

Stressing respecting science bases and tricks

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Introduction

Undoubtedly food has been linked to the evolution of the human being. The evolution of nutrition from the separation of the rest of the primates to our days, has meant a substantial change in the development of the human brain. Achieving an adequate intake of calories over long periods of time and providing nutrients with a variety of nutrient products enabled an intellectual progress far removed from other species. Migrations coupled with the search for a better standard of living with a stable availability of food, led to genetic adaptations to assimilate some substances. It is clear the union between the most basic needs and the most evolved as the cognitive. The present human being has a disproportionately large brain with respect to its total corporal dimensions; nevertheless the first hominids did not have much greater than the primates. Our brain is very active and this leads to a very high calorie intake reaching 25% of the total daily calories.

The migrations in search of food have supposed the distribution of the man throughout the world demonstrating a great adaptive capacity with respect to what it found in the different zones. However, the theory has emerged that there is a mismatch between the adaptive genetic rhythm and the rapid processes of cultural, social and industrial changes, which would lead to diseases that we sometimes call modern, such as Cardiovascular disease, diabetes or obesity. It has also been defended by some authors the existence of a saver gene that would be the result of useful energy efficiency in beings with little availability of food as it happened for thousands of years. Obesity is a disease that affects millions of people in the world and that must be treated accurately by specialists. Part of this less serious mismatch but also with a pernicious effect on the standard of living is overweight, which is manifested especially in countries with a high economic level, excessive calorie consumption and a frequently sedentary life. The food has some general guidelines but must also adapt to each person, their caloric consumption, their tastes and their way of life. The law of thermodynamics explains the overweight by a continued imbalance between consumption and caloric expenditure.

Based on this law, other than simple theory, the most traditional form of thinning is the decrease in calories taken. A reduction in the caloric intake of the diet or an increase in caloric intake should be sought, but there are also other important actions that may enhance the thinning effect.

Reduction of caloric contribution

The laws of thermodynamics are what they are and therefore, consuming fewer calories is undoubtedly the most basic and habitual tool when it comes to slimming. It is an effective way to achieve the goal that we propose. However, several factors have to be taken into account.

Care should be taken not to make a very abrupt reduction of calories to avoid a drastic decrease in basal and rest metabolism. To understand it easily we have to know that the organism has a priority that is none other than to stay alive and is willing to take action if there are situations of aggression. A very low intake of food and

energy will lead to an attack that will activate a “survival mechanism” such as reducing energy expenditure and even fat, which will end up producing a reduction of weight through the loss of muscle and water. This of course will be negative to achieve the objective of losing weight, and in addition an increase of the food intake later, even if it is adequate and adjusted to the needs can lead to a rebound effect fattening quickly until the body is adjusted again, at the same Time if you re-do the above diet will produce a lesser weight loss effect upon being and metabolism slowed down. It is necessary to take into account the expenditure of energy performed at least subjectively, so that the caloric reduction is not excessive, there is no destruction of muscle and the basal metabolism is reduced. We can conclude that we must use the fat thermostat by controlling metabolism with different methods.

Increase in caloric expenditure

By increasing physical activity. This can be accomplished with increased physical activity, a less sedentary life, increased basal and rest metabolism and some other little tricks.

1. Increased physical activity: it will be the fundamental element, more controllable and in which we can increase the energy expenditure more clearly. It can be done through different types of physical activity.
2. Less sedentary life: having a daily activity with fewer hours lying or sitting, with fewer hours of television, computer. Climbing stairs, making walking...

3. Increased basal and rest metabolism: the basal metabolism is the one that is had after hours of inactivity and without ingesting food. It would be therefore the one you have when you wake up. Resting metabolism would be during the day when we do not do physical activity. Both increase when you lead an active life and is reduced when you make a very low calorie diet or with a sudden restriction of calories.
4. Little tricks: they would be behaviors that can add a number of extra calories spent, always little important, like taking a sauna or increasing the number of meals to five, which would cause a greater energetic expenditure during the digestions. You could also increase the expense by taking some mild stimulant like drinking coffee, cocoa or tea, always in moderation.

Habits and appetite

Adjusting circadian rhythms is very closely related to physiological processes such as cardiovascular or digestive processes. To carry out a life with a certain order in which they maintain some habits acts on the tempo of our organism facilitating an adequate balance of the appetite in relation to the real necessities. At the same time establishing an order in life allows a good state of sleep, a better mood and a reduction of stress, which affects hormonal processes, fat accumulation and possible appearance of craving for food. Social factors such as continuous publicity about food of all kinds or the facility to be able to consume it at any time are elements that also should be controlled by establishing a healthy daily order. It has also been seen that there is a relationship between sleep disorder and difficulty in losing weight.

