

# Snow break



**Snowboarding is cool. Many boarders think wearing wrist guards isn't. But there's strong evidence that wrist guards prevent fractures.**

**Belinda Allan looks at how to get the best protection.**

**Wrist injuries are common among snowboarders. International studies show that 25 percent of all snowboard injuries affect the wrist – and that 70 percent of wrist injuries are fractures. When you lose your balance, you instinctively put out your hand to break your fall. Most fractures occur when the wrist is forced backwards.**

**Juliane Bray, New Zealand's top female snowboarder and the first New Zealander to win a snowboarding World Cup event, believes beginner snowboarders should wear wrist guards. Although Juliane doesn't wear wrist guards now – she knows the importance of falling properly – she did wear them when she was learning to snowboard. She also wore wrist guards when she was protecting a wrist injury after a bad fall.**

**What's good enough for Juliane should be good enough for the rest of us. So we convened an expert panel to assess seven snowboarding wrist guards (every brand we could find in early 2007). The panel looked at comfort, fit and protectiveness.**

## Our assessment

Wrist guards have an almost impossible task. They must provide adequate support and protection, while allowing the wrist to be used as normally as possible.

A wrist guard covers the lower forearm, wrist and part of the hand. There are two main types: those worn over your glove; and those worn underneath. Gloves with built-in wrist guards are also being developed.

Wearing any wrist guard should be better than not wearing one. But our panel was disappointed in the wrist guards we saw.

The panel agreed that the **RAC** wrist guard (worn over the glove) was the most protective. It protected both sides of the wrist and had a fan-shaped support on the palm to spread the impact.

But the RAC screams “learner”. It's bulky, unattractive, and uncool. So you won't find it in many shops. The good news is that

most ski fields will lend you a free pair of RAC wrist guards when you hire a snowboard. All beginners should take up this offer.

The **Dakine Wrist Guard** also provided good protection to the palm of the hand. It's compact and would fit easily under a glove. However, there's no support splint on top of the hand. This guard is a good compromise for a more experienced snowboarder.

The **Dakine Nova Wrist Guard Glove** was the most convenient. You only need one piece of equipment, rather than both a glove and a guard. But our panel questioned how much support it'd give. It's definitely not for a beginner, although it may provide some support for a more experienced boarder who's less likely to fall. Matt Wood from R&R Sport (one of our panellists) told us that this technology was fairly new. In time, he expects gloves with built-in wrist guards to offer better protection.

Two of the other guards – Red Impact Wrist Guard and Triple

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Eight Undercover Snow Wrist – provided little protection. The Seirus Internal Wrist Guard Jam Master Exo was uncomfortable.

The Teal and Black wrist guard we bought from Trade Me was considered totally unsuitable. The protective support was easily snapped and it was bulky and uncomfortable to wear.

The panel stressed the importance of trying the wrist guards before you buy. So don't buy online, or from a store that won't let you try them.



## Why wear a wrist guard?

Lab-based studies have shown that, if you're wearing a guard, more force is taken off the bone and you're less likely to fracture your wrist – and any fracture you do get will be less serious.

International studies (including three randomised control trials) suggest that snowboarders wearing wrist guards have significantly fewer injuries. For instance, the Colorado Snowboard Injury Survey collected information on more than 7000 snowboard injuries. The data showed boarders who wore wrist guards were only half as likely to injure their wrists as those who didn't.

Some snowboarders say they don't wear wrist guards because the guard may transfer the injury higher up the arm. But there's little evidence to support this. A 2005 study published in the American Journal of Epidemiology studied 19 ski areas. It found that wearing wrist guards reduced the risk of a hand, wrist, or forearm injury by 85 percent.

Not surprisingly, beginners are at the highest risk because they lose their balance more easily and may not have learnt how to fall properly. Experienced snowboarders are two-and-a-half times less likely to injure their wrists.

If you break a wrist you'll be off the slopes for six to eight weeks. Fractures may require re-setting and possibly the insertion of metal wires or plates. They can lead to premature osteoarthritis, and to chronic pain and disability. They're not something to take lightly.

ACC wants to reduce the number of snowboarding wrist fractures. In the 2005/2006 year, 15 percent of the total snow-sport claims for earnings-related compensation were for wrist fractures – many of these were from snowboarding.

## Lack of a standard

Standards ensure a product can withstand certain forces under testing, and they reassure consumers that the product can do what it claims. But we can't advise you to look for a standards-approved snowboarding wrist guard – there aren't any.

Snowboarding is a fairly new sporting activity and no country has yet developed a standard for wrist guards. The International Society for Skiing Safety (ISSS) will discuss what's involved in developing a standard this year.

