# 

G U D E

## PISTACHIO FAVORED SNOW

Training in winter

How we react to the cold

Skiing with pistachios in your pocket

Fun facts and advice



A fireplace, an enchanted mountain and a great desire for snow: this is the image that comes to mind when one thinks of winter. Without forgetting the keen and intense passion for outdoor activities such as skiing, snowboarding, but also walking with snowshoes, trail running on the sleet or even climbing up with sealskins before dashing down into the fresh snow.

By giving stimuli for both the body and the mind, the cold season offers several possibilities to enjoy nature through physical activity. And yet, we often associate "catching cold" with the possibility of getting sick. But is it really so? According to various studies, however, doing sports at low temperatures helps improve physical performance, as well driving the metabolism to burn more calories and to lose weight. The cold is also a very powerful source of stress, so it is important to allow the body to get used to it in a progressive and non-traumatic way, following some useful precautions to be on the ski slopes healthy and full of energy. To make all this possible, in the weeks leading up to our return to the slopes it would be useful to follow a training program that enhances aerobic and muscular endurance, alternating strengthening exercises with running sessions. On the other hand, from a nutritional point of view, it is essential to maintain proper hydration and an adequate energy intake through a rich and varied diet, in order to be able to counteract the effects of hypothermia. American pistachios, which are rich in energy and considered a complete protein, are valid allies for athletes and a perfect snack in any situation, even in the middle of a ski run.

#### **HOW TO TRAIN IN WINTER**

"The fact that an environment is more or less hostile forces us to consider all mental adaptations as early as the warm-up phase", explains Matteo Artina, athletic trainer and physiotherapist of the Italian Alpine Snowboarding team, who works privately with several European Cup and World Cup alpine ski athletes and who, in the past, coached the two Olympic gold medalists of PyeongChang 2018 Sofia Goggia and Michela Moioli. According to the coach, to get to the slopes in the best possible form, it is important to carry out pre-skiing activities in the months leading up to winter. "Pre-skiing in the gym is critical, because it allows to fortify one's muscles and work on balance, endurance and strength. But that's not enough: one has to consider that the sport will then take place outdoors, so indoor activity should never be separated from an outdoor phase", like running or brisk walking, up to Nordic walking, to ensure that the body becomes an instrument of action in any atmospheric situation, and so that the cold can become an ordinary and not an extraordinary condition. "I remain of the opinion that all people who want to practice winter sports

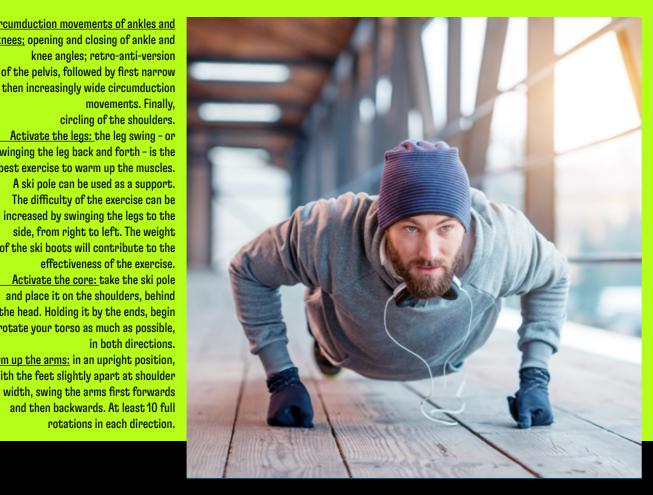
IF YOU CAN REACT TO LOW TEMPERATURES, THEN THE SHOCK IS LESS IMPACTFUL. ALSO FROM A MENTAL POINT OF VIEW, WHICH ALLOWS YOU TO REMAIN MORE LUCID

#### **HOW TO "GET ACTIVATED" BEFORE SKIING**

Before putting on skis, it is good practice to do a warm-up that we call "activation", in which joint mobility exercises involving ankles, knees, pelvis, trunk and shoulders.

