Exercise 43 The Centers for Disease Control and Prevention recommends up to 150 minutes of moderate-intensity aerobic activity, 75 minutes of vigorous aerobic activity, or an equivalent combination of the two each week to maintain a healthy weight. Using rowing cardiovascular exercise, which challenges the muscle groups throughout the body, can help achieve this health goal.

TRAINING PROGRAM FOR 30 HOURS PLUS 10 HOURS CIRCULAR TRAINING

In this part a training program for 40 hours is given. Exercises are given for each hour, which are used in functional training or cardio fitness in the main phase of the class. The exercises are presented in the way shown in the following example: Hour 1: Exercise 1 - 3x8; where Time 1 means the serial number of the hour; Exercise 1 is the sequence number of the exercise from the descriptions of the exercises in the section "Exercises for functional training" (in the example this is the exercise for folding the forearm); and 3x8 is the range of the exercise, where the first number means the number of sets and the second number the

number of repetitions.

For exercises that wheelchair users cannot perform, a replacement exercise is given, example: exercise 52: 1x12, instead of this exercise, wheelchair users perform exercise 48: 1x12.

The number of repetitions of the exercises and the duration of the breaks are given as a basis. They vary or adapt to the abilities of the trainee.

Each lesson, in addition to the main phase, consists of introductory and concluding parts, which use common shaping exercises used in various sports, recreation and forms of exercise and therefore are not described separately here.

Functional training classes will be conducted within the following training systems: circuit training, functional strength training and training. Cardio fitness classes will be described as a separate entity.

SYSTEM OF CIRCULAR TRAININGS

Circuit training is a way of physical exercise consisting of simple exercises organized in a system or interconnected. Circuit training aims to develop functional, ie. the physical abilities of the trainees as strength, then cardiorespiratory endurance, strength endurance, etc.

What is circuit training?



During the circuit training, a series of exercises are performed - usually 6 to 10 - loading all muscle groups. The exercises are performed without a break between them. The goal is to deliberately not give the body time to fully recover. Each exercise is performed with a certain number of repetitions or for a certain period of time before moving directly to the next. After completing the first round of exercises, take a minimum break and move on to the second. Usually one workout does not exceed 3-4 rounds. The duration of a workout can vary between 15 minutes and 1 hour depending on how many "rounds" of exercises you choose to perform. The options for modification and adjustment in this type of training are practice endless - this may seem confusing at first, but the main idea of circuit training is to do more work than in a "normal" training session. Circuit training belongs to the group of metabolic training, in which the goal is to speed up

metabolism. workouts the break between sets is 45 seconds and the break between exercises is 90 seconds.

Before you start, warm up your whole body: 5 minutes riding an exercise bike and 5 minutes of dynamic warm-up of the joints. Then proceed to the first round of exercises. It includes 8 exercises and looks like this: Perform all the exercises one after the other without a break between them. For upper body exercises (exercises 1, 2, 3, 4 and 5) do between 10-12 repetitions. For lower exercises, do between 12-15 repetitions. The circle looks like this (for each of the exercises there is a video attached, just click on the link):

1. Couch with lever / dumbbells
2. Pulling a vertical pulley
3. Lifting the helicopter bar
4. Biceps flexion with a lever
5. Triceps extensions
6. Fold the back of the thighs
7. Thigh extensions
8. 3 minutes HIIT (ergometer): 50 seconds slow pace followed by 10 seconds at maximum speed. Repeat 3 times.

Instructions for implementation

Make at least 2 and if possible 3 rounds.

- The rest between the individual rounds is 90-120 seconds.
- The total duration of the workout should not exceed 45 minutes.
- The first round may be lighter, but the next rounds should be heavier.
- After the end of the circuit training you can do 3 sets of 15-20 repetitions for abdominal presses.
- Finish the workout with 25-30 minutes of cardio (walking on a sloping path).
- Don't forget to finish stretching.
- Lesson 1: Exercise 17: 2x10; exercise 1: 2x10; exercise 2: 3x8; exercise 53: 3x8;
- Lesson r 2 ; exercise 5: 2x10; exercise 15: 2x10; exercise 3: 3x10; exercise 4: 3x10.

Lesson 3: Exercise 19: 2x10, exercise with dumbbells; exercise 30: 3x10, trainers who cannot exercise on a device perform the exercise on a mat; exercise 21: 3x10; exercise 24: 3x10; exercise 26: 2x10; exercise 39: 2x10; exercise 40: 2x10.

Lesson 4: Exercise 13: 2x10; exercise 46: 3x10; exercise 31: 3x10 meters; exercise 37: 2x8; exercise 42: 10 times on one side and 10 times on the other; exercise 44: 10 times on one side and 10 times on the other;

Lesson 5: Exercise 12: 3x15; exercise 25: 3x10, perform the exercise without push-ups; exercise 38: 3x8; exercise 43: 3x10; exercise 55: 3x10.

