

**LAP-BAND SURGERY FOR MORBID OBESITY  
HARTFORD HOSPITAL  
HARTFORD, CONNECTICUT  
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NARRATOR: Over the next hour, surgeons will perform a lap-band procedure live from the operating room at Hartford Hospital in Hartford, Connecticut. Using minimally invasive techniques, surgeon Dr. Darren Tishler will place the band around the upper portion of the stomach without cutting or stapling the stomach. This technique is both reversible and adjustable.

The lap-band procedure has helped many who faced morbid obesity to lose weight and regain control of their health. You may e-mail questions to physicians in the OR by clicking the MDirectAccess button at any time. This program represents Hartford Hospital's ongoing efforts to bring the latest developments in healthcare to the community. And now we go to the operating room where the surgery is already in progress.

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ROCCO ORLANDO, M.D.: Good evening. I'm Dr. Rocco Orlando, a surgeon with Connecticut Surgical Group at Hartford Hospital. Tonight we have Dr. Darren Tishler performing the procedure. And before we turn you over to Dr. Tishler, I'd like to invite you to ask questions of the...the Internet by pressing on the MDirect button at the bottom of your screen. And, certainly, let us know if you have any questions at during the course of...of this evenings procedure. Now, let me turn it over to Dr. Tishler.

00:01:28

DARREN TISHLER, M.D.: Well, thank, you, Dr. Orlando. We are...already got started on the procedure here with...put our ports in, which gives us access to the abdomen. And we've also inflated the abdomen with carbon dioxide to give us room to work inside the belly. This patient is a fifty-four year old woman who for much of her adult life has been overweight. She suffers from hypertension, obstructive sleep apnea, gastroesophageal reflux, urinary stress incontinence and arthritis. She's also had problems with rashes under the folds in her skin and a lot of edema of her lower extremities. She's 5' 4" tall, weights 262 pounds and has a body mass index of 44. She's tried numerous diets, including Phen-Fen, the South Beach Diet, the Atkins Diet, Optifast and even working with a personal trainer. She's taking five medications, including blood pressure and cholesterol medication.

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Now let me introduce a few of the people in the room here today. You've already met Dr. Orlando. Dr. Peter Bloom is across from me. He'll be assisting me on the procedure. He's one of my partners at Connecticut Surgical Group here at Hartford Hospital. Aria is our scrub tech, right here to my right. And behind her, we have Myra, who is our circulator tonight.

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Now we already have the operation underway, so why don't we look inside the abdomen and we'll get started here. What you see here – Let's try and give us a little wider shot – is the stomach, which we're retracting downward. And, we're gonna expose the diaphragm, or the right [cruise?] of the diaphragm, which is one of the muscles that surrounds where

the stomach joins the esophagus. And we're just gonna open it up just a tiny bit with our cautery. We really don't do too much here; just a little opening.

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ROCCO ORLANDO, M.D.: As Dr. Tishler is dissecting here, I can point out to you that the... the liver is above where he's working. The spleen is above and...and to the right, so that you can be oriented to what he's doing. Dr. Bloom is assisting him by applying some downward traction on the stomach to enable Dr. Tishler to...to complete his dissection.

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DARREN TISHLER, M.D.: You see the spleen right off to our right. And, again, we're not doing too much. We're just opening up a tiny little bit of this tissue right over this muscle. I'm not sure, but I'll do it there. Okay, we'll turn loose there. This white stripe you see right here is the vagus nerve. Come right down here. We're trying to show it to you nicely. There we go. Okay. Now we're working under the liver and right here is what we call the pars flaccida. I'm just gonna open that up with a little bit of cautery.

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We've got a lot of really high tech instruments here today. We're using high definition cameras provided by Olympus. This really just is as high definition as you get, like some of the new television sets today. We've got 1,080 lines of resolution, which really gives us a beautiful picture. I'm not sure how much of that will get transmitted to you over the...the Internet, but you should get a pretty sharp picture.

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I'm just gonna keep open this here to expose the muscle on the other side of the stomach. There we go. That's really nice. Let me just open up a tiny bit more here.

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ROCCO ORLANDO, M.D.: I think as Dr. Tishler performs this part of the dissection, we have an animation of the lap-band which we can show you that will illustrate what the goal of this is schematically. This is a picture of the lap-band. You can see the syringe is injecting into the port fluid and that fluid is...is filling the band. The ring which you see on your screen now can be filled with fluid to make that band larger or bigger and to constrict the stomach. Now the band will be placed around the upper portion of the stomach to create a small pouch of stomach so that when the patient eats they have a sense of fullness, which satisfies them and their sense of hunger is then relieved.

