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MODULE 2

**ENCOURAGING
SPORTS PRACTICE
FOR ONE'S OWN
PSYCHO-PHYSICAL
WELLBEING AND
TO CONTROL
NATIONAL SOCIAL
AND HEALTH COSTS**



SEGMENT 1

Motor Activity as a Medicine

It is now internationally accepted that a healthy diet, physical activity and not smoking (healthy lifestyles) are crucial for the well-being of the community.

Furthermore, from a communicative point of view, it is also emphasized that healthy lifestyles lead to important and significant financial savings in **health systems**.

It is therefore easy to understand how several health campaigns are based on simple and clear ideas that should be disseminated to as many people as possible.



Without forcing the terms, **motor activity** can therefore be fully considered as a drug and should therefore be properly proposed, dosed and administered.

It has indeed been shown that an excessively intense and prolonged sport activity (professional athletes) could also damage specific organs/structures in the body. In order to make movement a real source of wellbeing instead of pathologies, it is therefore important to know what should be the main reference parameters.



The different motor activities can be divided (also) according to their duration and the type of metabolism they use.

- **Aerobics is a long-lasting activity requiring a steady supply of oxygen and calories (running, swimming, cycling, rowing, etc.)**
- **Anaerobic activity is an explosive activity using the energy present in our organs (mainly muscles) but which can last only a few seconds (100 m athletics, high jump etc.).**
- **Alternate activity means using both metabolisms depending on the phases (active or inactive) and the role played in the game (football, basketball, tennis etc.).**



It is therefore clear that some activities should be preferred to others according to the desired goal: if you want to increase energy expenditure, aerobics will be the primary activity over time.

Whereas the goal is to increase lean mass in general and therefore stimulate muscle tissue, anaerobic activity should be taken into account.

There are several parameters to be observed and taken into account in composing a motor activity program, in order to avoid making mistakes.

Firstly, the health conditions of the subject. There are motor activities largely recommended even for people suffering from specific pathologies, but in general it is always better to undergo a **health screening** before starting the activity.

This evaluation will aim at excluding pathologies that could emerge (cardiac in particular) due to the activity you are about to undertake.

It should also highlight some somatic data which are useful for avoiding unpleasant consequences, such as weight, body structure, bone paramorphism (feet, knees, column, etc.) and which are fundamental for recommending the right activity.



In addition, it should be considered that results can only be obtained by carrying out motor activity consistently over time and not simply a one-time event.

A great deal of attention should therefore be paid to preventing small problems related to clothing (shoes and socks! for example), to activities that are inappropriate in terms of body structure (running in overweight people) or places (cycling in non-flat areas).

It is also necessary to take into account the daily life of the individual: the environment where he or she lives, the climate, the proximity/availability of suitable facilities such as cycle paths, gyms, swimming pools, open spaces etc.

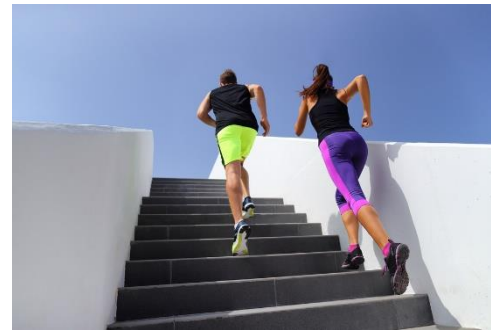


THE ACTIVITY GIVING THE BEST RESULTS OVER TIME IS THE ONE THAT COMES FROM GOOD DAILY HABITS.

Some of the gestures that sometimes we don't take into account can become cornerstones of a healthy lifestyle.

USING THE CAR LESS, WALKING SAFELY WHENEVER POSSIBLE, TAKING THE STAIRS INSTEAD OF USING THE LIFT, FOLLOWING DAILY PATHS TO GO TO WORK OR TO SCHOOL ENSURING A REGULAR PHYSICAL ACTIVITY.

Always, whenever possible, make the right choice for our health.



If this is not possible for different reasons, schedule a weekly activity using what you have available.

We should, of course, prefer public gardens, cycle paths, parks, protected routes, places where you can exercise in ideal environmental conditions.

Sometimes even our house (e.g. stairs, garden, etc.) can provide an opportunity for training, but whatever the choice, the result can only be achieved through tenacity.

SPORADIC ACTIVITIES WITHOUT THE RIGHT BASIS CAN DAMAGE RATHER THAN HELP.

The physiological improvements produced by regular physical activity have been confirmed by various studies.

From a metabolic point of view, the increased calorie consumption associated with specific activity promotes weight control and thus it is, together with a proper diet, the basis for the prevention of various diseases.

From a cardiac point of view, daily endurance activity (10,000 steps rule) decreases heart rate and increases systolic output (trained heart).

From a bone perspective, (a proper) load is one of the most important factors in preventing osteoporosis.

Physical activity is recommended not only to healthy people but also to people suffering from various diseases.

Several dysmetabolic diseases such as diabetes, dyslipidemia, hypercholesterolemia, etc. benefit from weight loss and increased metabolism achieved through exercise.

