

# BSA

## Fishing and Fly-Fishing

### Merit Badge Knots Handbook



A fishing line is only as strong as its knots.  
Don't lose a nice fish because of poorly tied knots.  
Use the proper knots tied correctly as shown in this  
book and practice them often.

The following knots are either required or recommended for the BSA Fishing or Fly-Fishing merit badge, or both. Refer to your merit badge pamphlet or online sources for the latest requirements. See <http://www.usscouts.org/usscouts/mb/mb052.asp> for fishing and <http://www.usscouts.org/usscouts/mb/mb136.asp> for fly fishing.

Your Merit Badge Counselor can initial and date each knot page if desired to verify that you know how to tie each knot.

### **Helpful Hints and Best Practices**

- The best number of turns in a knot depends material and line diameter.
- When constructing knots with multiple turns, don't allow one strand to cross over another. Make sure that all strands lie neatly side-by-side.
- Lubricating a knot with spit, dog slobber (the best!) or water helps it to close properly. Some folks use special glues for knots that won't slip.
- No knot breaks until it slips. Pull your knots down firmly.
- Once a knot is securely tied, the tag ends should be clipped short - unless there's a special reason to leave them long.
- Fluorocarbon and some braided lines are slicker than nylon and require greater care when tying and closing knots or they will come loose.

**Images are from:**

<https://www.101knots.com>. and [www.netknots.com](http://www.netknots.com).

Another good website is <https://www.animatedknots.com>.