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And you can see that because of the tightness of the band, the food exits the stomach more slowly and the size of that band is under the control of the surgeon through in...adjustments that are made both at the time of surgery and during the postoperative period.

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DARREN TISHLER, M.D.: Let's go back to the inside view now.

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ROCCO ORLANDO, M.D.: The...Now, as Dr. Tishler continues some of these dissections we have a num...already a number of questions that are coming in via the...via the Internet. And, Dr. Tishler, we have a question from Tokyo, from a medical student in Tokyo. And that question is, how does the lap-band decrease hunger and how can you lose weight simply by tightening the stomach?

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DARREN TISHLER, M.D.: Absolutely. I'll get to that question once I...I just want to point out some really interesting anatomy. This is the caudate lobe of the liver right here. And then just below that is the vena cava; that's the largest blood vessel in the body going right in the liver. Here's that muscle I was talking about, which I'm about to open up.

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Well, we're not a hundred percent sure as to how restriction on the stomach can cause satiety. But, any time the stomach stretches, it sends a feedback to the brain and that

feedback is what allows the patient to feel full and satisfied. And those are the two things that don't work when someone is overweight or obese.

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Now the next thing we're gonna do is we're gonna get our lap-band ready to go into the abdomen. And let's go to Aria here and she'll be able to demonstrate the actual band that we're gonna put into the belly. The lap-band is made by a company called InnoMed. And let's just get on the table here. The band was FDA approved in the United States in 2001. Let's get a good shot of that band there. Let's bring it a little closer. So you see the band here. It's got a balloon that we can inflate through this tubing right here. And that tubing is connected to a port which we'll place under the patient's skin a little later in the procedure. But let's go ahead and put that band in the stomach if it's all set, Aria.

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ROCCO ORLANDO, M.D.: Dr. Tishler, can you tell us approximately how many of these bands have been placed worldwide to date?

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DARREN TISHLER, M.D.: I believe it's just over 230,000 have been placed worldwide to date, of the bands. They started throughout the rest of the world a few years before any...they did in the United States. It took a little while longer to get FDA approval in the United States. These bands had a real good safety record.

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Now we're gonna spend a little time just getting the band into the right position here. And so we're putting the band inside the abdomen. Another grasper. Long grasper. Please give me a shot of the tubing. I want to get the tubing right up by the...Perfect. Let's get the tubing right in the position. We're doing this operation laparoscopically using very small instruments. There's some fairly small incisions. There we go. We're just gonna get our tubing ready for when we go behind the stomach. Now this is the next step. We're going to actually position the band.

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ROCCO ORLANDO, M.D.: As we're now looking at the image of the...the patient's abdomen, you can see through these small tubes that the incisions are indeed quite small and that therefore lead to a good cosmetic result. Dr. Tishler, we have another question for you and that is someone who has a lap-band and who says, Dr. Tishler, my incisions are in different positions.

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DARREN TISHLER, M.D.: Very...Very good question. There's a variety of approaches for the ports. You really have to use what works well for the actual instruments that each surgeon has.

Now I'm gonna go right behind the stomach here with my grasper and I should feel almost no resistance on the instrument at all. I'm just gonna come just inside that muscle there. I've got to go a little more.

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ROCCO ORLANDO, M.D.: We have another question about the incisions al...and that is, how many incisions do you make? And these are...There are approximately five incisions – three of them quite small; just a quarter of an inch or so, and two of them larger. One of them nearly, oh, about three quarters of an inch and another one about half an inch. So a total of five.

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DARREN TISHLER, M.D.: Okay, what I've done...What I've done here is I've placed a grasper behind the stomach, we're gonna grab the tubing and we're gonna bring that tubing up around the upper part of the stomach through that tunnel I've just created. Now you're gonna see the band wrap around the stomach.

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Part of the beauty of this operation is that it's done in such a standardized fashion. The...There's slight differences in the port placement, but the fact that just about everyone who's done this operation is trained in the same way, you get a real standardized approach and you can learn from what everyone else has already done with this operation. It's really unlike many other operations that we do in surgery.

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I'm gonna bring that last part of...There's a little knuckle on the band which I have to bring around the upper part of the stomach, which is about to come through right there. There we go. And now I'm gonna lock this band in place. Thanks Peter.

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ROCCO ORLANDO, M.D.: You can see from Dr. Tishler's manipulations that this is really very much like fastening a belt buckle.

