



Along with kids and adult novices, 20- to 25-year-old males are a high-risk group for injury on the ski slopes.

Ready, set, *ski*

Planning a snow holiday? Make the most of it and be a high flyer by getting fit and avoiding injuries, writes ANNA-LOUISE BOUVIER

As a physiotherapist and a late vocation skier (OK, so how much snow is there when you grow up in the NSW Riverina town of Griffith?), I view ski season with a mix of exhilaration and dread.

It's a fantastic, albeit expensive, holiday. The children love it, the family loves it. Adults glide down slopes rediscovering their fading youth using a mixture of craft and good fortune to beat their kids down black runs. Children in helmets and goggles, some barely able to walk, come careering down, trying to break land speed records.

Last year, I went to Niseko in Japan and experienced the wonder of powder snow, no queues and the luxury of soaking in an *onsen* (Japanese communal hot bath). A holiday really doesn't get much better. That is, until some novice on a snowboard comes crashing across your serenity. Suddenly, you're back home ready for a knee reconstruction and six months getting to know your local physio.

So let's look at the ins and outs of what you can do to stop your après-ski time turning into a medical merry-go-round.

How likely are you to be injured?

Scottish physician Dr Mike Langran has compiled some excellent summary data on international injury rates. You have about a 2/1000 chance for alpine skiing and 3-4/1000 chance for snowboarding of ending up in casualty or at the medical centre on the snow. In reality, the rate of non-emergency injuries is much higher, especially in the 40-50 age bracket, and they're the ones who end up having physio-style treatment when they get home.

What are the most common injuries?

From Dr Langran's data tracking 6500 injuries, alpine skiers are more likely to hurt

their knees, head/face and thumbs, while snowboarders are more likely to injure their wrists, followed by the head and face. Skiers are more likely to experience sprains or ligament damage (think cruciate ligaments in the knee), whereas snowboarders are more likely to fracture something (most commonly a wrist).

Who's most at risk?

Kids and adult novices are the highest risk groups. It's suggested this may be because they are more likely to have hired gear, but with kids it's more probably because they have no fear and are likely to end up out of control. Another high-risk group are 20- to 25-year-old males (perhaps the same causes as for kids?).

Fall factors

Other skiers While kids and novices are in the highest risk group for sustaining injury, they also represent one of the biggest risks for causing injury! In Australia, the sheer number of skiers on the mountain is also often a problem so even the fittest, most flexible and skilled skier can end up getting scuttled.

Snow conditions Both very bad and very good conditions can be problematic. Growing up often skiing on ice, dirt and sludge in

Australia certainly did not prepare me for the brilliant snow conditions of Japan. Such conditions require wider skis which, while making you more stable, often have skiers going faster than they can handle. Melbourne physiotherapist Sue Gertzel says the highest percentage of injuries also happen on sunny, fine days, when people are likely to go faster. **Visibility** Vision is one of the body's main sources of balance. Lots of snow may also bring poor visibility. So long as your internal proprioceptors (your ligaments) are telling you where your body is in space and how to make all the fine control adjustments you need, all is well. Unfortunately, these reflex adjustments tend to decline in your 40s and 50s and may not provide you with all the feedback you need to stop yourself when you're about to fall.

Cold Warm muscles give more. Cold muscles don't absorb change as easily. So if you're skiing in really cold conditions you really need to warm up more (especially after your afternoon hot chocolate when you're getting really tired and the temperature is really dropping). Beware the first run of the day and the first run after lunch.

Fitness Skiing requires a fabulous but very sport-specific mix of balance, skill, strength, reflexes, physical conditioning and flexibility.

PREVENT INJURY

1 Check your equipment

- Make sure your bindings are adjusted to ISO standards.
- Wear a helmet. It won't necessarily help if you smash into a tree but the research suggests it will reduce the risk of minor abrasions and contusions.
- Snowboarders: get a good wrist guard.