# Arbor Knot

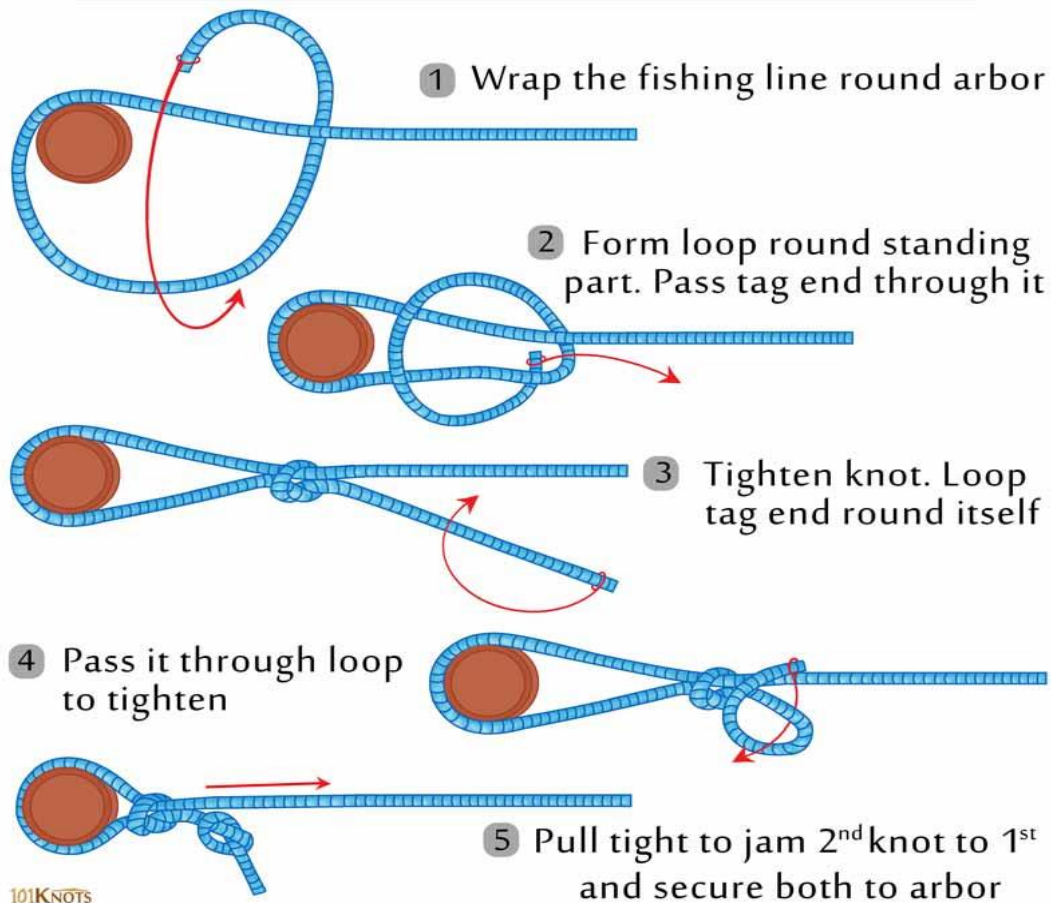
## Required Fishing & Fly-Fishing Knot

**Uses:** The Arbor Knot is used to attach fishing line or fly line backing to the "arbor" or "axle" of the reel spool.

**Tying Tips:** Look closely at Step 2 - note how the tag end is fed through the loop to form a slip knot. Tighten the tag end stopper knot and trim the waste end before sliding the knot down on the arbor - it's hard to get to it later. Rock the line back and forth after snugging it on the arbor to make sure the knot is well seated.

**Advantages:** The Arbor Knot is simple, easily learned and effective.

## Arbor Knot Instructions



# Nail (Tube) Knot

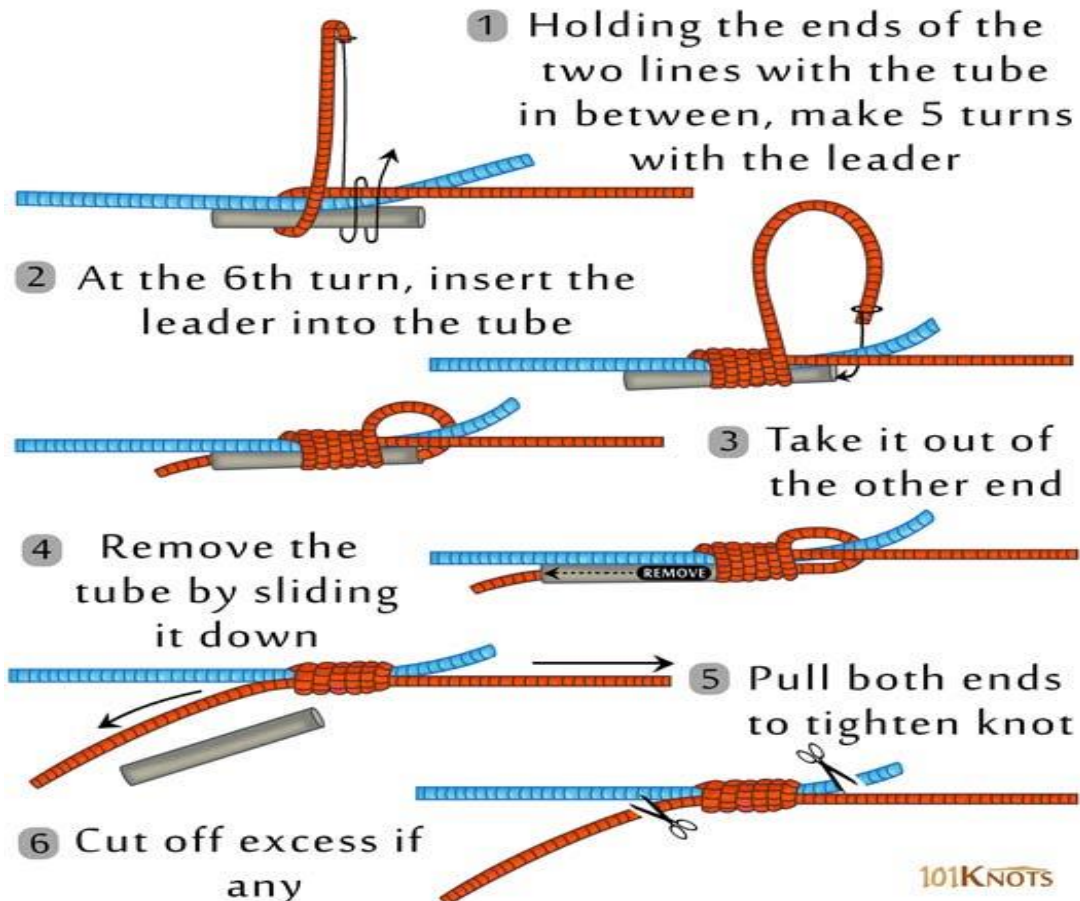
## Required Fly-Fishing Knot

**Uses:** The Nail Knot is an important fishing knot used to join two lines of very different diameters. For example, it is used for attaching thin backing to the back end of a fly line as well as the leader butt to the front end of the fly line.

