# Calf puller in my pocket: Rope, knots, mechanical advantage 

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It seems like $50 \%$ of my work involves restraint of the animal. Think about it for a minute. We have physical, dangerous jobs. In addition to the physical danger of working with large animals, we must also be efficient in our work. We may try to park our mobile unit as close to a job as possible, but sometimes that close is not very close. Look at the police officer or look at the infantryman. They carry as much on their person as possible.

I have had fun and saved much time carrying some rope on my person. I have renewed my passion for veterinary medicine. The most important concept that I am presenting is the efficient use of rope to provide a mechanical advantage using a pulley system.

To get proficient with using rope restraint you need rope/chord, the ability to tie 8 knots, and a carabiner. The rope size, in general, is related to its break strength. The larger the diameter, the stronger the rope. Twenty-five-foot length is most useful for most situations. One to $3-\mathrm{mm}$ cord will fit in the pocket easily, but breaks between 500 lb and 2000 lb ( $227-909 \mathrm{~kg}$ ), depending on the material. The $6-\mathrm{mm}$ and $8-\mathrm{mm}$ climbing ropes are a nice size to work with and will
hold friction knots. The good quality climbing rated, 6 - to $8-\mathrm{mm}$ cord will break between 3000 to 5000 lb . They will not fit in the pocket, however.

The knots that are essential are available on YouTube or books. The most important are the bowline, truckers hitch, round turn reverse with 2 half hitches, double fisherman's knot, prusik, Valdotain Tresse, versa tackle, marline spike hitch. These knots and hitches are easy to learn. Unlike riding a bicycle, however, the knots will be forgotten unless practiced frequently. The positive from learning and practicing these knots is that you will find that they are useful at home, and in many different recreational activities also. Rope storage is important also. Trying to untangle a 25 -foot piece of cord when you really need it can be frustrating and lead to putting all your ropes in the trash.

Here is a list of efficiencies: traction for dystocia, displaced abomasum lateral restraint, calf restraint (burley squeeze for newborn casting a broken leg), lifting a foot on a lame cow, tie a chute, load a horse, tie a tail, tie a gate, squeeze a foal, SR vaginal prolapse harness, and the list goes on.

