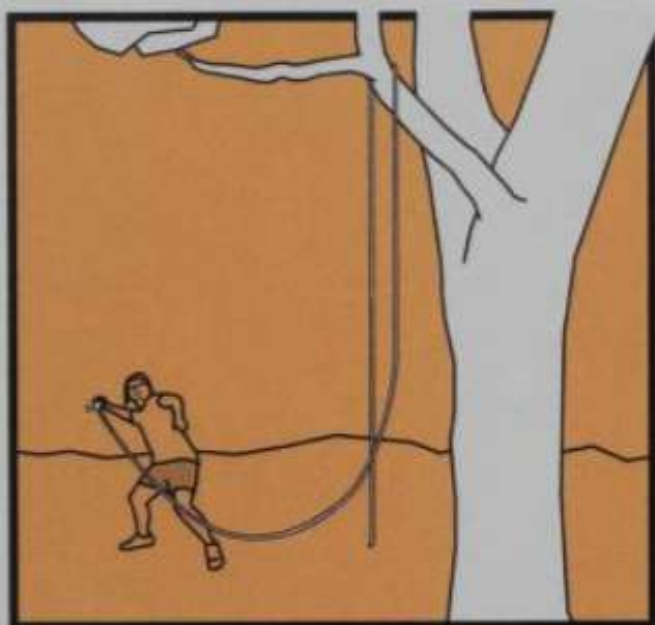


Make a Rope Swing

Trust life and limb to something you made



CUTS AND
SCRAPES



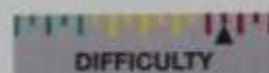
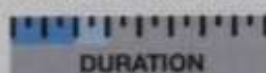
FALL



BUMPS AND
BRUISES

REQUIRES

- Strong Rope
- Sturdy Tree Branch
- Adult Supervision



WARNING

A healthy-looking branch can be rotten on the inside. Before you risk life and limb, inspect your hang-point carefully. Have an adult confirm your choice of branch. Pulling on it with a rope (while on solid ground) can provide good information.

HOW-TO

1. Find a tree. Look for branches that are about as big around as your waist, have lots of green leaves at the ends, and no big rocks or roots directly below them. Sometimes ropes get stuck in trees - will you be able to get up to the branch to get your rope down later if needed?
2. Find suitable rope. Look for rope that can hold at least twice your weight (according to the "test weight" on the package). If you can't find rope that strong, then double- or triple-up the rope you have until it can hold twice your weight. You'll need it to be long enough to go up to your branch and back down, plus some extra for knots and loops.
3. Hang your rope. Holding on to the tail of the rope, throw the other end over the branch. If the branch is too high to do this easily, consider tying a rock to a length of string and tossing that over first, then use the string to pull the rope over.
4. Check the position. Make sure that your rope goes over the branch at the right spot. If it is too far from the tree, the branch may bend or break; too close and you may bump into the trunk when you are swinging.
5. Make fast. Repeat steps 3 and 4 again so that the rope wraps completely around the branch. This will keep it from slipping or sawing through the branch while you are swinging.
6. Swing!

Supplementary Data

A person on a swing is what physics textbooks call a pendulum. The rate at which a pendulum swings is determined by the length of the rope from the attachment point to the swinging mass (that's you). When we "pump" to make a swing go higher, we are really changing the length of the pendulum. We lay back (which lengthens the pendulum) as the swing goes down, and sit up (shortening the pendulum) as it goes up. It's the fast bit at the end of the arc that makes us go a little higher. This exchange of energy is called Conservation of Angular Momentum.

You can just hang on to the rope to swing, but you may soon find that your desire to swing outlasts your ability to hold the rope. Tie a stopper-knot in the rope to make it easier to hang on to, or tie something on the very end to sit on, for example, a board or a tire.

If you are in a park, you probably shouldn't leave your swing tied to the tree. Untie any knots that you have tied, and then throw the rope back over the branch so that you can pull it down.