**Tying Tips:** Gently pinch the knot as you form it (steps 1-5) to keep the wraps even and avoid overlap. After snugging it up (step 5), lubricate it, pull it tight, and trim the ends carefully. Test the knot by pulling firmly on both the thick and thin lines.

**Advantages:** The Nail Knot makes a compact knot that slides through the rod guides with minimal resistance.

## Nail Knot Instructions



# Improved Clinch Knot

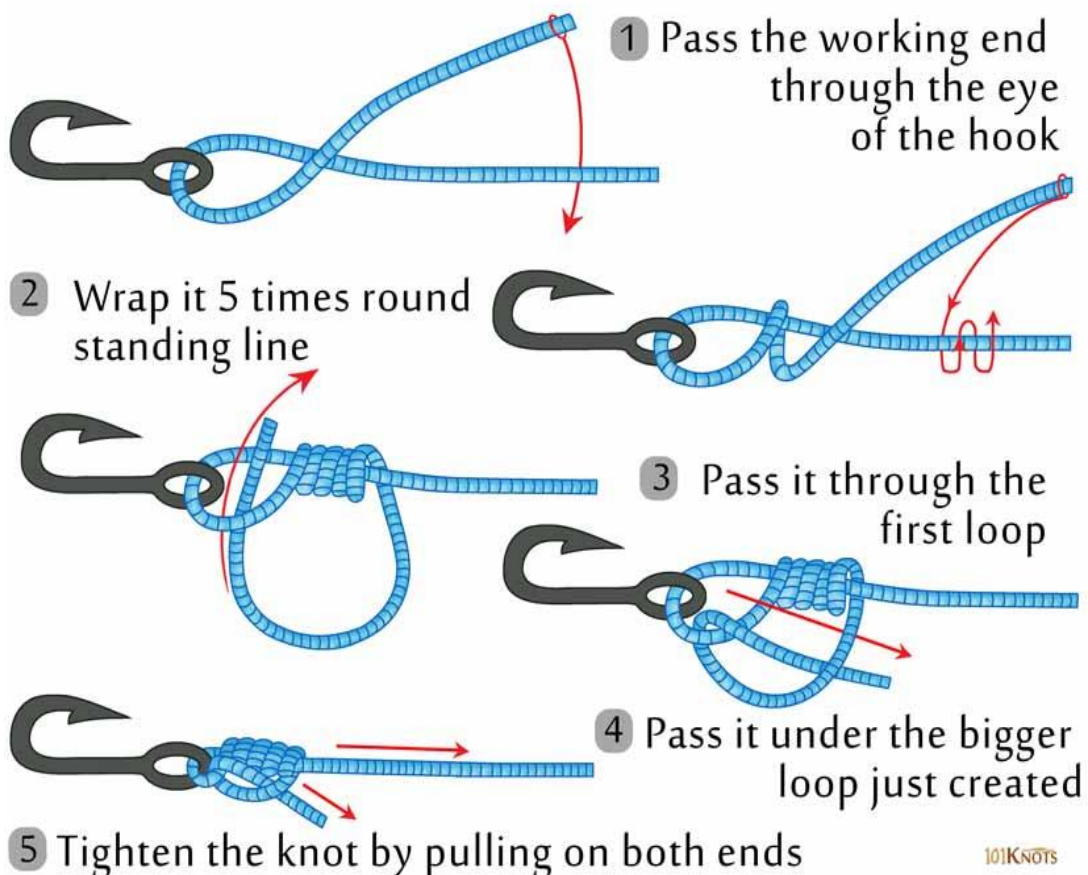
## Required Fishing & Fly-Fishing Knot

**Uses:** The Improved Clinch Knot is good for securing a monofilament (nylon or fluorocarbon) fishing line or leader to a hook, lure, fly or swivel. The "improved" version includes an extra tuck under the final loop for security.

