

## **“SKI TRAINING AND PERIODISATION”**

The key to being ready for the ski season is preparation. A focused build up for 12-16 weeks before heading away for that winter break: alpine skiing, snow boarding or ski-touring is a good way to maximise performance and potentially prevent injury. Training for skiing is no different than training for any other sporting event or seasonal sport activity. Every athlete has mapped out the specific events in which they intend to participate in. They then determine the time required to train for the event and how much they will need to rest before the next training phase begins. This approach to training is called periodisation.

For most people a ski holiday is made up 3-10 days of skiing between 4-8 hours a day. When we break down those daily sessions they are potentially made up of between 6 and 12 repetitions of 5-45 minute interval sessions. Thus anaerobic fitness and recovery is essential to the days activity. On top of this a good aerobic level of fitness is important to get you through the week away a cope with the compounding affects of fatigue. A good base level of stability, strength and power is helpful for preventing injury with around 80% of the focus being on your legs and trunk.

To prepare for this kind of event we can periodise using a linear model. This simply means we increase the load through the body over a set period of time. Initially starting with lower loads and greater volume and progressing to higher loads and greater intensity and/or volume of exercise. A three stage approach is a simple and easy way of approaching your build up to skiing.

### **Stage 1**

Depending on your baseline fitness it is good idea to give yourself a 2-6 week introductory phase. The main aims through this phase are to work on your base levels of core stability, general cardiovascular fitness and address any current injuries. At this point if you are unsure about your injury status you should seek advice from a registered physiotherapist. Even if you have no current injuries a muscle balance assessment can be valuable in detecting your weak points or finding out what you have to work on for the season.

#### Key Components

- Large core stability component – general rule stick to unilateral free weights, increase balance components
- Balance and technique
- limited set repetition (clusters of 2-3 exercises 1x warm up set 1x work out set)
- Cardiovascular: low to moderate intensity

### **Stage 2**

Over the next 4 weeks the aim is to slowly increase your loads with your weights, perform exercises with greater groups of muscles involved, introduce a power component to your weight training and increase the intensity of your cardiovascular exercise.

This is a good point to just change the group of exercises you are doing. This will bombard your nervous system with new information and reinforce the adaptation to activity which your body is

undergoing. As you are increasing your loads weight training a good general rule is that you aim to increase your loads by no more than 10% per week. Never sacrifice your form for increasing the load. You may find that until your core stability increases your body will not tolerate an increase in the loading. At this point it can also be beneficial to add a low load power exercise (e.g. jumping up steps) to start getting the body accustomed with the loads occurring while skiing or snow boarding.

Your cardiovascular exercise should also increase at this point. The most efficient way to do this is by interval training. Using a heart rate monitor is beneficial to this process so you know how hard to challenge yourself and quantify your cardiovascular response.

#### Key Components

- Large groups of muscles in functional patterns
- Higher set repetition 3x 8-12
- Some power exercises included
- Submaximal loads (8Rmax)
- Build on cardio base – change intensity between sessions

#### Stage 3

Over this 6 week period the aim is to reach your best strength and power with your weight training and to increase your anaerobic threshold as much as you are able. Again this is another good point to change the collection of exercises you are doing. It can be useful to pyramid your weight training sets at this point starting with lighter weights and greater repetitions and progressing each set to a heavier weight with fewer repetitions. Whole body movements such as jumping and hopping are again useful through this period. Another option for your training at this point is to go to an indoor snow centre 1-2 times a week. This will allow the best kind of practice and conditioning for skiing... actually doing the activity! As with each period never sacrifice form for increasing loads.

- Increase loads – pyramid eg 60%/70%/80%+ of your maximal strength
- Olympic lifts useful – technique first, use mid shin/mid thigh positions/unilateral dumbbells
- Jump/ hop/ Sprint
- High intensity interval training improve lactate threshold- cardio
- Beware of injury – never sacrifice form for increasing the loads.

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