Lesson 6: Exercise 17: 2x10; exercise 1: 2x10; exercise 2: 3x8; exercise 53: 3x8; exercise 62: 3x10.

FUNCTIONAL STRENGTH TRAINING

This group of workouts or classes is designed primarily for the development of strength as one of the most dominant physical abilities, the development of which has a positive effect on improving other physical abilities. When these exercises are applied, the break between sets is 1 minute and the break between exercises is 2 minutes.

Lesson 7: Exercise 17: 4x8; exercise 18: 3x10; exercise 8: 4x8; exercise 9: 3x10; exercise 1: 4x8; exercise 2: 3x10; exercise 13: 4x8.

Lesson 8: Exercise 53: 4x8; exercise 34: 3x10; exercise 22: 4x8; 11: 3x10; exercise 3: 4x8; exercise 4: 3x10; exercise 58: 4x8.

Lesson 9: Exercise 15: 4x8; exercise 16: 3x10; exercise 6: 4x8; exercise 7: 3x10; exercise 20: 4x8; exercise 60: 3x8; exercise 54: 3x8. Wheelchair trainers, instead of leg muscle exercises, perform: exercise 39: 3x10; exercise 40: 3x10 and exercise 42: 3x8.

Lesson 10: Exercise 61: 3x8; exercise 63: 3x8; exercise 28: 3x12; exercise 29: 3x10; exercise 24: 4x10.

Lesson 11: Exercise 17: 4x8; exercise 21: 3x10; exercise 9: 4x8; exercise 65: 3x5; Wheelchair trainers perform: exercise 8: 3x10; exercise 1: 4x8; exercise 13: 3x10; exercise 46: 4x8.

Lesson 12: Exercise 53: 4x8; exercise 10: 3x10; exercise 34: 4x8; exercise 11: 3x10; exercise 14: 4x8; exercise 4: 3x8; exercise 58 3x10.

Lesson 13: Exercise 36: 4x8; exercise 32: 3x10; exercise 5: 4x8; exercise 6: 4x8; exercise 66: 3x8; exercise 57: 4x10; exercise 49: 3x12. Wheelchair trainers, instead of leg muscle exercises, perform: exercise 39: 3x10; exercise 40: 3x10 and exercise 42: 3x8.

Lesson 14: Exercise 61: 3x8; exercise 63: 3x8; exercise 28: 3x12; exercise 29: 3x10; exercise 24: 4x10.

Lesson 15: Exercise 50: 3x10; exercise 48: 4x8; exercise 8: 3x10; exercise 9: 4x8; exercise 1: 3x8; exercise 2: 4x8; exercise 13: 3x10.

Lesson 16: Exercise 53: 4x8; exercise 47: 3x10; exercise 30: 3x12, wheelchair users perform the exercise on a mat; exercise 65: 3x30 seconds, instead of this exercise, wheelchair users perform: exercise 10: 4x8.

Lesson 17: Exercise 15: 4x8; exercise 16: 4x8; exercise 6: 3x10; exercise 7: 3x10; exercise 51: 3x12; exercise 56: 3x10; exercise 60: 3x18; exercise 49: 3x8. Wheelchair trainers, instead of leg muscle exercises, perform: exercise 39: 3x10; exercise 40: 3x10 and exercise 42: 3x8.

Lesson 18: Exercise 61: 3x8; exercise 63: 3x8; exercise 28: 3x12; exercise 29: 3x10; exercise 24: 4x10.

CARDIO FITNESS TRAINING

The goal of cardio fitness training is the development of cardio-respiratory abilities through training in which the heart rate is monitored. During these workouts, heart rate monitoring is performed through five heart rate zones. They are as follows: First zone: heart rate from 50 to 60%; second zone: from 60 to 75%; third zone from 75 to 90%; fourth zone: from 90 to 95%; fifth zone: from 95% to 100% of the maximum heart rate. One of the formulas for determining the maximum heart rate (MSM) is $220 - (\text{number of years of life})$. For example, if the trainer is 25 years old and has to train with a training intensity of 75%, the training intensity is calculated as follows: $(220 - 25 = 195, 195 \times 0.75\% = 146.25)$. In this example, the trainee should have a heart rate of about 146 beats per minute at an exercise intensity of 75%.

Lesson 19: Fartlek training: MSC from 60% to 75%. Longer warm-up, main phase of the class, the trainees are on bicycles and treadmills. This phase lasts 20 minutes, the trainee rides a bike or runs on a treadmill until the pulse reaches 75% of the MSC, then quickly lowers it to 60%, reducing the pace of running or cycling. It then accelerates again and increases the speed to 75% of the MSC. During the 20 minutes of this phase, the trainee should not exceed 75% of the MSC. The main phase is followed by prolonged stretching of the muscles.