**Tying Tips:** Make sure your wraps are even and don't overlap each other. Thoroughly lubricate the knot (after step 4) before tightening

**Advantages:** The knot is relatively easy to tie and is strong. If tied properly, with even wraps and lubrication, it doesn't slip.

## Improved Clinch Knot Instructions



# Palomar Knot

## Required Fishing Knot

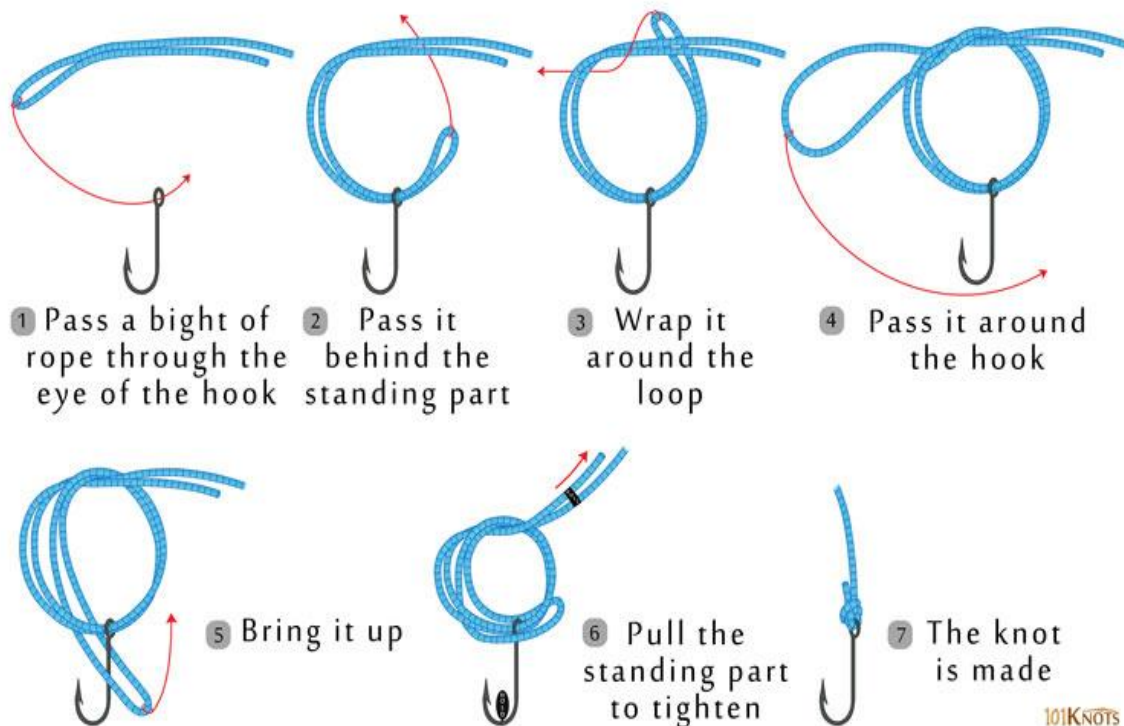
**Uses:** The Palomar Knot is a simple knot for attaching a line to a hook. It is also one of the strongest knots.

**Tying Tips:** Lubricate and pull both the standing and tag ends to tighten the knot.

**Advantages:** It is recommended for use with slippery braided lines as well as for others. With a little practice, it can be tied in the dark.

