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PHYSICAL TRAINING AEROBIC TRAINING AND BETA-OXYDATION

PHYSICAL TRAINING, JUST LIKE TECHNICAL TRAINING, IS FUNDAMENTAL IN THE ATHLETIC PREPARATION OF AN OLYMPIC SHOOTER. IF WE WISH TO IMPROVE, WE MUST RESEARCH PROGRAMS FOR PHYSICAL, MENTAL, TACTICAL AND TECHNICAL TRAINING AND DRAW UP A PLAN THAT WILL HELP US FEEL HEALTHIER AND TO HAVE A LOWER HEART RATE DURING COMPETITIONS. AS SHOOTERS WE ARE WELL AWARE THAT A LOWER HEART RATE LEADS TO GREATER STABILITY IN HOLDING A GUN.

This physical training program has been specially designed so that those who adopt it can make serious improvements in their physical and aerobic capacities. This will have a direct impact on how the body uses fats as a source of energy, which will in turn result in:

- A gradual decrease in the body's percentage of body fat
- Maintaining one's current lean muscle mass
- An increase in on's aerobic capacity
- Weight loss

THE KEY TO SUCCESS IN THIS PROGRAM IS TO KEEP THE HEART RATE DURING THE ACTIVITY BETWEEN 120 AND 140 BEATS PER MINUTE. IF WE TRAIN WITHIN THIS RANGE, WE BURN SUBCUTANEOUS FAT AND USE IT AS ENERGY FOR OUR WORKOUT.

STARTING THE PROGRAM

Before starting any physical training program, it is very important that you consult a physical education instructor, a doctor in sports medicine and a nutritionist. If you fail to do so, you are putting your health at risk. Take into consideration that we do not all respond in the same way to physical stimulation. CONSULT YOUR DOCTOR. This program consists of a twelve-week training schedule. It is a simple plan and at the end of each workout, if you worked within your heart rate range and the intervals, you will feel both physically and emotionally fit.

CLOTHING

It is very important that you wear the appropriate clothing for your workout. Wear only what is necessary, don't overdo it – once you break a sweat, clothes tend to become a burden.

THE RIGHT CLOTHING FOR WORKING OUT IN 20°C TEMPERATURE:

Socks: They should be made of absorbent

terry cloth. They should stretch and fit snugly in order to avoid blisters due to wrinkles in the fabric.

Shoes: There is an athletic shoe for each sport and this is not necessarily a marketing strategy. Athletic shoes should grip the feet firmly during the execution of extreme movements in order to avoid lesions. Running shoes for low-intensity, long-duration jogging must have enough insole padding that will protect the runner from knee injuries or unnecessary muscle contractions. The heel must be slightly higher than the toe to facilitate each step. The heel should be padded inside and should be sufficiently low in order to avoid injuries of the Achilles tendon. The toes should fit comfortably when fully stretched and be held firmly in place by the shoe. No particular brand or model ensures perfect adaptation of a person's foot to a certain shoe, so that it is important to try on several types and models.

Underwear: For men, it is very important to wear underpants that fit snugly in order to avoid excessive bounce, and for this same reason, women should wear a good sports bra.

Pants: They should be soft enough to avoid chafing in the inner thighs.

Shirt: It should protect the athlete from the elements, either preventing heat loss in cold temperatures or solar exposure in hot climates. The fabric should be absorbent and quick-drying so that it continues absorbing sweat continuously.

In hot climates: A cap with a flap that shades the nape of the neck.

In cold climates: A windbreaker jacket and a long-sleeved shirt, but keep in mind that excess clothing quickly turns into an annoyance once we've warmed up. Wear gloves and a cap that covers the ears. Do not opt for wool, since it soaks up water and takes a long time to dry. Choose quick-drying synthetic fibers. Loose pants are not recommended, as the wind tends to cause a "parachute" effect

that slows the runner down. Instead, opt for snug running pants; they're aerodynamic, they absorb sweat and prevent chafing.

WARM-UP

A good warm-up is vital in order to prepare the body for a workout. A good warm-up should:

- Progressively elevate the heart rate
- Warm up the joints
- Raise body temperature and muscular viscosity
- Adequately stretch the large muscle groups
- Optimize respiratory function
- Facilitate blood flow to all capillary groups
- Help us prepare psychologically for the coming physical effort
- Activate all functional systems

NUTRITION

In order to make serious progress on this program, we must be properly nourished and hydrated. A balanced diet requires the following elements:

1. SUFFICIENT NUTRIENTS:

Nutrients are foods that, once they are chemically processed, provide the necessary energy for the proper functioning of the body. Nutrients are consumed in carbohydrates, fats and proteins, ideally in the following proportions: carbohydrates 55-70%, fat 20-30%, protein 10-15%, in the caloric proportions adequate for the type of activity of the athlete.

2. CALORIC REQUIREMENTS:

The amount of calories needed in order to maintain, augment or decrease body weight. If the daily requirement is 2,500 calories, these are the number of calories needed to maintain one's current body weight. The caloric requirement is directly related to the types of activities and the energetic output of each individual.

3. HYDRATION:

The adequate ingestion of liquids, including

mineral salts and carbohydrates, can prevent a dangerous dehydration. Drinking a minimum of 1 liter of water half an hour prior to a workout is basic for a good physical athletic performance. During exercise, it is important to drink water in order to make up for liquids lost through sweat.

