



The winter season 2019-20

MOUNTAIN HOLIDAYS DO YOU GOOD!

“Skiing is a sport which improves body and mind, positively affection one’s health and mood”: this is what recent scientific studies published by the University of Salzburg have shown. The Dolomiti Superski “Wellbeing Factor” is a part of their ‘Performance Check’ service, which allows users to monitor their health-related skiing performance.

Science and hard facts

This topic had already been analysed by the **AMAS** clinical research (Austrian Moderate Altitude Study) published in 2000 by Professor Egon Humpeler of Innsbruck University. It scientifically proved the benefits of a stay in the mountains at moderate altitudes between 1400 and 2000 meters. After nearly 20 years, new elements have emerged which analyse skiing and its effects on **health**. The results are astounding: skiing is an important activity to stay in shape which has positive consequences on our body and mind: a real panacea.

Skiing is healthy

In fact, the **SASES study** published in August 2011 in the *Scandinavian Journal of Medicine & Science in Sports* by the Department of Sport Science and Kinesiology of the **University of Salzburg** reveals that skiing regularly can diminish the risk of cardiovascular diseases and Alzheimer's. The tested control group presented diminishing levels of **cholesterol and high blood pressure, and excess weight was shed thanks to higher calorie consumption**. Furthermore, as had already been proven by the AMAS study in 2000, staying for several days at moderate altitudes positively affects the overall blood picture. These different oxygenation patterns spark the beginning of a mechanism which increase **red blood cell production and haemoglobin** traces in the blood. This speeds the blood renewal cycle and improves tissue oxygenation. **As the majority of skiing areas in the Dolomites are located above 1,500 m. altitude, skiers' health will benefit from the positive effects generated by staying at this altitude.**

Skiing keeps your muscles and heart in shape

Analyses carried out on slopes highlighted that the majority of skiers moves in a range varying between **60-80%** of one's own maximum heart frequency (Hfmax) in sport medicine terms. According to the World Health Organisation (**WHO**), this interval frequency is exactly what helps the most when maintaining our cardiovascular system healthy and in shape. Not only during skiing itself- more than 40% of the tested control group maintained a heart frequency within these values even when taking a gondola or chairlift straight after having skied: the heart benefits from a prolonged training session. These higher and normal alternating heart frequencies generate the effects of an **interval training** which is very effective in improving ones fitness and resistance effort. Moreover, all this is conducive to developing a lean body and building muscle mass which in turn protect joints and ligaments thereof.

Positive effects even on easy slopes

Salzburg's SASES study also analysed the effect of skiing on a certain type of **slope**. **Easy slopes** (30% of all slopes within the Dolomiti Superski are **blue**) maintain a relatively low heart frequency due to a weaker muscle stimulation and a lower state of anxiety in absence of steep slopes. In this case the body predominantly burns fatty substances, skiers undergo **endurance training** and relief period is more immediate. **More difficult slopes**, characterised by steep drops and increased downhill speed, demand higher muscle stimulation when curving and the state of anxiety increases, training focuses more on **strength**, with consequent rise of heart

frequency. The energy source in this case consists predominantly of **carbohydrates** and the body needs to stay hydrated. This big gap in values between an under strain heart frequency and a normal frequency (a very important factor) sparks positive effects mimicking those obtained during interval training. As skiing involves complex movements, regular skiing activity enhances the skier's **motor coordination** leading to positive knock-on effects on many other health-related aspects.

A sigh of relief

When focusing on breathing, as skiing is carried out only starting from certain altitudes, it was proved that the sport helps many people with conditions such as **allergic rhinitis** or **bronchial asthma**. The higher you go, the fewer agents which can damage the respiratory system pollute the air. The 2000 AMAS study had already proven this

Skiing makes us happy

And as a final aspect we have the **psychological and mental** benefits of skiing. In fact, a part of the SASES study focuses on the mood of the tested control group. All physical benefits derived from skiing and having fun outside, in the mountains, in the heart of nature positively influence our mood. The near totality of the control group stated they **felt happy and very positive** during and after skiing. They also added that they barely felt any sense of fatigue.

The Dolomiti Superski “Wellbeing Factor”

To measure these beneficial and healthy aspects of skiing Dolomiti Superski, the biggest ski carousel in the world, is always open to new technologies which can be applied to different services benefiting their clients. In fact it has developed a wellness indicator tied to individual skiing performance. This is a feature of the well-known and much appreciated “**Performance Check**”, available exclusively inside the private area “**MyDolomiti**” on the Internet site dolomitisuperski.com, which allows users to see the number of lifts used, the distance in km they skied on and the total metres of downhill skiing they skied within the Dolomiti Superski territory. Users can visualise 7 possible wellness levels they can reach according to the metres of downhill slopes skied on. The used values are taken from recommendations by the WHO and by the clinical trial of Hambrecht et al., Ornish et al. These values are cross-referenced with a range of set/fixed weekly, overall calorie consumption: these are then converted into vertical metres of downhill skiing (**hm**) that must be skied.

These seven categories are:

<1,000 hm during 1 day on the slopes only have a weak positive effect on skiers' well-being

1,001-2,500 hm during 1 day on skis suffice to already generate positive effects on skiers' well-being

2,501-4,000 hm during 1 day stimulate your muscles and your heart with a good training effect

4,001-5,000 hm during 1 skiing day is the optimal level with the most benefits on skiers' well-being

5,001-6,500 hm per day are quite a lot with high training effect. To be suggested for real athletes

6,501-8,000 hm could be quite too much and should be avoided except you are a semi-pro. We advise that only very well trained persons undergoing a controlled fitness regime take this last level.

>8,000 hm per day are definitely too much for any normal person. Not for champions of course.

Values for each individual day are obtained by dividing weekly values by 6. The “**Wellbeing Factor**” of the skier appears next to the designated symbol within the “Performance Check” service. The “**Wellbeing Factor**” feature is based on average data of an average in shape male subject of, **70 kg**, skiing on a medium slope (red) at a medium level of exertion and on an average in shape female subject, **50 kg**, skiing on a medium slope (red) at a medium level of exertion.

Press Office Dolomiti Superski

Diego Clara

Phone: +39 0471 795397

Fax: +39 0471 794282

Mob.: +39 366 6861403

Skype: diego.superski

diego.clara@dolomitisuperski.com

press@dolomitisuperski.com

dolomitisuperski.com/press