**Disadvantages:** The loop must pass through and over the hook, and can be awkward, requiring a large loop.

## Palomar Knot Instructions



# Uni Knot

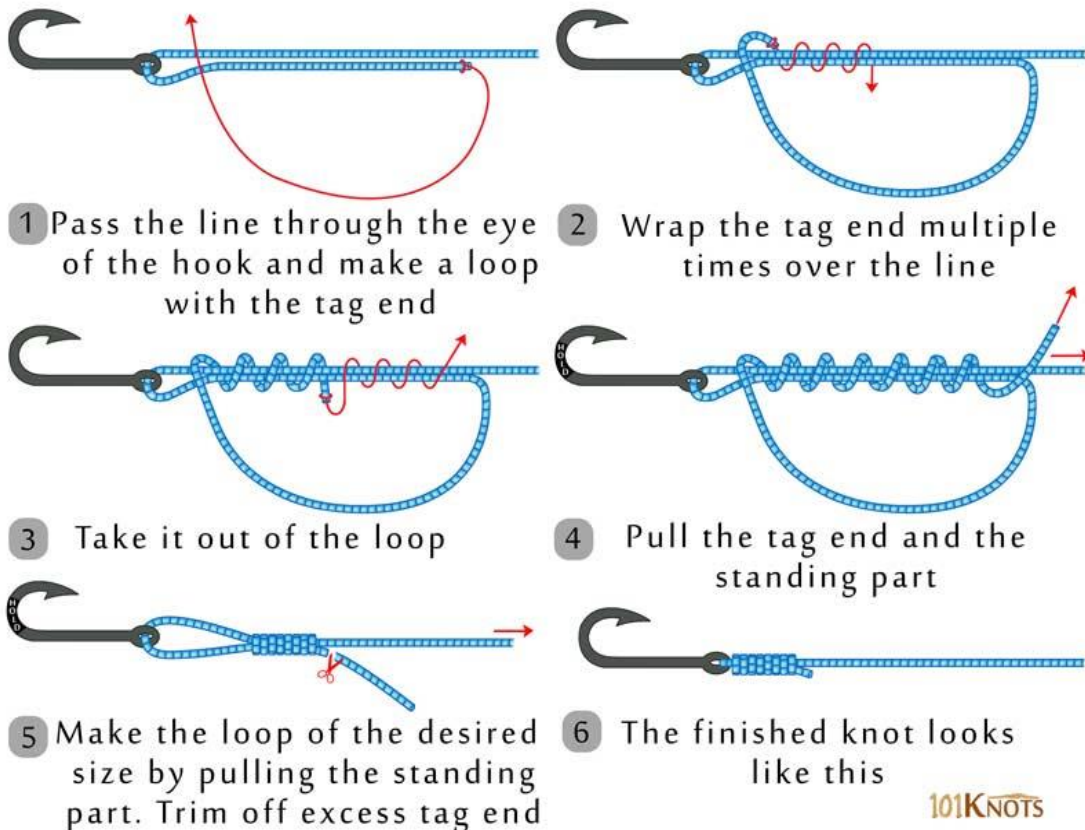
## Required Fishing Knot

**Uses:** The Uni Knot can be used, in one form or another, for almost every connection an angler needs.

**Tying Tips:** Like the Improved Clinch Knot, it's important to keep the wraps even and to avoid overlap. Thoroughly lubricate the knot before tightening.

**Advantages:** The knot initially forms an adjustable loop (Step 5). When finally tightened, the knot slides down and becomes fixed. It can be left slightly open for better lure or fly action. It works well with all fishing lines, and with practice is easy to tie in the dark.