VERY IMPORTANT: Nutrition is the fuel that enables the human body to function properly. The type and quantity of foods we eat are a vital element of a strategic health plan, so it is important that you consult a nutritionist who will evaluate your caloric requirements, based on the activities planned by your physical education instructor. This is equally true for hydration.

THE IMPORTANCE OF REST

After prolonged physical activity, energy reserves are at their lowest. During a period of rest, the body regenerates and prepares itself for further activity. Through optimal rest pe-

riods and proper nutrition, bodily functions can recover thanks to an over-compensation effect. This biological adaptation process can help us improve our fitness level and increase our quality of life.

RETURN TO A STATE OF CALM

At the end of each workout, it is very important that you do some relaxation, breathing and stretching exercises so that your body will relax after an activity that has produced a certain degree of mental and physical tension. Never skip this transition between your workout and your return to everyday activity. Try to perform the stretching exercises to soft and relaxing music.

THE PLAN

This plan was designed so that a person can gradually and progressively establish a physical training routine. It is based on interval training: jogging/running interspersed with

intense walking whose objective is to lower the heart rate. No matter what the physical fitness level of the person is, if we respect certain rules, this plan will improve your physical capacities and your quality of life.

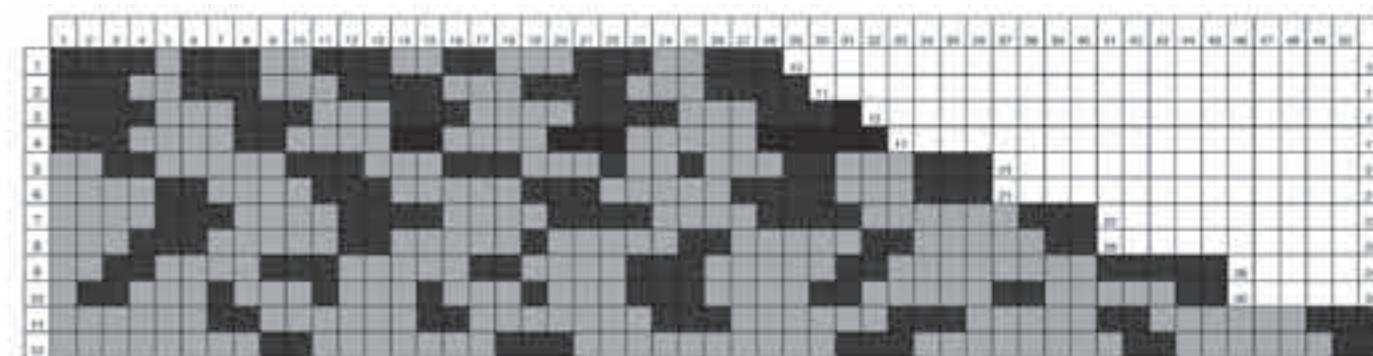
Before starting the program, you must consult your strategy with a physical education instructor and/or sports medicine doctor and, with their assistance, decide the week or level at which you must start your program.

The program establishes progressively longer jogging/running intervals and active rest periods from the very first week, when you will be jogging for 10 minutes, within a total exercise period of 28 minutes. This means that you will be jogging for 10 minutes, with 18 minutes of brisk walking.

From week to week, you will be increasing the jogging interval times and maintaining or reducing active rest intervals.



WEEKLY WORKOUT PLAN



In this weekly workout plan, the black squares represent the number of minutes of each walking interval and the light grey squares are the number of minutes of each jogging/running interval.

EXAMPLE: WEEK 1: 4 minutes walking - 1 minute jogging - 3 minutes walking - 2 minutes jogging - 3 minutes walking - 2 minutes jogging - 2 minutes walking - 3 minutes jogging - 3 minutes walking - 2 minutes jogging - 3 minutes walking - end of the workout.

COORDINATE THIS PLAN WITH YOUR PERSONAL TRAINER AND DOCTOR, IN ORDER TO ESTABLISH PERSONALIZED PARAMETERS AND MAKE SURE IT ADJUSTS TO YOUR NEEDS.

1. Begin the intervals after a proper warm-up.
2. During jogging intervals, the heart rate should be within a range of 120-140 beats per minute. No more, no less. The best way to keep track of your heart rate is by wearing a monitor, otherwise, take your pulse for 10 seconds. Multiply the number of beats perceived in ten seconds by 6 and that is your hear rate per minute. The exact number of beats you should perceive by taking your pulse with your fingers is 21-22-23, which multiplied by 6, result in 120-132-138, within

- the desired range.
3. You must carry out 3 workouts per week, with a minimum of one 24-hour rest period between each. This plan is useless unless this rest period is respected and you follow a proper nutrition plan as well.
4. During the walking intervals, the heart rate must be under 120 beats per minute before you can start your next jogging interval. So, if during your walking interval you are unable to bring down your heart rate to under 120, you are one week or more above your current fitness level. Perhaps you are performing a workout that you should have started in 20 days. Do not rush into a new level, the body is wise, be patient.
5. Once the workout is over, ease into a state of calm which will bring with it a feeling of re-

laxation that you will require in order to start your next workout with enthusiasm and feeling great.

This plan is easy to implement and its effectiveness has been proven. If you decide to give it a try, do not forget to consult a physical fitness expert, your personal trainer, your doctor and a nutritionist. This activity should be beneficial, not cause injuries. *WE ARE ALL DIFFERENT, SO IT IS VITAL TO CONSULT A PROFESSIONAL TO MAKE SURE THIS PLAN FITS WELL WITH YOUR NEEDS AND PSYCHO-PHYSICAL CHARACTERISTICS.*

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