Feeding

A poor use of proteins and carbohydrates will lead to a greater accumulation of fat in the adipose tissue, in the same way a greater use of them will allow a preventive effect and contribute a weight loss aid. To understand this idea we must know the main function of carbohydrates which is none other than that of producing energy in actions of high and medium intensity. For its part, the main function of proteins will be to form tissues. You should also know that the most effective way to store these elements (immediate principles) is to turn them into fat. Proteins are not stored and carbohydrates are stored sparingly in the muscles and even further reduced in the liver. Simply put, when they are not used they are converted to fat to be able to store them as a source of energy in the long run.

To achieve greater use of nutrients and reduce this conversion to fat to the maximum we can take some measures:

- A. Reduce high glycemic index foods.
- B. Raising foods rich in fiber will provoke effective reactions:
 - a. A greater sense of satiety.
 - b. Lower blood sugar elevation (glycemia) which will mean a lower insulin elevation. Insulin causes increases in fat storage and fat production from sugars.
- I. We can achieve this by:
 - a. "Fibrous" carbohydrates like vegetables and vegetables.
 - b. Vegetables.
 - c. Whole grains: pasta, rice, bread, etc.
- C. Consuming carbohydrates with proteins or fats will slow their absorption and also reduce the presence of insulin in the blood.

- D. Consume part of the hydrates and proteins near a physical activity. To allow the regeneration of stored glycogen (glucose in muscle and liver) and facilitate muscle development. This reduces the likelihood of excess carbohydrate production.
- E. Use light low fat and low sugar foods. It can be an interesting element. However, in recent years there have been studies showing that in groups of subjects consuming light dairy products there was no reduction in the amount of body fat, and even higher adipose tissue values were observed. If confirmed in the future, it is certainly paradoxical and the explanation is not yet clear. It could be the increase in the amount consumed, could be increased consumption of other foods, elevation of other sugary foods, intake of hydrogenated fats. Another element that could explain this would be the increase of insulin more abruptly when taking skimmed products, having the same amount of sugars or higher (as there is almost no fat percentage and grams per quantity will be greater), or when shooting The faster the insulin to have more amount of sugars and without the presence of fat that could reduce the glycemic index.

In order to keep the basal metabolism high through the diet it is advisable not to carry out excessive reductions of calories and to consume sufficient protein but not to exceed because it can cause problems of descalcification and to hepatic level. However, if you have seen that you could take more than was advised when you perform a very active life or intense resistance training and strength.

Physical exercise

Being overweight is a weight above the most optimal state of each person. But the important thing is not so much what is weighed but if there is an excess of adipose tissue. While the elevation of fat tissue often implies a worsening of the physical state, appearance and some parameters related to health, the adequate increase of muscle mass supposes some advantages that will affect the health, the aesthetic and the control of the overweight.

In many cases diets that promise great results act on a loss of weight by reducing muscle mass or body water, without affecting fat mass, which will not bring any health benefits, if not the opposite and can Also reflected in a negative effect on muscle tone and body shape.

Relevant points

- a. The use of different systems is complemented by acting on the reduction of fat and the increase of the metabolism.
- b. Increased muscle mass raises the basal metabolism and therefore caloric consumption throughout the day.
- c. Increased hormone production of growth hormone and testosterone will cause a reduction of adipose tissue. This will be in both directions, with an inverse relationship between body fat and growth hormone production and testosterone.

To seek maximum benefit

Use of high intensity: Traditionally low-intensity exercise has been associated with increased body fat loss. The reason is that in this type of exercises is where a greater percentage use of fat as energy route occurs. However, it has been seen that the use of high-intensity resistance training allows for greater caloric expenditure during exercise, but especially during hours at the end of the exercise, which is a greater total expenditure compared to the slower exercises.

Use of different intensities: However, lower intensity exercises called Fatmax should also be performed because they are the ones that cause a higher fat consumption in relation to total expenditure. Reducing body fat will be a major factor that will occur both with high intensities and with lower intensities.

Both types of resistance exercise facilitate the control of blood glucose or glycemia which causes a lower participation of insulin and therefore a lower storage of fat in adipose tissue. Performing exercises of speed and explosive force.

Explosive training of short runs, speed or strength facilitates an anabolic hormonal state with an effect on caloric expenditure throughout the day.

Use of global movements: It is advisable to use global strength exercises involving large muscle groups. This will have a greater effect on growth hormone and testosterone. At the same time it will lead to greater caloric consumption than if you use small muscle surfaces. Exercises with free weights

In which there is a participation of a greater number of muscles and muscular tensions. Acting the agonist muscles or mainly protagonists,

the antagonists (or muscles of opposite action), synergists and stabilizers. Thus, when a squat or squat action is carried out of the different forms that can be performed, they will cause tension of extension of the legs, of braking of the action of stabilization of the whole body, with an activation of the different muscles of Legs, thighs, glutes, but also trunk. This will lead to increased caloric expenditure during training and during the post-training period.

In short, the use of food and exercise as well as psychological and social factors will allow us to act on weight in an effective, healthy and rational way.

Conflict of interests

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