## Uni Knot Step By Step



# Double Uni Knot

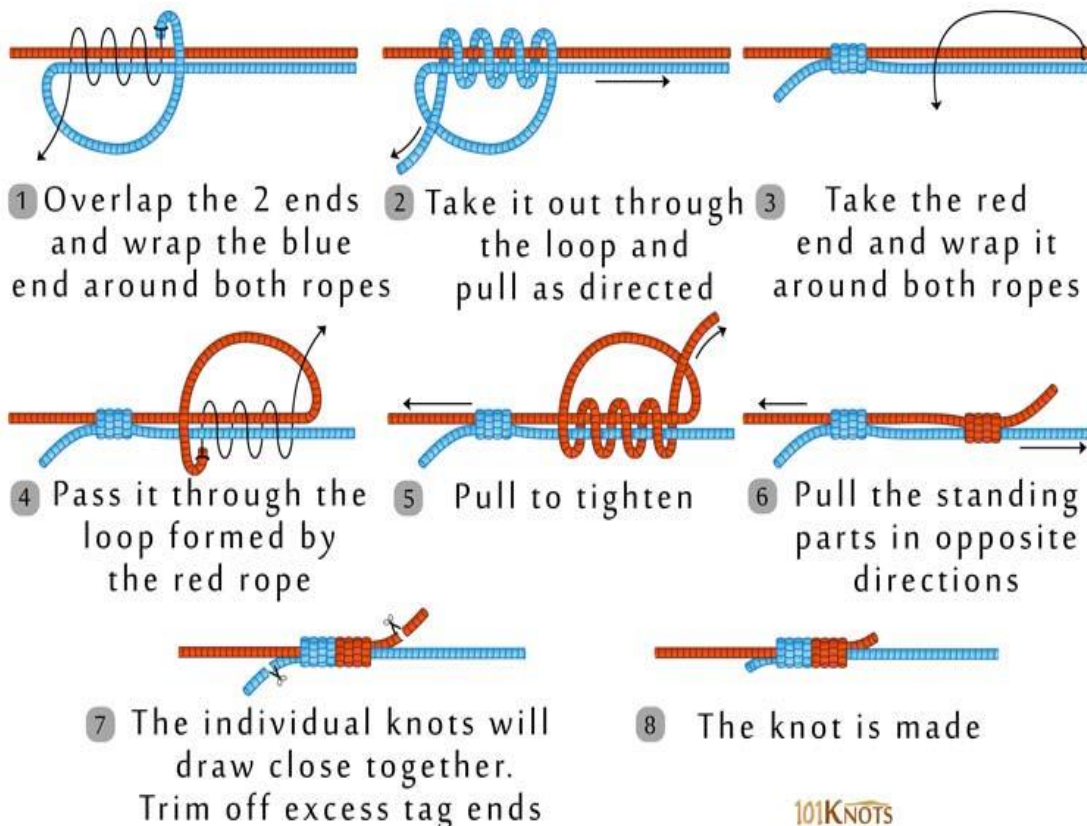
## Required Fishing Knot

**Uses:** This knot is used to attach two sections of line.

**Tying Tips:** Allow plenty of line overlap to provide the amount needed for each knot. After lubricating and snugging down each knot separately, draw them together to form the complete knot.

**Advantages:** Like the basic Uni Knot, this knot works well with all fishing lines. It can be used to connect two lines with very different diameters and characteristics. Before drawing it together, you can insert some wool or yarn to form a strike indicator (called a “bung” if you’re in Australia) if desired.