In cardiac rehabilitation plans (from heart attack to hypertension), once stabilized the pathology, physical activity is administered just like a drug.

Even a physiological but special situation such as pregnancy has specific protocols to be followed to carry out activities before and after the childbirth.

Benefits of physical activity for your heart

Physical activity and exercise can do wonders for your physical and mental health.

- Physical activity and exercise lower your risk of developing heart disease including heart attack, high blood pressure and heart failure.
- Making physical activity a daily habit greatly improves your overall physical and mental health.
- No matter how much or little physical activity you do, it's never too late to start.
- Moderate intensity activities such as brisk walking and swimming help your body feel energised and work at its best.

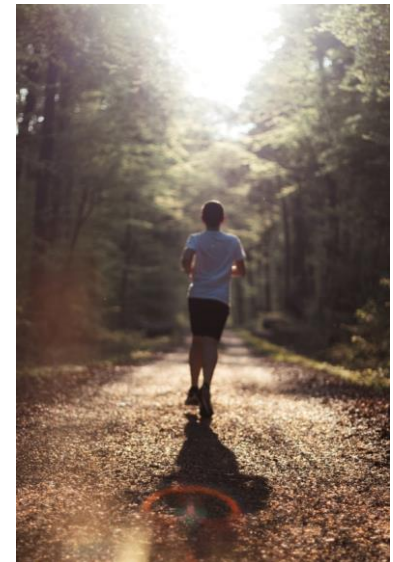


Photo by Tobias Rademacher on Unsplash

Benefits of physical exercise

Regular and adequate levels of physical activity and exercise can have immediate and long-lasting effects including:

- Increase energy levels
- Improve blood circulation
- Strengthen bones, muscles and joints, which can improve strength and overall fitness
- Help manage weight, blood pressure, cholesterol and blood glucose
- Encourage a positive self-image and mindset.

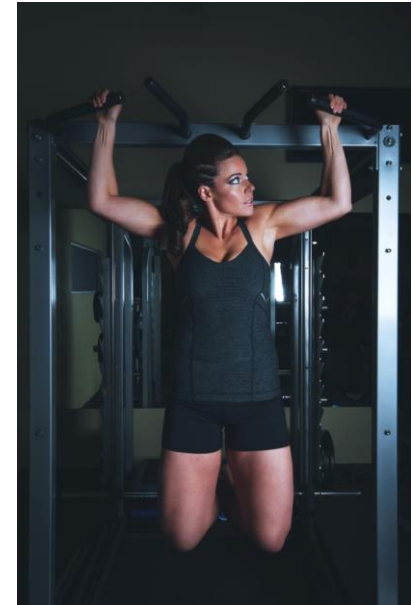


Photo by Scott Webb on Unsplash

Benefits for your brain

The benefits of physical exercise, especially aerobic exercise, have positive effects on brain function on multiple fronts, ranging from the molecular to behavioural level. Even briefly exercising for 20 minutes facilitates information processing and memory functions.

Exercise affects the brain on multiple fronts. It increases heart rate, which pumps more oxygen to the brain. It also aids the bodily release of a plethora of hormones, all of which participate in aiding and providing a nourishing environment for the growth of brain cells.

Exercise stimulates the brain plasticity by stimulating growth of new connections between cells in a wide array of important cortical areas. Exercise increases growth factors in the brain, making it easier for the brain to grow new neuronal connections.



Photo by Hikmet Gümüş, Wikipedia

Benefits for your body

Physical exercise is an important tool to combat obesity, a disease that affects whole body metabolism and is associated with an increased risk of cardiovascular disease (CVD) and Type 2 diabetes (T2D).

Regular physical exercise has several beneficial effects on overall health. While decreasing body mass and adiposity are not the primary outcomes of exercise, exercise can mediate several diseases that accompany obesity including T2D and CVD. Several recent studies have shown that sustained physical activity is associated with decreased markers of inflammation, improved metabolic health, decreased risk of heart failure, and improved overall survival.

There are several risk factors leading to the development and progression of CVD, but one of the most prominent is a sedentary lifestyle. A sedentary lifestyle can be characterized by both obesity and consistently low levels of physical activity.



Bones and muscles

Routine physical activity is important for building strong bones and muscles in children, but it is equally important as we get older. Your bones and muscles work together to support every movement you make on a daily basis. When you are physically active you strengthen your muscles. Your bones adapt by building more cells and as a result both become stronger. Strong bones and muscles protect against injury and improve balance and coordination. Regular physical activity or exercise help to improve and prevent the decline of muscle strength.



Image by Deep Khicher from Pixabay

Exercise and Mental Health

Exercise is a natural and effective anti-anxiety treatment. It relieves tension and stress, boosts physical and mental energy and enhances well-being through the release of endorphins. Exercise is also a powerful depression fighter for several reasons. Most importantly, it promotes all kinds of changes in the brain, including neural growth, reduced inflammation, and new activity patterns that promote feelings of calm and well-being. It also releases endorphins, powerful chemicals in our brain that energize our spirits and make us feel good. Finally, exercise can also serve as a distraction, allowing us to find some quiet time to break out of the cycle of negative thoughts that feed depression.