1. Circumduction movements of ankles and knees; opening and closing of ankle and knee angles; retro-anti-version of the pelvis, followed by first narrow and then increasingly wide circumduction movements. Finally, circling of the shoulders. Activate the legs: the leg swing - or swinging the leg back and forth - is the best exercise to warm up the muscles. A ski pole can be used as a support. The difficulty of the exercise can be increased by swinging the legs to the side, from right to left. The weight of the ski boots will contribute to the effectiveness of the exercise. Activate the core: take the ski pole and place it on the shoulders, behind the head. Holding it by the ends, begin to rotate your torso as much as possible, in both directions. 4. Warm up the arms: in an upright position, with the feet slightly apart at shoulder

rotations in each direction.



should learn to expose themselves to the cold, in order to know it and to get their bodies used to it, because if you can react to low temperatures, then the shock is less impactful, also from a mental point of view, which allows you to remain more lucid». Speaking of actual training, Matteo then adds: "To train in the cold and to practice winter sports, you need to start considering the warm-up phase as part of the training itself. The warm-up phase requires the achievement of only one goal: the increase in body temperature, which means activating the biochemical processes to produce more energy". A warm-up phase performed at -10°C should be more exercise-rich, require more time and be more intense. In 1964, Russian physiologist Masterovoi hypothesized that muscle temperature depends on vascularization. "Circulation need to be increased by performing exercises, movements, muscle gestures to make the blood - as well as the heat – go faster around the body", Artina continues.

#### **BUT WHAT HAPPENS TO OUR BC** WHEN IT'S COLD?

When we expose ourselves to low temperatures, our body has only one goal to achieve: to raise the body temperature until it reaches the optimal level, which is around 36°C. Maintaining this optimal degree of warmth is a major goal for survival. To make this happen, our body implements a process - the so-called thermogenesis - through which it produces heat. "Thermogenesis can occur in two ways: with shivering, where heat production occurs through a rhythmic and isometric contraction of muscle tissue not aimed at movement, or without shivering, where heat generation occurs through biochemical reactions", the coach explains.



"In our skull there is a structure responsible for managing occur in the muscle tissue, in the liver and in the so-called body temperature called "hypothalamus", which is precisely brown fat, which is easily found in children and which has the control center, our internal thermostat, responsible for the purpose of burning nutrients, mainly fat, to increase the verifying that a temperature of 36° is kept constant". It is no production of heat. The activation of brown adipose tissue, coincidence that the first civilizations all developed in re-stimulated by cold, is mainly linked to the release of norepigions of the world with a climate between 30 and 40 degrees. nephrine", continues Matteo. This is therefore a process that Then with nomadism, evolution managed to create a control "works on fat" and which can even lead to a 10-15% increase center that favored thermoregulation, i.e. the ability to keep in the basal metabolic rate (the daily energy consumption). the body temperature constant, both in excess and in defect. "The hypothalamus is the junction to which all the information from the receptors of the human body arrives: the skin has 150,000 Krause receptors for cold, while only 15,000 Ruffini ones for heat. All this to allow the control center to understand if the body temperature is dropping below what is our sm used in winter sports is aerobic, i.e. it's related to the use



physiological level, or what keeps us basically healthy. What happens then is that reactions are triggered which mainly

#### SKIING AND THE COLD

"In skiing, activity is divided into hours of very low intensity and a few minutes of medium-high intensity: for every 3 minutes of descent there are 15 of ascent. The energy metaboliof fat, even if the descent, or the intense phase, will almost certainly work on sugars". It is no coincidence that, after a morning spent on skis, one feels the need to consume complete and significant meals. To avoid getting to the end of the day excessively hungry, the use of dried fruit rich in good and oily fats is the ideal supplement. "Those of dried fruit – and in particular of American pistachios – are easy to use fats: they quickly fit in the biochemical reactions and are used preferentially". Vitamin B6, very abundant in pistachios, contributes to the conversion of lactic acid into glucose, an important mechanism for giving energy to the muscles, while niacin, a B group vitamin present in these fruits, is essential for the release of sugars in the muscles during motor activity and for the transformation of fat deposits into energy.

#### WHY AMERICAN PISTACHIOS

An actual panacea for body and mind, the pistachio is a rich—heart, thin the blood and protect against cardiovascular diwith dehydrated fruit, where calories come from sugars. As

and complete food to accompany enthusiast people in the sease, for which reasons are strongly recommended to those long hours of snow sports. Sara Cordara, nutritionist biolo- who practice sports". From the moment they are harvested in gist specializing in human nutrition science and expert in the fields of California, American pistachios do not undergo but also in vitamin C and vitamin A, vitamin K and vitamin

sports nutrition and supplementation, talks about it. "From any chemical process, except for a toasting phase which does a nutritional point of yiew, we are talking about a wonderful not alter their nutritional characteristics. "A concentrate of food that belongs to the dried fruit family, not to be confused minerals and vitamins, they are very rich in group B vitamins, far as nuts such as pistachios are concerned, the calories de- E, which is one of the most powerful antioxidants in our body. rive mainly from good fats, such as Omega3 and Omega6, the They also contain iron and potassium, but no cholesterol". so-called polyunsaturated fatty acids, which are good for the Those who practice winter sports subject their body to signi-CATEGORY: dried fruit. ORIGIN: Asia Minor.