## Double Uni Knot Instructions





# Surgeon's Knot

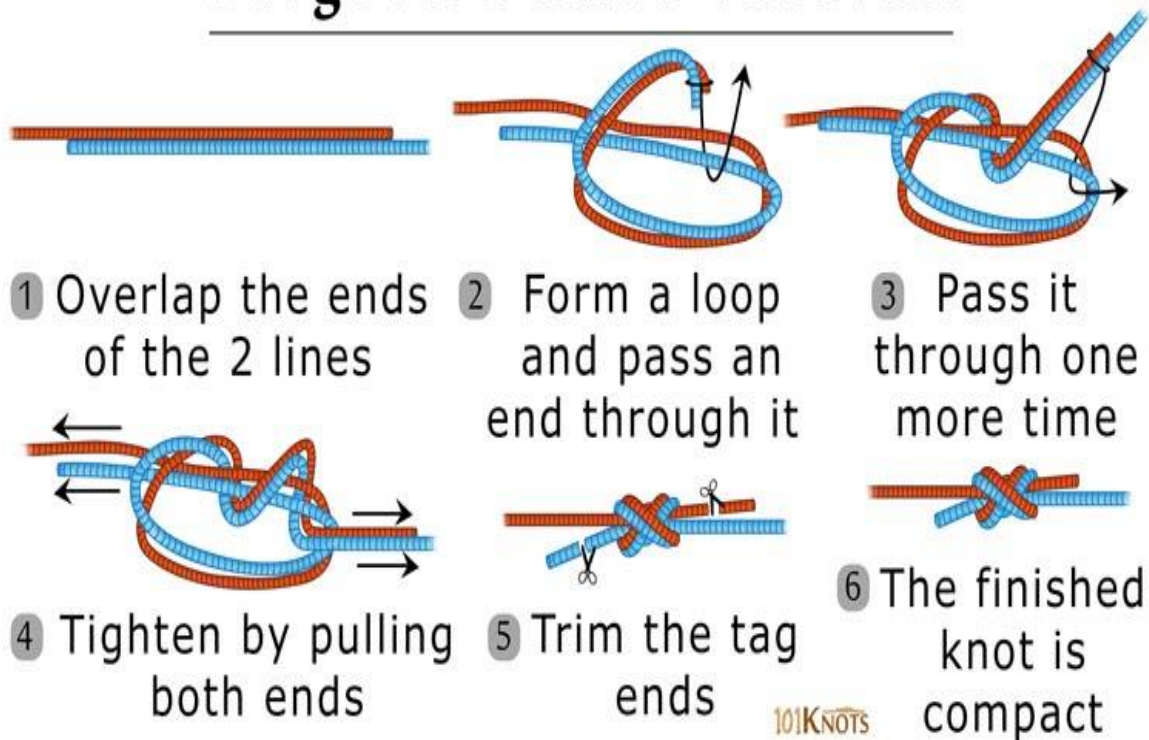
## Required Fly-Fishing Knot

**Uses:** Sometimes called the Double Surgeon's Knot, it is used to join two lines together.

**Tying Tips:** Overlap the line ends enough to make a loop adequate for the lines to pass through. For lines of significantly different diameters, double the thinner line before tying the knot. For slippery materials, like braid or fluorocarbon, use three passes instead of two to form a Triple Surgeon's Knot.

**Advantages:** The Surgeon's Knot can be tied quickly and easily, and it retains a high percentage of the rated line strength. It is useful to join two lines of significantly different diameters.

## Surgeon's Knot Tutorial



# Surgeon's Loop

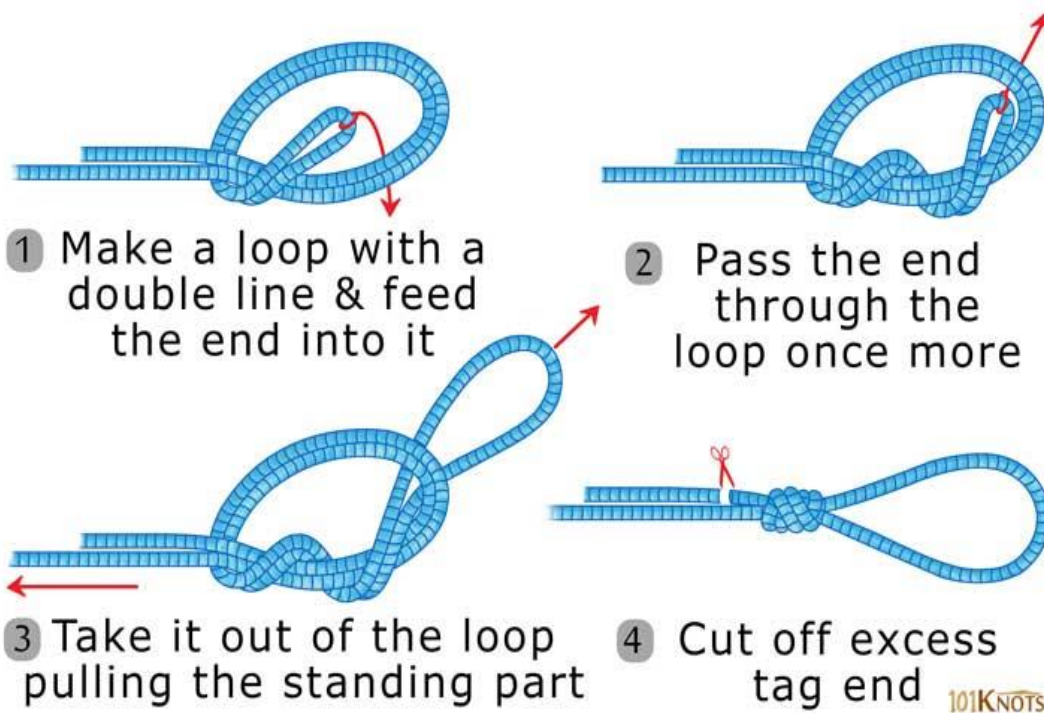
## Recommended Fly-Fishing Knot

**Uses:** The loop formed by this knot can be used to make a loop-to-loop knot or connection.

**Tying Tips:** Try to keep the loop relatively small and trim the tag end close, so the loop-to-loop connection will slide easily through the rod guides.

