

Snow Machines

Anatomy of a Mono-ski

Imagine the feeling of peeking over the tip of your ski to see nothing but the bright white snow of the steep slope below. Now imagine doing that while sitting in a machine that will take you down that hill at speeds of more than 100 kilometers per hour if you let it.

You're seated in a snug fiberglass bucket attached to an aluminum frame. Your knees are bent in front of you. A shock absorber connects you to your one ski. It works to cushion the bumps and humps on the way down. You have an outrigger – a mini ski on a short pole – in each hand to help you keep from tipping over. Welcome to the wonderful world of mono-skiing!

Skiing in a mono-ski, or a bi-ski which has two skis for better balance, is one of the few wheelchair sports that leaves the wheelchair behind.

For people who use a wheelchair, it is a **special kind of freedom**. They can go places and do things that they can't do anywhere else. Some say that mono-skiing feels just like flying.



The Driver's Seat

Mono-skis are used mainly by people who have lost the use of their legs. Maybe they were born that way or had an accident. But they do have good upper body strength and balance. Bi-skis, which ride on two skis, are for skiers who have less balance, or less muscle and arm control.

Good mono-skiers and bi-skiers can carve slick turns on any ski hill. And they can **ski moguls, terrain parks, race courses** and even backcountry runs with the best of their stand-up skier friends and family.

Fun Facts

Mono-skis made their first appearance in the Winter Paralympic Games as a full medal sport in 1988.



Made to Measure

Mono-skis and bi-skis come in all sizes. Youth versions use all the same parts that are in the adult versions. They're just sized smaller to fit kids. Some have a piloting bar. That's a handle bar that an **instructor** or **parent** can hold on to so they can help steer and control speed.

Spokes and Strokes

To learn about different kinds of sports wheelchairs and how they're made visit www.glowinghearts.ca and check out the KINETICS section in *Glowing Hearts – From Play to Podium*.

An Evolution

Like any piece of sports equipment, mono-ski technology has advanced too. The first **mono-skis** (known as sit-skis) were made in Europe and looked more like old-fashioned sleds with metal runners. Skiers dragged long poles in the snow to help them turn. Most skiers needed a stand-up skier tied or "tethered" behind them for safety. But skiing techniques evolved. And once **shock absorbers** were added, and just one ski became most popular, the mono-ski matured into a well-engineered modern-day machine.



Built to Rip

WEIGHT: 15-20 kg | TUBING: Aircraft-quality aluminum | PRICE: \$2,500 - \$7,000

A mono-ski is made of four main parts. There's the **seating system** which has a fiberglass seat that may be strengthened with carbon fiber. Next is the **frame** made of aluminum, like a bicycle frame. A **suspension system** softens the ride, and uses a shock absorber like you'd find on a motorcycle. Finally there's **the ski**, a regular board like any skier would use.

