

## **Mountain School Tech Tips: Some Notes on Climbing Ropes**

Looking for an all-round rope, is a bit like looking for an all round ski. A nice skinny ski with fish-scales on the base is great for skiing the trails around Paulson summit, but just ain't gonna cut-it on a big powder day in the backcountry. Similarly, a nice light rope will be great for glacier travel, but might make you a bit nervous when you're 8 metres out from your last piece of gear half-way up the south face of Asgard. In lieu of an unlimited budget and ownership of multiple ropes, the best you can do is choose the most appropriate rope that will work for most of the climbing you want to do.

All climbing ropes are dynamic, that is, they stretch on impact to absorb the forces generated when a climber takes a whipper. Static line is available, but is unsuitable (even dangerous) for climbing and is used solely for hauling gear, rescues and caving. Modern ropes are made of an outer sheath (the mantel) woven around an inner core (kern), and vary in length from 50 to 70 metres (you can buy dynamic rope off the spool from MEC), with 60 metres being most common.

Dynamic ropes are categorized into three types depending on the diameter of the rope, single, half and twin. Single ropes are between 9 and 11 mm in diameter and are intended to be used individually. These thicker ropes are ideal for crag climbing and top-roping but are heavy to lug about on a glacier. They make good first time ropes for beginning climbers and you can even buy them with an extra thick sheath if you are planning on doing lots of top-roping. Half ropes are between 8 and 9 mm in diameter and should be used in pairs (climbing with two ropes) generally clipping alternate pieces of protection. They provide some added safety on alpine routes (for example, rock fall is less likely to chop both ropes) and can be used singly for glacier travel. Twin ropes are thinnest, 7.5 to 8 mm in diameter and are also designed to be used in pairs, although both ropes should be clipped into all protection pieces. Using twin ropes requires good rope management skills but they can be used singly for glacier travel. Ropes also come in dry and non-dry finishes. Dry ropes are impregnated with some chemical that makes them water resistant. Ice climbers will definitely want dry ropes, and some people buy dry ropes for alpine climbing and glacier travel, but, in my experience, the dry finish wears off after a while and you are left with a more expensive non-dry rope.

Once you've got your new rope, take care of it. Don't store it in direct sunlight or near chemicals. Buy or make a rope bag and use it for crag climbing (no-one carries rope bags on alpine climbs). Don't step on the rope – especially with crampons on, and whack your buddies upside the head if they step on your rope, check your rope after use, look for flat spots and abrasion of the mantel. Some obsessive compulsive types keep a record of how many falls their rope has taken, but most of us don't have this kind of time (or personality) for this.

Want more information, MEC has a lot of great information on-line including a

comparison chart showing the weights, length, impact force and number of falls for each of the ropes they sell. Just go to [www.mec.ca](http://www.mec.ca) and search for ropes under "articles & info".

References (available for loan from the KMC library):

[www.mec.ca](http://www.mec.ca)

*Rock Climbing: Mastering Basic Skills* by Craig Luebben