**Advantages:** The Surgeon's Loop is a simple double (or triple) overhand knot. It can be tied quickly and easily in the end of a line, and it retains a high percentage of the rated line strength. It can also create a fixed loop that allows an artificial lure or fly to move more naturally.

## Surgeon's Loop Instructions



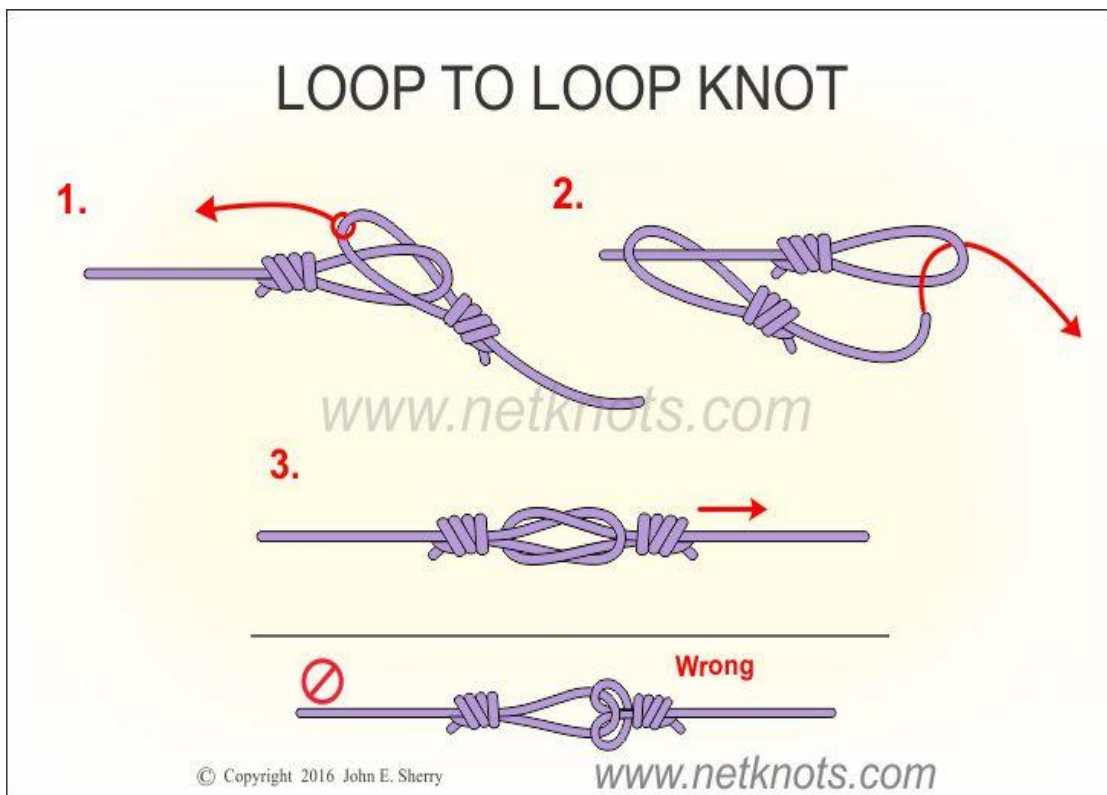
# Loop-to-Loop Knot

## Recommended Fly-Fishing Knot

**Uses:** The Loop-to-Loop Knot (Connection) is a method of connecting the loops at the ends of two lines.

**Tying Tips:** Pay careful attention to how the loops connect to each other, especially if the lines vary in diameter or stiffness. The lighter line can form a weaker Girth Hitch (see final image below). You don't want that.

**Advantages:** The Loop-to-Loop Knot is exceptionally strong. Many fly lines now come with pre-made loops on their ends. Just tie a loop at the butt end of the leader and use the Loop-to-Loop Knot to join the two lines. You can quickly change one leader for another if needed. It can also be used to connect backing to the fly line, so the whole line can be changed as needed.



**This handbook was created by the  
BSA National Fishing Team**