WHERE IT GROWS: today it is mainly cultivated in the Middle East, Tunisia, China and California, since it requires particularly hot and dry climates.

#### WHAT IT CONTAINS:

A rich source of linoleic acid and plant sterols, it contributes to the maintenance of normal cholesterol levels;

Potassium, which normalizes blood pressure:

Thiamine, which contributes to normal heart

Copper, manganese, selenium, zinc, riboflavin and vitamin E, which help protect cells from oxidative stress;

Iron, which promotes the normal transport of oxygen in the body;

Vitamin B6 and folate, which contribute to normal homocysteine metabolism:

Chromium, which contributes to the maintenance of normal blood glucose levels.

FUN FACT: Pistachio is a complete protein, i.e. what the Food and Drug Administration defines as a food that contains an adequate amount of all nine essential amino acids, necessary to support growth and maintain health in individuals aged 5 and over.

FOR SPORTS: pistachios help build and preserve muscles. Cholesterol-free, high in fiber, antioxidants, lutein, potassium, healthy fats and B vitamins, they help "refuel" and regenerate the body before and after working out.

ficant changes in temperature, or moments of strong physical and mental stress, which can cause alteration of the intestinal flora. Since they are rich in fiber, pistachios are a valid help. "Californian Pistachios grow in very fertile soils at warm temperatures, because their trees are able to withstand even long periods of drought, while they do not tolerate excessive humidity. Since 1957 California has been producing and cultivating Kerman pistachios, a quality that stands out for its very light kernel and for the characteristic of containing all nine essential amino acids. In short, it is a complete protein".

HOW AND WHEN TO CONSUME THEM - During a prolonged activity, such as a day of skiing, where thermogenesis also leads to a variation of the basal metabolic rate, a diet capable of providing the right caloric intake is essential. "American pistachios are perfect at any time of day; the recommended daily amount is 30/35 g, or about 49 pistachios, a portion that provides about 160 calories. They can be consumed all together, as a snack, both half an hour before training, to gain energy to support the body during exercise, but also to satisfy hunger between one descent and another. Finally, they are also perfect for after skiing because - being rich in beta-sitosterol, a phytosterol with an anti-inflammatory action similar to cortisone - they repair muscle damage. In short, instead of taking a supplement, a handful of American pistachios is better". Very versatile in the kitchen, these fruits can be added to sweet and savory dishes, as well as transformed into spreads (check on the label that they have a low percentage of sugars) and into pesto to season pasta.

AN ANTIOXIDANT ACTION - A very recent study conducted by Cornell University and published in the journal Nutrients has shown that Californian pistachios have a very high antioxidant power, among the highest compared to those relating to foods commonly known for the content of these substances (blueberries, pomegranates, cherries and beets). "From a chemical point of view, antioxidants are substances naturally present in American pistachios, capable of protecting the body from the attack of free radicals which can attack the healthy cells of our body, thus contributing to their inflammation and aging. Some normal metabolic activities that characterize our daily life - such as sun exposition for a long time, exercising too much or smoking - increase free radicals in our body. Antioxidants fight them by destroying them or reducing their quantity", explains Cordara.

PISTACHIO LOVERS - On social media networks there are many fanpages dedicated to "pistachio lovers", also thanks to the growth in the number of people who approach and practice a plant-based diet. Versatile in the kitchen, this food can be used to make many delicious recipes, ranging from appetizers to desserts, which can be found on the website www.americanpistachios.it

AHANDEUL OF AMERICAN PISTACHIOS: BETTER THAN A SUPPLEMENT



### A "snow snack"

For a snack that is always ready when facing long days on the snow, we asked Giuseppe Marrone -Pastry chef, Trainer and Consultant in pastry and ice cream - to create for us a recipe based on American pistachio.

#### Ingredients:

- toasted American pistachios 250 gr
- 70% dark chocolate 350 gr
- sesame seeds 75 gr
- poppy seeds 75 g
- muesli 50 g sultanas 50 g

Melt the chocolate in a bain-marie and add it to the rest of the ingredients. With the help of a spoon, form small barshaped snacks on baking paper or in silicone moulds. Let it cool at room temperature.

