COMMON SUTURES IN SURGERY

(0:00 - 0:20)

We are back in the suture room and guess what we're going to talk about? Sutures! Stay tuned. Welcome back to another Surgical Tech Tips. Today is the day that I'm going to talk about sutures.

(0:20 - 0:45)

I know a lot of you out there have been asking for me to talk about sutures and all the different varieties and types of needles and sutures, so today is the day. We'll do like a general overview of sutures and needles and hopefully I'm thinking about breaking off other videos and breaking off sutures that are used in different specialities. So here we go.

(0:46 - 4:42)

First things first, I want to try and make things simple for you guys here and I want to start off with needles and needles can be put in two categories. We have our cutter needle, our cutting needle and we have a tapered needle. A tapered needle is something that is somewhat of a blunt tip and it'll be used on most soft tissue.

When I say soft tissue I mean you know bowel, subcutaneous, peritoneum, you know that that type of stuff, muscle. A tapered needle would be used for soft tissue, organs and soft tissue. When it comes to cutting needles, cutting needles obviously it sounds like it cuts because it does.

It has a sharp tip and as the needle goes back off of the tip it's actually bladed as it goes down the needle and that's used easily for cutting into tissue that is really really tough. And what it's used mostly for is if you're out in the field you'll recognise you know the 4-0 Monocryl PS2. That PS2 is a reverse cutting needle and it's used for closing the skin.

Now why is it used for closing the skin? That subcuticular layer right below your skin is really really tough tissue and you need a needle to cut through that tough layer of skin to bring it all the way around and close up that incision. So that's it, needles. Two categories, taper and cutting.

Simple. Going on let's talk about our suture and let's talk about suture absorption. There are only two types of absorption in sutures.

There's something that's non-absorbable and there's something that's absorbable. Simple as that. It doesn't get any simpler than that.

It's either absorbable or it's not. That's it. Now when it comes to the different types of suture that's when things get a little bit more complicated.

Again we can kind of start off and make it simple and say that there's two different types of suture. There's a monofilament and a multifilament. Monofilament meaning that there's a single strand to the suture and multifilament meaning there are multiple strands that are braided together to make the suture.

Either one of those could be absorbable or non-absorbable. There's different kinds, different manufacturers, but monofilament and multifilament are the two main types of suture that you will see. But it stems off and it kind of spider webs from there and that's what we're going to get into right now.

Multifilament sutures. I want to talk about those first because there's not a lot of them actually. I look through this whole suture room and there's only four different multifilament sutures.

And remember the multifilament is single filaments strewn together and twisted. It's a braided suture. Multifilament.

The first multifilament suture I want to talk to you guys about is the silk. The silk suture. This is a non-absorbable suture.

Multifilament. The packaging as you can see is kind of bluish greenish packaging and the suture itself is black. Where I see this used mostly in my experience are chest tube stitches.

You know they'll put a stitch right next to the chest tube, tie it, wrap it around the chest tube, tie it again to make sure that chest tube cannot be yanked out of the chest by accident. The second suture I want to talk to you guys about, again multifilament, is the ethabond. The ethabond has the orange packaging but the suture itself is green.

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Now I see this as basically a green silk. It's very very similar to a silk except for that it's green. They're both non-absorbable sutures.

Ethabond and silk are both non-absorbable sutures and they're used in many of the same ways. But one thing that I never see silk used for that ethabond is used for are hernia repairs in general surgery. A lot of the times they may need to use a patch for the hernia and they'll use an ethabond suture to secure that patch in place.

I've never seen silk used, not sure why. Third suture I have for you is one of the most common sutures that you will see in the OR. It's the vicryl.

The vicryl is a multifilament suture that is absorbable. This bad boy can be absorbed by the body. The packaging is purple.

The suture itself, when you open up the package, is going to be either white or it can be purple. Some of them are dyed violet. And this is one of the most common sutures that you will see in the OR.

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Fourth and last multifilament suture I have for you here is the fibre wire. This is specifically and only used in orthopaedic surgeries. Possibly podiatry.