Lesson 20: Fartlek training: MSC from 60% to 75%. Longer warm-up, main phase of the class, the trainees are on bicycles and treadmills. This phase lasts 20-30 minutes, the trainee rides a bike or runs on a treadmill until the pulse reaches 75% of the MSC, then quickly lowers it to 60%, reducing the pace of running or cycling. It then accelerates again and increases the speed to 75% of the MSC. During 20-30 minutes of this phase, the trainee should not exceed 75% of the MSC. The main phase is followed by prolonged stretching of the muscles.

Lesson 21: Continuous training: MSC from 60% to 75%. Longer warm-up, main phase of the class, the trainees are on bicycles and treadmills. This phase lasts 20 minutes, the trainees maintain a steady pace and slowly increase the MSC to 75%. The goal of the training is to have no fluctuations in the pace, ie the heart rate to increase gradually during the training from 60% to 75% of MSC. Longer stretching in the final phase.

Lesson 22: Continuous training: MSC from 60% to 75%. Longer warm-up, main phase of the class, the trainees are on bicycles and treadmills. This phase lasts 20-30 minutes, where the trainees maintain a steady pace and slowly increase the MSC to 75%. The goal of the training is to have no fluctuations in the pace, ie the heart rate to increase gradually during the training from 60% to 75% of MSC. Longer stretching in the final phase.

Lesson 23: Training 3x3x3. The trainees are divided into bicycles, treadmills and in exercise position 22. Each trainee performs a total of three cycles of exercises. Each cycle is performed as follows: the first minute MSC from 50 to 60%, the second minute MSC from 75 to 90% and the third minute MSC from 95 to 100%. There is a break of 3 minutes and the trainees change the equipment on which they have trained. When the trainees complete all three cycles, they have a break of 6 minutes and then start again.

Lesson 24: Pyramid training: The trainers are divided into bicycles and treadmills. The training is conducted as follows: 5 minutes cycling or running MSC 50 - 60%, 4 minutes MSC 60 - 75%, 3 minutes MSC 75 - 90%, 2 minutes MSC 90 - 95%, 1 minute MSC 95 - 100% . Rest for 5 minutes and then repeat the exercise. Total repetition of the exercise: 2 to 3 times.

Lesson 25: Training 3x3x3. The trainees are divided into bicycles, treadmills and in exercise position 22. Each trainee performs a total of three cycles of exercises. Each cycle is performed as follows: the first minute MSC from 50 to 60%, the second minute MSC from 75 to 90% and the third minute MSC from 95 to 100%. There is a break of 2 minutes, the trainees change the equipment on which they have trained. When the trainees complete all three cycles, they have a break of 4 minutes and then start again.

Lesson 26: Pyramid training: The trainers are divided into bicycles and treadmills. The training is conducted as follows: 5 minutes cycling or running MSC 50 - 60%, 4 minutes MSC 60 - 75%, 3 minutes MSC 75 - 90%, 2 minutes MSC 90 - 95%, 1 minute MSC 95 - 100% . Then the trainees continue to exercise in the opposite direction, ie. from heart zone 5 to zone 1. Rest for 10 minutes and then the exercise is repeated. Total repetition of the exercise: 2 times.

In Lesson 37 to 40, 20 exercises are performed as follows: two exercises are performed without a break, the first exercise is performed for 2 minutes in zone 2, and the second for 1 minute in zone 4. There is a rest until the MSC drops to 50 - 60%.

Lesson 27: A combination of the following exercises is performed: and exercise 5; and exercise 29; and exercise 5; exercise 29; exercise 5.

Lesson 28: A combination of the following exercises is performed: both exercise 5 and exercise 29; and exercise 5 ;; and exercise 29; and exercise 5.

Lesson 29: A combination of the following exercises is performed: Treadmill (BP) and exercise 21; BP and abdominal presses; BP and exercise 60; BP and exercise 21; BP and abdominal presses; BP and exercise 60; BP and exercise 21; BP and abdominal presses; BP and exercise 60; BP and exercise 21.

Lesson 30: A combination of the following exercises is performed: Hand or foot bicycle and exercise 21; exercise 22 and exercise 42; bicycle and exercise 22; bicycle and exercise 21; bicycle and exercise 42; bicycle and exercise 22; bicycle and exercise 21; bicycle and exercise 42; bicycle and exercise 22; bicycle and exercise 21.

PROGRAM FOR 20 HOURS OF THEORETICAL TRAINING

The theoretical training program is given as a series of 20 hours of theoretical training, including 7 lectures.

Table 3. Lectures on theoretical training

№ of the lesson	Наименования на лекциите	Number of lessons
1.	Aerobic training	3
2.	Components of physical fitness - cardio fitness	3
3.	Components of physical fitness - flexibility	3
4.	Components of physical fitness - strength	3
5.	Functional training	2
6.	Comb trainer	2
7.	Practical application of functional and cardio fitness	4

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