

# Building a quinzhee

A quinzhee is a dome-shaped shelter made by hollowing out a pile of settled snow. It's an overnight shelter that is easier to construct than the more permanent igloo, which is made from cut blocks of snow and requires skill and knowledge. You can't stand up in a quinzhee, but you can sit upright or just curl up.

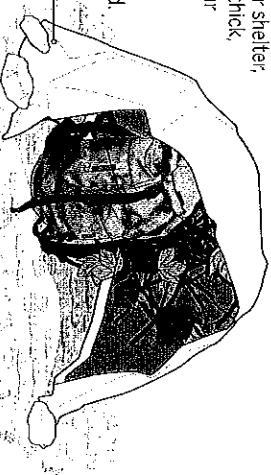
## WARMING AND COOLING TIPS

The following tips may help you stay at the right temperature:

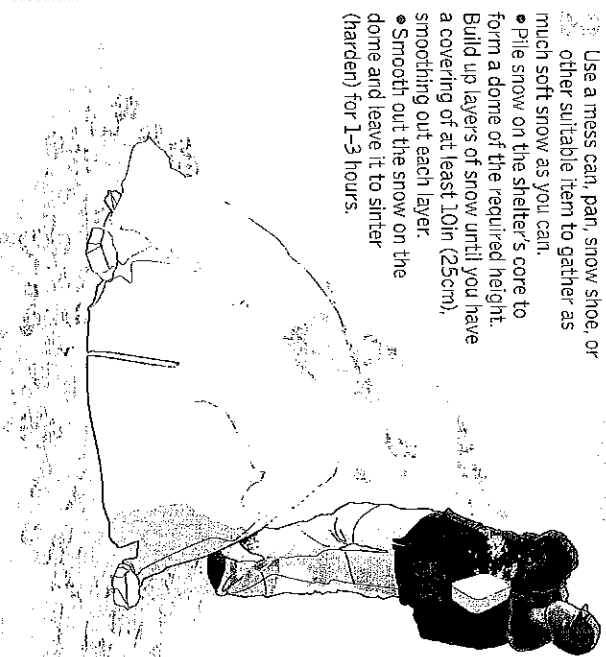
- Remove layers of clothing as you work, perhaps to your base layers, with a waterproof layer on top. Keep clothing dry so you can wear it when you stop working.
- Keep shelters at a constant temperature. If snow melts and refreezes, it stops insulating.
- Avoid heating your shelter too much.

Find a relatively flat area covered with snow. Mark out a circle for your shelter, including walls about 10in (25cm) thick and stamp down the snow. Use your backpack and boughs or leaves, covered with a tarpaulin, to form the core of the shelter. Site the doorway at 90 degrees to the wind.

Cover backpack with tarpaulin



- Use a mess can, pan, snow shoe, or other suitable item to gather as much soft snow as you can.
- Pile snow on the shelter's core to form a dome of the required height. Build up layers of snow until you have a covering of at least 10in (25cm), smoothing out each layer.
- Smooth out the snow on the dome and leave it to sinter (harden) for 1–3 hours.



## CARBON MONOXIDE

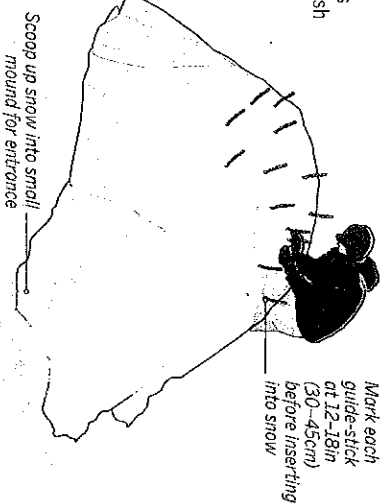
Carbon monoxide is an odorless gas that's produced when there's not enough oxygen to create carbon dioxide from burning fuel. Carbon monoxide poisoning can be fatal in an environment that is well-insulated and non-ventilated.

## PREVENTION IS BETTER THAN CURE

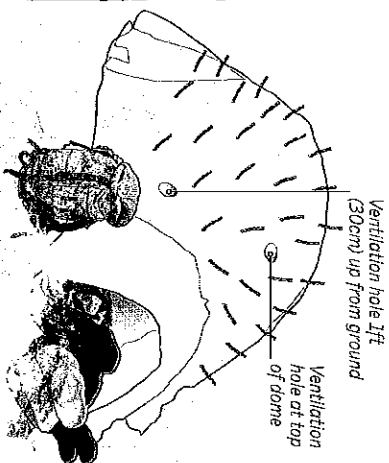
Create holes, 3–4in (7.5–10cm) in diameter, at the base and top of your shelter. Make sure the air flows out freely.

To get an even thickness in the roof and walls, push guide-sticks of equal length through the snow toward the center of the dome.

- Build a small compact mound in front of the dome.



- Burrow into the mound, remove your bag and tarp, and excavate snow from the core.
- Use the guide-sticks to keep the walls at least 10in (25cm) thick.
- Smooth out the snow on the inside to prevent drips from forming.
- Build a raised sleeping platform. This takes cold air away from your sleeping area.



## SIGNS OF POISONING

Carbon monoxide poisoning is cumulative and can build up over a few days. Mild effects of this are fatigue, faintness and flu-like symptoms. As the poisoning progresses, the effects are severe headaches, nausea, and decreased mental coordination.

## TAKE ACTION

Get into fresh air at once. Breathe fresh air for at least four hours to reduce the carbon monoxide in your system by half.

## BUILDING SNOW SHELTERS

- The following tips may help you to build a snow shelter:
- Snow is a good insulator. Fresh, uncompacted snow is typically 90–95 percent trapped air. Since the air barely moves, the snow can keep you warm and dry if used correctly.
  - Check your site for hazards, such as snowdrifts, freezing winds, avalanches, cornice collapse, and big animals.
  - Keep your tools inside the shelter in case you have to dig your way out.
  - Brush snow off your equipment and clothing before entering the shelter.
  - Tie all vital equipment to yourself so you don't lose it in deep snow.