I don't know. I don't really do a lot of podiatry so I can't say for that. But I've seen it used in orthopaedic surgeries and it's a very, very heavy suture that's used for kind of like a ligament repair type work to keep those those bones together.

You see them a lot of the times when they place anchors and they'll use that fibre wire. It's a tough, tough suture to break. You really, it's tough.

Now we move on to the monofilament suture, the single strand suture. I want to start off with the non-absorbables first and the first one is going to be proline. Proline, it's almost, the packaging looks very similar to the silk.

This is actually a little bit more of a bluish colour for the proline. And the suture itself is actually dyed blue as well. Proline suture you will see used all the time in vascular.

It is a monofilament and it is non-absorbable suture. The second monofilament I have for you is the nylon, also known as the ethylon suture. This monofilament suture, non-absorbable, is also, the suture itself is black in colour just like silk, but the packaging is green.

What's the big difference between the silk and the nylon? Think about it. Remember, silk is multifilament, nylon is monofilament. And this suture is kind of interesting.

It's a little stretchy. They call it nylon suture, I'm assuming because it's made of some sort of nylon. It's not super stretchy like nylon pants or something like that.

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But it does have a stretch to it and it's interesting when you're tying with it. A lot of the times, you'll see this used across all the specialities. A lot of the times people use it for skin closures if they don't want a full primary closure of the skin and completely close the skin off, but they want the incision to still drain a little bit.

They'll use interrupted stitches, and interrupted stitches are one single stitch, not like a running stitch. They'll just use interrupted stitches to close up the skin and what that does is it leaves areas of the incision somewhat open so the incision can still drain, especially if there's an infection underneath or something like that. Third stitch I have for you is the chromic.

This chromic is, it's interesting. It's got this brown packaging. You can't see what's inside.

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When you open up this package, it has a very pungent smell. It sits in this alcohol type solution

and this is actually made, it says chromic gut, because it's actually made from the intestines of an animal. It's just got a very interesting smell.

This is highly absorbable, which is fantastic, and where I've seen this used mostly is circumcisions actually, and peds, stuff like that. Chromic. Fourth suture I have for you guys is the PDS.

(9:22 - 10:51)

PDS suture is, it's interesting. It's absorbable. It's monofilament.

The packaging, as you can see, is just grey. It's just drab grey, and the suture itself is violet. It's a purple suture, purple monofilament suture.

Now, if you're doing any type of big open general case, like a big open laparotomy or something like that, you will see this used. This is used to close up that peritoneum slash, you know, rectus, scarpus fascia, all that stuff, all in one big bite. They use this big TP1 tapered needle on a number one PDS, and you will see that used for primary closure of that peritoneal space.

General. Last monofilament I want to share with you guys is the monocryl, another one of the most common sutures used in the OR. So, vicryl is one of the most common multifilament sutures.

Monocryl, I want to say, is the most common monofilament suture that you will see used in the OR. It has the orange packaging. Inside itself, it's actually like a clear monofilament suture, interestingly enough.

And where you will see this used mostly is to close skin. A primary closure running stitch of skin. That is the 4O monocryl PS2.

(10:51 - 12:03)

It's on a cutter needle. That's where you're going to see it used most of the time. So, I think I'm going to end the video there.

Sutures are complicated. There's a lot of different sutures, a lot of different needles, and I feel like this subject might be, it's kind of hard to cover, because there's a lot of information on it, and there's a lot of information that I want to like give to you guys, but I feel like the video would end up being like an hour long, which is just ridiculous, and that would take me so long to edit. There's just a tonne of stuff.

There's a tonne of stuff to go through. So, I hope this kind of brief overview and insight into sutures and needles, you know, gave you some better knowledge, but if you guys want me to dive deeper into specific sutures or dive deeper into specific specialities, please let me know down in the comments below. Let me know, or you can message me on the Facebook group.

Thank you guys for watching as always. Thanks for sharing and commenting. I appreciate it, and I hope you guys have a good day.

See you guys again. Bye.