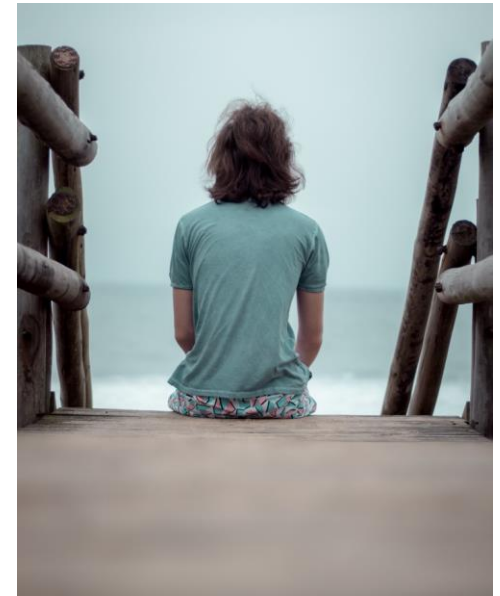


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Exercise and sleep

Exercise triggers an increase in body temperature and the post-exercise drop in temperature may promote falling asleep. Exercise may also reduce insomnia by decreasing arousal, anxiety and depressive symptoms. Insomnia is commonly linked with elevated arousal, anxiety, and depression, and exercise has strong effects on reducing these symptoms in the general population.

These issues are the most common in great part of population. Anxiety disorders belong to the most common mental illness in Europe, affecting 25 percent of the population every year.



Image by Hans Braxmeier from Pixabay

Exercise and weight

Both diet and physical activity play a critical role in maintaining a healthy body weight, losing excess body weight, or maintaining successful weight loss. Physical activity helps control weight by using excess calories that would otherwise be stored as fat. Most foods we eat contain calories and everything we do uses calories, including sleeping, breathing, and digesting food. Balancing the calories we eat with the calories we use through physical activity will help us reach and maintain a healthy weight.

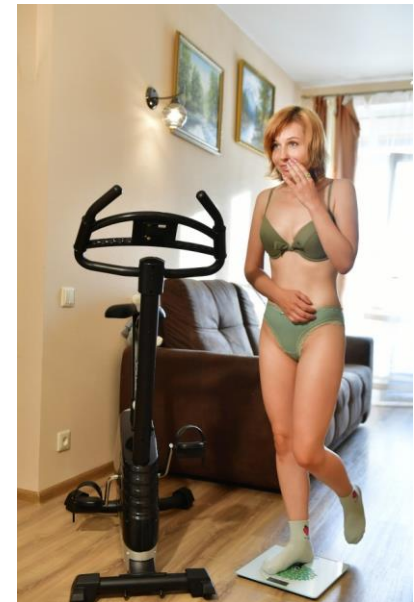


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Sports and metabolic rate

The effects of sports and fitness training depend on our metabolic rate and calorific needs. Metabolic rate basically refers to the energy that is released by the body. Sports training can have a significant effect on metabolic rate – this can determine weight gain and weight loss. This is because it boosts calorie burning.

Physical activities (sport, outdoor games, etc.) naturally increase metabolism : to meet the needs of the moment, our body dips in its reserves to feed muscle cells. Catabolism takes place. Physical activity, on a longer term, increases the basal metabolic rate.

The following pages show sports and recreational activities with the amount of calories they burn.



Photo by Inspired Horizons Digital Market

Sports and calories consumption

- Boxing/ Kickboxing (640 cal/hour): Good upper body workout, coordination builder, and cardiovascular workout.
- Running Fast (800 cal/hour): Good for cardiovascular endurance training.
- Swimming Fast (900 cal/hour): although 200 meters of Butterfly stroke sprint can burn 100 calories in 3 minutes. It is the best full body exercise.
- Rock Climbing (740 cal/hour): Less cardiovascular but very good for building muscle strength and coordination.
- Cycling (700 cal/hour): it's a great lower body, non-weight bearing exercise workout and cardio training but not much of an upper body workout.
- Racquetball (600 cal/hour): good cardiorespiratory training, coordination-building, and with the twisting and pivoting, builds core flexibility.

Sports and calories consumption

Rowing (560 cal/hour): builds up endurance, strength and muscle in your shoulders, thighs and biceps. The key to rowing is in the technique – coordinate the legs, back and arms to work simultaneously.

Basketball (630 cal/hour): non-stop action is what makes basketball such a great cardiovascular exercise. The shooting also improves hand-eye coordination.

Tennis (560 cal/hour): it demands speed, agility, strength and reaction time.

Cross-country Skiing (480 cal/hour): Being in the snow already fires up your metabolism, and the varied terrain makes for a great interval workout.

Ice Skating (500 cal/hour): Has all the great benefits of running without the joint stress.

Swing Dancing (360 cal/hour): a fun, cardiovascular workout with a partner!

Soccer (competitive) (800 cal/hour): a very high intensity running sport, it offers a great interval and sprinting regimen.

Keywords

Work out

Healthy lifestyle

Healthy check

Healthy Habits

Sleep

Muscles

Mental health

Weight

Metabolic rate

Healthy perseverance