## We say

- ▶ Always wear a wrist guard, especially if you're a beginner. Most ski fields will provide them for free when you hire a snowboard. Adults will pay \$40 to \$50 to hire a snowboard for the day.
- ▶ Don't buy wrist guards until you've tried them with the gloves you'll be wearing. Although some wrist guards offer better protection than others, there's no point buying uncomfortable ones.
- ▶ Because there's no standard to help you find the right wrist guard, use our "What to look for" guide.
- ▶ Wrist guards come in different sizes, so get one that fits.
- ▶ Wrist guards should last for two seasons (depending on how often you wear them). They need to be dried out after use.
- ▶ Just starting to snowboard? Take a beginner's lesson, if the ski field offers this. Learn how to fall properly – it'll reduce the risk of injury.
- ▶ Don't forget other protective equipment, such as helmets and padded shorts.

## Falling safely

To reduce the risk of injury, tuck your forearms in towards your chest with your fists clenched – and bend your knees. As you fall, your buttocks (if you fall backwards) or knees (if you fall forwards) take the main impact.



Profiles



consumer recommends



consumer recommends

**Most protective wrist guard**

**RAC WRIST GUARD**

Price: \$39.95

**Good points:** The most protective wrist guard and the best for beginners. Support splints on top and bottom of wrist. Fan-shaped support on palm to spread the impact. Left- and right-hand guards identified. Durable splints with good length of support. Worn over gloves (this protects the gloves and helps keep them dry).

**But:** Bulky and unattractive. Not commonly sold in shops.

**Worth considering**

**DAKINE WRIST GUARD**

Price: \$43.00

**Good points:** Fan-shaped support on palm to spread the impact. Left- and right-hand guards identified. Range of sizes available. Good fit. Compact (so would fit easily under most gloves).

**But:** No support splint on top (back) of hand. Palm splint fairly rigid and so may split with wear. Neoprene fabric may become sweaty.

**What to look for**

**When you're shopping for wrist guards, look for:**

- ▶ **Breathable material:** Neoprene or rubber will be comfortable but may be sweaty. These materials will also cool quickly.
- ▶ **Comfort:** If the wrist guards aren't comfortable in the shop, they won't be comfortable after a day on the slopes. There shouldn't be any pressure points when you bend your wrist back and forth.
- ▶ **Convenience:** Can you use your hands or remove your gloves easily? Can you release, secure, and adjust bindings without having to undo a guard?
- ▶ **Design:** Support splints should be contoured to fit the curve of the hand and wrist.
- ▶ **Fit:** Guards shouldn't slip up and down on the wrist. They should stay in place regardless of whether they're worn under or over the glove. Brands should offer a range of sizes to ensure a good fit.
- ▶ **Flexibility:** There should be some flexibility in the splints – but you shouldn't be able to bend them in half.

- ▶ **Left- and right-hand guards:** Wrist guards designed to fit either hand won't stay in place as well as those designed specifically for each hand. There should be a clear indication whether the guard is for the left or the right hand.
- ▶ **Length of guard:** Longer guards are generally better than shorter guards. The length of the guard should be longer than your watch strap.
- ▶ **Palm support:** There should be some cushioning at the point of impact, to spread the load. A fan-shaped support will be most effective.
- ▶ **Support splints:** Support splints should be on the top (back) of the hand and on the palm. The palm support should be stiffer than the support on the top.
- ▶ **Wrist extension:** Guards should be stiff enough to stop you bending your wrist back more than 45 degrees.

The panel stressed the importance of trying the wrist guards before you buy. So don't buy online, or from a store that won't let you try them.

**Our panel**

**Dr Simon Brebner**

Ski Area doctor at Treble Cone for 12 years. Medical Director for the Winter Performance Programme.

**Ginny Bush**

NZ team physiotherapist at the 2002 Salt Lake City and 2006 Turino Winter Olympics. Physiotherapist for the NZ Winter Performance Programme. Ginny is based in Wanaka.

**Erin Greene**

Patroller Coronet Peak.

**Associate Professor Peter Milburn**

Researcher into sports injury biomechanics, School of Physiotherapy, University of Otago.

**Matt Wood**

Buyer of snow products for R&R Sport, Dunedin.

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**MORE INFORMATION**

**FROM CONSUMER**

Shin guards *Consumer 445*

Mouth guards *Consumer 456*

**FROM OUR WEBSITE**

Profiles of the other wrist guards assessed.

[www.consumer.org.nz](http://www.consumer.org.nz)