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DARREN TISHLER, M.D.: Using chopsticks. Let's see? Let's just get it to go right there. Sometimes the easiest parts of the operation are the most challenging. Let me just...yeah. I just need it to right there. And this has a mind of its own today. There we go. Myra, could you get my earpiece? And we're just gonna do one final check here right before we buckle the band, making sure it's exactly where we want it. And I'm real happy with that. We've got a little bit of stomach right above the band, and so now we're just gonna click it into place. And it's just a little tug and now the band is locked into place. Really a nice design for that. Okay. Now we're gonna bring this over towards me this way a little bit and we'll start sewing it into place. We're gonna move the camera to the other port. We're gonna make a quick adjustment on our port. Might be a good time to go through some of those slides while we do that.

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ROCCO ORLANDO, M.D.: Now, as this is demonstrated, we have another question coming in to us. What happens to the tubing and where does it lay inside the body? And as I can...And as you can see, Dr. Tishler has threaded that...that tubing through the band and will be laying it in the abdomen and then bringing it out through the skin, where it will then...where that will then reach the...the reservoir.

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DARREN TISHLER, M.D.: Right. It's real important to know that we don't leave any tubes hanging out of the abdomen. There's nothing that people can see. It's just under the skin. Patients barely notice that they have it.

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ROCCO ORLANDO, M.D.: Yes, Dr. Tishler, and you've anticipated another question. That's another...several viewers have already asked that question – is there anything that is external? And the answer is, no, the entire device is implanted beneath the skin so that there is nothing that...that is external.

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DARREN TISHLER, M.D.: I'm just gonna bring our camera in from a different angle here now. And, there you go, Peter. And I'll...We're gonna try and get our picture a little clearer for you.

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ROCCO ORLANDO, M.D.: As you improve the view, Dr. Tishler, can you comment on any special training to learn how to do this...this operation?

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DARREN TISHLER, M.D.: Absolutely. I...My training, I did a fellowship in laparoscopic surgery at University of Alabama at Birmingham, where I learned advanced minimally invasive surgery and bariatric surgery. Take my first stitch. And I'll take the long grasper. And...InnoMed, the company that makes the lap-band, has a real nice training program where you learn the procedure through a series of courses and then through having a

proctor who's already done quite a few of these procedures. So, again, you're gaining that experience from all the surgeons who've done this before you. There shouldn't be any need for a surgeon who does this procedure to basically reinvent the wheel, as you like to say.

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Now what we're gonna do is we're gonna sew this band. Sew a little pocket for the band to lay in. I'm gonna start it real far lateral on the stomach here. Now we're just gonna...

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ROCCO ORLANDO, M.D.: And what Dr. Tishler's doing here is he is suturing the stomach over the band to prevent migration of the band, because he very much wants that band to stay exactly where he has placed it. It has been placed meticulously and precisely in the...in the proper location. And by placing these sutures, the band will remain in position and will not slip into another part of the stomach.

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DARREN TISHLER, M.D.: What's nice about this equipment we use is we get a lot of...I want to make sure I'm sewing to a little bit of stomach. Right above the band so I can get a little more stomach up there. There we go. Got a nice stitch right there. One thing to note is that we don't sew the band to the stomach. We're gonna sew the stomach to the stomach. And as I do this, you'll get...I think you'll get a good idea of this. And I'll make a nice little tunnel where the band's gonna lay. And I like to sew...There's a technique called intracorporeal, or tying inside the abdomen. Other surgeons might sew from outside the abdomen and push the knot down. It doesn't really matter which technique, as long as you do something that you're comfortable with and you do on a regular basis. I like the control that this technique gives me for sewing.

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ROCCO ORLANDO, M.D.: and the magnification provided by this technology, this is just for the frame of reference of the viewers. Those instruments that Dr. Tishler is using are...are less than a quarter of an inch in diameter, so that this is a greatly magnified view that really provides a great deal of provision and precision in performing this operation. And you can see with the... with the shots from the outside view of how Dr. Tishler is controlling those instruments and performing this laparoscopic suturing.

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Now, Dr. Tishler, the medical students from Tokyo are...are actively on the Internet. And, do you have data for the...the longevity of weight loss? And they're asking is there five or even ten year data on this...on...on weight loss with this device at this point?

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DARREN TISHLER, M.D.: There is, and there's some pretty good data on that. Dr. O'Brien and others, some nice studies on that. And, long term we see around fifty to sixty percent excess body weight loss. But, that's an average for all patients. You can get patients who do much better than that. Peter, if you can get some scissor we'll cut this one.