2 Get fit to ski

Many physios and gyms run programs that can give you ski-specific exercises to really get you ready for the snow. This has the combined effect of not just preventing injury but enhancing your performance on the slopes. You may also need a smart new outfit...

bodywork

Most of us are not as fit or flexible as we were and if we only ski once a year there's very little else in our lives that prepares us to keep both feet together while squatting up and down 50 times in three minutes. One of the biggest risks for injury comes from not being sport-prepared. The more you put in before you go, the more likely you are to cope with all the external issues that will challenge your performance.

*** Fatigue** If you've flown halfway across the world or travelled for hours with screaming kids to go on a week's holiday, you want to get your money's worth. The trouble is, most of us haven't put any preparation or training into this process and rely purely on our natural super-athletic reserves and previous prowess. Tired bodies make mistakes, so watch out on the last run of the day.

*** Mental preparedness** Fear changes performance and reaction times and tends to make you stiffer and more rigid. If you've learnt to ski from a young age, you've skied without the fear of falling that adult novices experience. However, even an experienced skier who has had a significant injury or fall will find the greatest challenge is to ski without fear.

Perhaps my friend's adage, as she was coaching me to fly down the fall line, is accurate: "Speed is your friend ... fear is your enemy!" ■

Ski-specific resources

www.ski-injury.com

Victoria: Ski-specific classes at Get Fit With Physios (Sue Gertzel)

Fitzroy, Surrey Hills, Heidelberg, Elwood, 03 9328 3733

ACT: Get Fit to Ski is an eight-week program 02 6273 4724

The 10-week best-you've-ever-felt skiing routine

Aerobic conditioning

- Walk hills for at least 40 minutes three times a week.
- Take the stairs at every opportunity.

Balance

- Every time you're on hold on the phone, stand slightly bent on one leg and bring the other hip up to 90 degrees. Hold for at least five breaths. When you get good at this, try closing your eyes (white-out training).

Reflexes

- While you boil the kettle, do a series of side-to-side squat jumps, keeping your elbows bent while simultaneously imagining you are a world-famous mogul champion.

Leg strength

- Wall sits: Gently slide up and down with your back against a wall 10 times. Then hold

at the lowest point for five breaths. Repeat three times, twice a day.

Triceps

- Bench push-ups: Stand with your hands on your kitchen bench, feet about a metre away. Keep your stomach tight and your body straight. Gently lower yourself towards the bench into a push-up position, keeping your elbows close to your body. Repeat 10 times, twice a day.

Flexibility

Canadian physiotherapist Carl Petersen's book *Fit to Ski* includes some terrific warm-ups and stretches on the snow. Go to www.citysportsphysio.com/fittoski.html or the injury prevention section at www.ski-injury.com for some great images of Carl's stretches.

Smart buys

The weather might be cooler, but your face can still be radiant. Treat yourself to these nourishing masks and feel the difference

Guinot Masque Energie Lift, 50ml, \$62

Put this on for 15 minutes and your face does feel invigorated — your skin is noticeably firmer and glowing from vitamins C and A. The mask goes on clear, so there's no scary Martian look, either. **8/10**



Dr LeWinn's Line Smoothing Treatment Mask, \$79.95 for pack of six treatments

This is the real deal, a no-mess, white, thick mask packed with green tea, ginseng and vitamin A, which you stick to your face like a medical patch. It feels cool on the skin and, when you peel it off after 20 minutes, your face is calm and smooth. **7/10**

Li'Tya Tasmanian Kelp Hydrating Mask, 75ml, \$39

Because of the kelp in its ingredients, this is a clay mask that's suitable for dry and/or sensitive skins. It's white on the face and softens fine lines in just 15 minutes. **9/10**

Dermalogica Intensive Moisture Masque, 75ml, \$62

This creamy white mask is great for ultra-dry skin. It's chock full of skin conditioners, plant extracts, honey and vitamins that make your skin feel smooth and soft after 10 minutes. **8/10**

Jan Marini C-ESTA Facial Mask, 60ml, \$88

It's strong-smelling, but the results from using this bronze-coloured cream are terrific. Leave it on for about 15 minutes and your face feels extremely smooth and skin appears more refined. **9/10**