

UNIT 1: PHYSICAL CAPACITIES AND TRAINING

1. OUR PHYSICAL CAPACITIES.

1.1. Endurance - Stamina.

Endurance or Stamina is the capacity that allows you to keep doing an activity during a long time. For example, 10.000 metres running, 500 metres swimming, 1000 metres **rowing**, etc.

1.2. Strength.

Strength is the capacity that allows us to produce muscle tension to beat a resistance or to make a movement. For example, **throwing**, jumping, **lifting**, hitting, punching, etc.

1.3. Speed.

Speed is the capacity to make a movement as fast as possible. For example, 100 metres running.

1.4. Flexibility.

Flexibility is the capacity to make wide movements. For example: athletes of gymnastic.

2. OUR MOTOR SKILLS.

Besides, we have three motor abilities. Motor abilities allow us to make **accurate**, agile and balanced movements.

2.1. Coordination.

Coordination allows us to make accurate movements.

2.2. Agility.

Agility allows us to move very fast around the space.

2.3. Balance.

Balance allows us to have our body control and keep it.

3. PSYCHOLOGICAL SKILLS

This skills are personal manners of each one: willpower, sacrifice, motivation, self-improvement, self-confidence, self steem, etc.

4. TRAINING.

4.1. What is training and its main components?

Training is a continuous, organized and planned process of **workout** to increase our physical, technique, tactic and psychic skills.

Components of a workout and their combination are the key to make a suitable training. Which are these components:

- Volume: it is the amount of workout, reps, exercises, games, time cap, etc.
- Intensity: it is the quality of the workout. *The stronger the training is, the better it is.*
- Recovery or Rest: it is the time to get back your physical capacities.
- Frequency: it is the times that you train each week or each day. *The more you train, the more you get fit.*
- Methods: it is the way that you usually train.

The suitable combination is essential to get goals. Generally speaking, your training must obey the next connections:

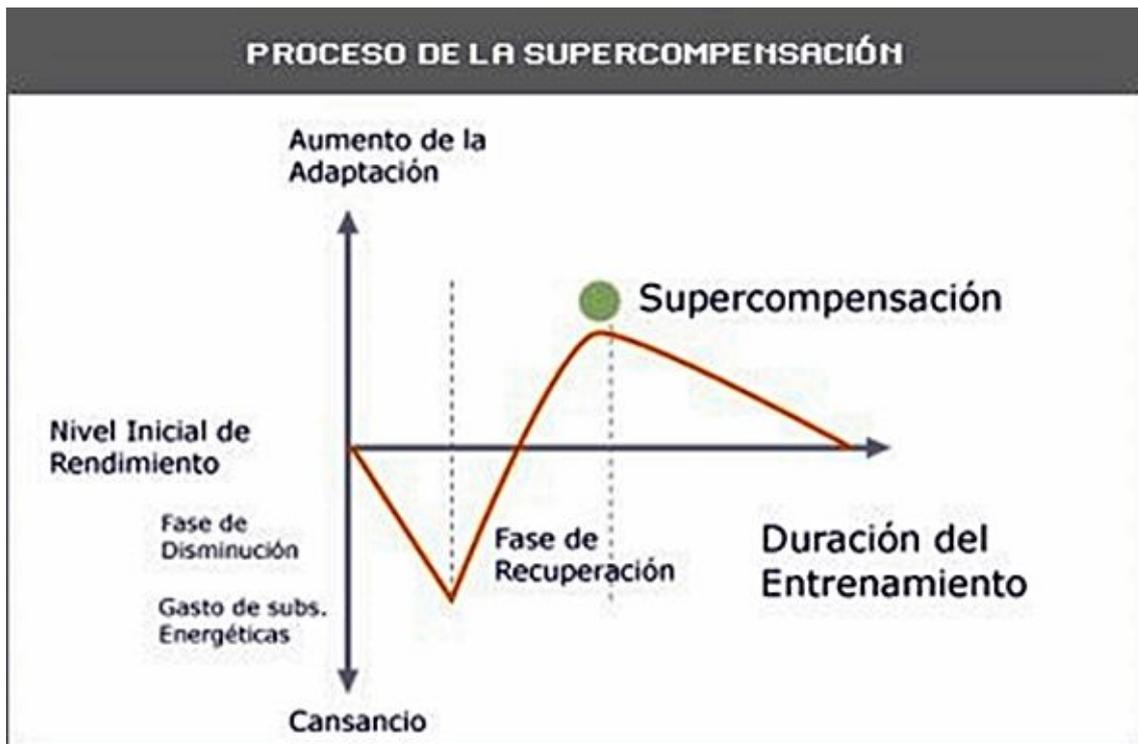
Volumen	Intensity	Recovery
high	Low	Low
Middle	High-middle	Middle
Low	High	High

It will depend on the **main aims** of the training. Normally, the most aims are:

- Loose weight.
- Improve the general state of the body.
- Delay the capacities' decline of our body **due to** the age.
- Prevent injuries.
- Improve any specific skill (technique, tactic, etc) or capacity.

