



## Igloo Builders Guide

Building an igloo is easy and fun. And the igloo is a great place to spend the night on a small 'expedition' in the mountains. Much warmer than a tent, and can be built just about anywhere. Building an igloo will take somewhere between 3 and 6 hours, depending on your previous experience and level of ambition...

This page is a small guide on building an igloo.

The photos are from somewhere north-west of Hallingskarvet, Hardangervidda, Norway, and were taken in March 1992.

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### Equipment

The only tool needed in addition to a snow spade is a saw. A special snow saw is recommended, but a carpenter's saw will do (as seen in the pictures). A machete or small axe is handy for moulding the snow blocks, but not necessary (use your ski instead - less to carry).

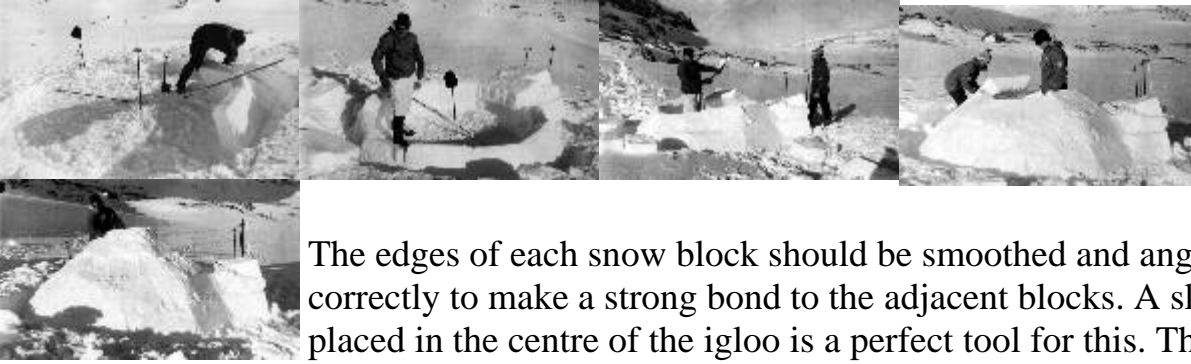
### Step 1: Find a suitable spot

A hard field of snow is required to build an igloo - hard enough to make solid snow blocks. Even if the top layer of snow is soft, hard snow can usually be found underneath. Use your sticks to make a circle, marking the base of the dome. The snow depth should be at least 1m where the igloo is placed. Don't make it too big, or you're into trouble later. This igloo is for 2-3 persons.

### Step 2: Prepare the snow blocks

The snow blocks are prepared with the saw. They should be solid enough to be carried horizontal without breaking by their own weight. Large blocks are used at the base of the dome, smaller ones at the top. A thickness of 15-30cm is good. The blocks can be made extra strong by setting them up to harden in the wind.

### Step 3: The building starts



The edges of each snow block should be smoothed and angled correctly to make a strong bond to the adjacent blocks. A ski with its tip placed in the centre of the igloo is a perfect tool for this. There will always be some (or maybe a lot of) cracks between blocks, but that is fixed later. It is very important that the bottom row of snow blocks are placed aslant, otherwise you are building a tower...

A full circle of snow blocks has been built. Ideally, the blocks should be placed in a spiral. This will make the building easier. Note the entrance. It is made of two vertical placed blocks pointing outwards with a solid block on top to make a small roof. It might look tiny, but a lot of snow is dug out later. At this stage you might want to lower the floor inside the igloo. This way you can get 10-30cm of extra headroom!

The dome is starting to form. Keep removing the snow that is piling up inside. It is a lot easier to throw it out of an open dome than to shovel it out the entrance afterwards.

If everything is done right, the dome will not collapse because the blocks are supporting each other. But in some critical situations, you might want to use a stick inside to support the topmost blocks until the dome is closed. The last few blocks are moved into the igloo through the entrance and lifted up. There might be need of two persons inside at this stage.

#### Step 4: Finishing the igloo

The igloo is closed! Not a perfect dome, but good enough. Now it is time to fill all those cracks with snow. (The really big cracks are filled with small blocks of snow.) Then the inside of the igloo must be smoothed. This is done by hand (your gloves get very wet, bring extra pair!). If the inside of the dome is one, smooth surface, there will be no dripping of water at all. When the smoothing of the inside is done and all the snow has been shoveled out, it is time to finish the entrance. An L-shaped entrance is a good solution, and will prevent any snow from blowing in. First dig an L with a depth of 1m (or more), then cover it with a square 'roof' made of snow blocks. Or you can just keep the entrance simple, as shown in the image.



Its finished! This is the inside. Note how the entrance is dug deep enough to allow almost standing height (Ronny with the spade). The cold air will flow into this hollow, which function as a cold sink. *NOTE! When using a stove in the igloo, make sure the ventilation is adequate!* During cooking small holes will melt in the roof, letting fresh air in. A small ventilation hole in the roof is recommended. Always keep the entrance open. The floor should be covered with some kind of camping mattresses, Therm-a-rest or similar is a good choice. Candles can be used as light source, cut a small niche for the candle, with sufficient space above it to avoid snow melting.



Time to say goodnight (Geir in the sleeping bag). Note how the ceiling is smoothed. Even after an hours worth of cooking, there is no dripping. Actually, during the night the water that has melted will freeze again between the blocks, making the igloo stronger than ever. Next morning you might be able to stand on top of the igloo!