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ROCCO ORLANDO, M.D.: As soon as Dr. Tishler concentrates the...One can expect, with a good result from a lap-band to lose one to two pounds per week after...after placement of the...of the lap-band.

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DARREN TISHLER, M.D.: Okay, next stitch. Now we're gonna do a series of these stitches over the stomach. We'll get the band right in the position we want it to be. And this is where the technique has really evolved over the years of the procedure. I think...Aria, I don't have the stitch here. Let's have another stitch. Where's our stitch.

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ROCCO ORLANDO, M.D.: Dr. Tishler, as you position this suture, another question for you. Can you comment on the risks of this procedure if one does it laparoscopically as opposed to doing it open? Do you expect less risk with the laparoscopic approach?

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DARREN TISHLER, M.D.: Well, that's a great question. This procedure today is really designed and tailored to the laparoscopic approach. I really wouldn't want to approach this operation as an open procedure. I get great magnification and a beautiful view laparoscopically. I really don't...On someone who's morbidly obese, I probably wouldn't be able to get this...this kind of view and exposure doing it. The operation is very safe. And when we go through those slides, we've got some slides going through the different risks of the surgery and I think we can talk about that then. But, Rocco, this might be a good time while we're just sewing this in place here to go to some of those slides.

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ROCCO ORLANDO, M.D.: Yeah. I think we...we have...[pause]...

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DARREN TISHLER, M.D.: We like to get about three or four stitches around here on the upper part of the stomach.

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ROCCO ORLANDO, M.D.: Now as...as Dr. Tishler continues placing this...this...this line of sutures, I thought we could make some comments about obesity and the...and the band and some of the expectations overall. Perhaps we could turn now for a moment to some of the PowerPoint slides that we have.

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I thought we would move to the PowerPoints for the moment. [Pause.] Okay. The...One of the issues that we...that we need to review is what are the indications for the surgical treatment of obesity. And the patients who are candidates for this procedure are significantly overweight with a...an elevated BMI. That's a Body Mass Index, which is a numerical assessment of just how overweight someone is. And anyone with a BMI of over 40 is a candidate for this, and folks with a BMI of 35 or more who have other obesity related health issues are also candidates for this. And some of those other obesity related conditions would be high blood pressure, diabetes, high cholesterol, sleep apnea, gastroesophageal reflux disease. And so those are all things which might lead an individual to consider undergoing anti-reflux surgery.

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The...We do require and expect that the patients undergoing this be at least eighteen years old, that they have been overweight for more than five years. That they are committed and dedicated to the lifestyle changes and the long term follow-up necessary when you go through the treatment of obesity using a surgical technique.

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Now, as you can see, as he...as Dr. Tishler continues this procedure, the lap-band procedure is what's called a restrictive procedure in that the band, which is placed around the stomach, prevents the...the patient from eating a larger meal. The patient feels the sensation of fullness when they...when they take in relatively small volumes of food and this is what allows them to...to lose weight.

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The band adjustments that take place are also crucial, in the sense that if the band is too tight then that will lead to too much difficulty with eating. If the band is too loose, then the patient can eat larger meals without difficulty and will indeed not lose weight. So, during the postoperative phase the surgeon will perform adjustments on the...upon the band to achieve that appropriate amount of weight loss. So a number of technical issues that are really key to the success.

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Dr. Tishler, are you...We have...some other questions for you. If you have a successful placement of a lap-band, can someone get down to something that would be considered a normal weight?

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DARREN TISHLER, M.D.: Absolutely. Absolutely. You want to shoot for a Body Mass Index around 25 would be a normal weight, and there's no reason why someone can't go to that point.

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ROCCO ORLANDO, M.D.: Another question. Can you comment on how the...Does the lap-band affect the...the person's sense of hunger? Do they feel hunger in the same way?

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DARREN TISHLER, M.D.: The patient will still feel hungry, when it's appropriate time. We don't want them feeling too hungry. But, the band is a tool to help people lose weight. The band works very nicely to allow people to eat a reasonably sized meal and feel full and/or satisfied after eating just a very small meal. I got that stitch.

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ROCCO ORLANDO, M.D.: And, can you comment...We have another good question. How was the pouch size determined? Because, again, some of our viewers look at this and say, boy, it looks kind of small. So how was that arrived at?