4.2. Arnold Shultz Law and Principles of Training.

To make a physical improvement in your body (TO GET FIT), the training has to be a suitable link between volumen and intensity to cause an important *stress* in the body. At the end of each training, the body starts to *recover* by itself until the next training (TO GET BACK). At this process, the state or the point of the fitness of your body will improve.



To get this, your training have to obey the nexts **Principles of Training**:

- **Increasing Intensity**: step by step, keep calm and you will **get fit**.
- **Continuaty**: every days, every weeks, every months, being persistent and determined. Don´ t be lazy!
- **Overloading**: at the end of the training, I have to feel tired.
- **Versatility**: firstly, training has to improve all our capacities and abilities.
- **Especificity**: secondly, we have to improve one or another capaticy depending on our aims.
- **Individuality**: maybe, my training is not good for you. The more personal the training is, the faster you will get fit.
- **Variety**: training have to be different between them. The more varied exercises you do, the better results you get.

4.3. Training methods (traditional methods):

There are many training methods for each capacity. In this list, it explains the most comun methods of **endurance and strength**.

ENDURANCE (running)		
METHOD	EXAMPLE	GOAL
Games	The wall, polices and thieves, the catcher, etc.	To improve the aerobic capacity.
Endless running	Example1: 30 minutes running 150-160 beats.	To improve the aerobic capacity.

Long time and same load	Example2: 45-60 minutes running 140 beats.	To make easy the lose weight.
Fartlek Change running load	Example1: 30 minutes of workout, 2 minutes low load and 1 minute high load. Example2: 30 minutes of workout running around a circuit field, 2 rounds low load, 1 round high load Example3: 15 minutes of workout, 1 minute low load, 30 seconds high load	To improve aerobic power. To make easy the lose weight.
Sport	Football, basketball, handball, rugby, track and field	To improve the aerobic capacity. To make easy the lose weight.
Sets Long running with time to rest	Example1: 6 sets of 800 metres middle load Example2: 3 sets of 1000 metres high load. Example3: 6 sets of 400 metres middle-high load.	To improve the aerobic power. To make easy the lose weight.

STRENGHT

METHOD	EXAMPLE	GOAL
Gymnastic movements circuit	5 rounds and 15 reps each exercise of the next circuit: Squats, sit ups, push ups, scissors, burpees, triceps push ups, jumping jack	To improve the general muscle To improve the body building To make easy the lose weight.
Load exercises Medicine ball, dumbbells, bars, elastic bands, trx, etc.	3 rounds and 10 reps of the next circuit: Squats with dumbbells, throwing the medicine ball to wall, dead lift, trx push ups	To improve the general and specific muscle To improve the body building To make easy the hipertrophy To make easy the lose

5. CROSSFIT.

5.1. What is Crossfit?

The CrossFit prescription is performing "functional movements that are constantly varied at high intensity." CrossFit is a core strength and conditioning program. CrossFit is not only a specialized fitness program but also a deliberate attempt to optimize physical competence in each of ten recognized fitness domains. They are as follows: Cardiovascular and breath endurance, stamina, strength, flexibility, power, speed, coordination, agility, balance and accuracy.

5.2. The Bases of Crossfit.

Crossfit tries to mix some of ten fitness domains. How? Well, crossfit uses three kinds of exercises:

- **Weight lifting:** to raise the bar, the kettlebell, the ball, etc.

- **Gymnastic movements:** to move our own body: sit ups, pull ups, push ups, squats, hand push ups, etc.
- **Metabolic movements:** burpees, running, rowing, jumping box, etc.

5.3. Methods of Crossfit.

Crossfit has many ways of workout to be constantly varied the training. They are some of that:

- **AMRAP** (as many rounds as possible).
- **AFAP:** as fast as possible.
- Number of rounds as fast as possible.
- **EMOM:** every minute on minute.
- 21-15-9 of two or three exercises.
- **TABATA:** it is a circuit of different exercises and those are checked by time. The most typical Tabata is 4 minutes, 20 seconds working, 10 seconds recovering. But you can increase the minutes, the working time or the resting time.
- **Simple circuit** (similar to Tabata). It is made by a wide number of exercises and those can be checked by reps or by **time**. Normally, you have to do 3-5 rounds of 8-10 exercises and the working time is usually between 30 and 60 seconds.

EXAMPLES OF WODS					
AMRAP	10 minutes of time cap 5 burpees 10 push ups 15 triceps push ups 20 squats	Number of rounds as fast as possible	5 rounds of: 10 pull ups 15 squats 20 push ups 150 metres running	Simple circuit	5 rounds of: pull ups squats sit ups push ups long stride triceps push ups plancha 30 second working 20 second resting
AFAP	150 metres running 50 push ups 50 squats 50 sit-ups 50 jumping box 50 triceps push ups 150 metres running	EMOM	10 minutes time cap 10 push ups 10 sit ups	21-15-9	Pull ups Squats Push ups Burpees
Tabata	4 minutes of Core: Sit ups Plancha Hip up Superman 20 second working 10 second resting				

- ✓ More information about Crossfit and training: www.estilorx.com