How to make swan neck ring splints

What you need:

*14 gauge wire. My favorite is stainless steel, it's the strongest and cheapest.

*A ring mandrel to form your splints

*Cutting pliers to trim your wire. Smaller ones work fine for softer metals like sterling or copper, but if you go with stainless you'll need heavy duty like the ones shown here

*A needle file to smooth wire ends

*A nail buffing block to polish your splint if desired

Note: If you're going with a softer material like sterling or copper, you should also get a rubber mallet to hammer and harden your splint.

Step 1:

After finding your ring size, make two complete rings on the mandrel, then mark where the ends overlap so you know where to trim.

In general, you'll want to wrap about two sizes smaller than your finished ring size as most wires have some spring back, which will make them come out larger than the desired size. I wrap my rings smaller then push them down to the desired finished size and hammer with a small rubber mallet to stretch them out and harden them.

Step Two:

Pull up the free ends of wire and trim at the marks you made.

Step Three:
Use the needle file to smooth down and round out the rough ends of your splint. If you're opting to polish the ring, you'll also want to use your buffing block to sand down and polish the ends now.
After finishing smoothing the wire ends, push them back down flush with the ring.
As you can see here, the ends have an angle to them from being pulled up to trim. I use a pair of regular flat (no teeth) pliers to angle them back down so they sit flush, though it can be done by hand too. Just takes a bit of tweaking to get them level again.

Step Four:
Once you have your ends level, it's time to open the splint up. Grip both rings at the front, directly across from the ends, and pull them apart to create a V shape,, making sure to keep the rings parallel to each other. This step takes a bit of tweaking to make sure the rings are even. I do a lot of trying on, making minor adjustments, and trying on again to make sure they're *perfectly* straight (I might be a touch OCD lol)

Step Five:
Here's where you use your polishing block to make the ring shiny if you want. I use 4 side nail buffing block for polishing (well, I did before I invested in a tumbler to do my polishing for me anyways). You can usually find them at any dollar store, and they always have them Walgreens or WalMart.
Just polish the ring following the steps on the polishing block, skipping the heavy filing grit. It's not necessary.
I only polished the top ring here to show the difference

Where to find your supplies:
You can find the mandrel, rubber mallet, and usually the file at most craft stores such as Michael's or JoAnne's. If you're lucky enough, some areas have jewelry supply shops which would have a better selection. If you can't find them locally, eBay is a great place to find them at lower costs.
I order my regular stainless wire from wire-jumpring-depot on eBay, they have pretty good priced, at about $17 for a 50ft coil of the 14g (1.5mm) stainless wire.
For nickel free stainless wire I use Unkamen Supplies on Etsy. It's $10 for a 10ft coil of 14g nickel free stainless. They also have niobium (in plain and many colors) and titanium at decent prices.
I've been getting my sterling from CraftWireSupplies on Etsy, they've got pretty good prices and ship amazingly fast.

If you have smaller sizes, US 4 and below, you can get away with a 16g wire. If you have much larger sizes, around 10 and above for stainless or 9 and up for sterling or copper, you might want to consider using 12g wire. The larger the size, the less tensile strength the metal will have, which equals out to less support the splint will offer. 12g is a real pain to work with and get bent properly, but it's worth it in the end.

Once you get the hang of it, it only takes about 15-30 mins to finish a splint, depending on how much time you spend polishing.

If you have any questions, feel free to shoot me a message and I'm happy to help out :)

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