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DARREN TISHLER, M.D.: Well, it...it is very small. It's about 30 cc's. Just before we went...Just before we went live on the procedure, we'd already sized the upper part of the stomach. It's not a very exciting part of the case, but we put a balloon in the stomach and we can pull it back and forth and get a real good sizing of that upper part. But it's about 30 cc's and holds about two or three spoonfuls full of food...tablespoons of food. That's enough to feel hungry. And, again, the whole goal is that the band is a tool so the patient does not feel as if they are working very hard at eating a reasonable sized meal.

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ROCCO ORLANDO, M.D.: So this is indeed a small pouch that results in...in...And, again, that's been arrived at through clinical experience in...in a number of patients to...to lead everyone to believe that that's really what an appropriate size to allow the band to work.

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DARREN TISHLER, M.D.: Okay. Go ahead. Myra, will you turn the Olympus camera off and on to reboot it? Turn that off. Turn both of them off for a minute. We're gonna lose our picture for a second. And we're just getting set for the next part of the procedure here. We bring the tubing outside of the abdomen into a pocket we make under the skin. There we go. Let me get that...I'll get a Raytech out.

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ROCCO ORLANDO, M.D.: Dr. Tishler, are you now bringing the band out at this point?

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DARREN TISHLER, M.D.: Let me just...Yeah, let's come into this point now. We're going to get ready to bring that out in just a second here. I'm just gonna try and get you guys a better picture before we...before we come outside the abdomen.

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ROCCO ORLANDO, M.D.: At this point Dr. Tishler is winding down on the laparoscopic part of the procedure as he prepares to bring the...the limb of the band out of the abdomen to place the...to place the...the reservoir through which that will be filled.

Now we've had a couple of questions about the suture material. So can you comment, Dr. Tishler, is that a permanent suture? Does it go away? Does it ever need to be replaced?

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DARREN TISHLER, M.D.: It is a permanent suture. It's called Ethibond. It is...I like to use it because it's very easy for me to...to tie with and it has pretty good grabbing power. It does not go away. We want that to be permanent because we want that pouch along the stomach to be quite permanent. I think that's pretty good there. Okay, we're gonna go ahead and bring the tubing out. Now one thing you have to remember here is that we do get a little bit of magnification on this. We'll probably have about 55 cc's of blood loss

altogether here. We do give patients blood thinners to help prevent blood clots, which is one of the complications that anyone can have who gets laparoscopic surgery.

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ROCCO ORLANDO, M.D.: Dr. Tishler, that's perfect timing. We have a question again via the Internet.

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DARREN TISHLER, M.D.: Okay. We're gonna switch---

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ROCCO ORLANDO, M.D.: How would...How would you handle a patient who has a history of DVT?

DARREN TISHLER, M.D.: I'm sorry, what was that, Rocco?

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ROCCO ORLANDO, M.D.: How would you handle a patient with a history of DVT?

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DARREN TISHLER, M.D.: Well, in those cases we've got---

ROCCO ORLANDO, M.D.: And that's deep vein thrombosis. That's blood clots in the legs, which is a risk of...of any procedure.

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DARREN TISHLER, M.D.: Absolutely. That's a...That's a great question, again. Patients who are overweight, of course, have a higher risk of a DVT, or blood clot. On top of that, patients who have had a prior blood clot, we can put filter into the vena cava, which will prevent those blood clots from migrating up into the lungs causing a pulmonary embolism and it's pretty effective. Now that filter used to be fairly permanent. We're gonna go ahead and take the [liver?] retractor out. We'll just spend a moment here getting our retractors out, so we're done with the intraabdominal portion of the operation. And you can see this patient has a very large liver.

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Those little speckles you see in the liver are fat deposits in the liver. We see a lot of patients with fatty liver who are overweight. We'll get a nice close-up of that for you. But this is something that gets better. We have more evidence that fatty liver disease gets a lot better with obesity surgery and reducing the weight.

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ROCCO ORLANDO, M.D.: And this...This is indeed one of the many risks of...of...of obesity, that fatty liver change. And it's certainly one that's been found to be reversible with surgical approaches to weight loss.

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DARREN TISHLER, M.D.: We're gonna go ahead and take all of our ports out of the abdomen. We're done with the intraabdominal portion of the case.

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ROCCO ORLANDO, M.D.: Now as Dr. Tishler---

DARREN TISHLER, M.D.: Yes. Let's go ahead...Let's go ahead and turn the lights on in the room.

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ROCCO ORLANDO, M.D.: Dr. Tishler illustrates removing the ports. We've had a couple questions about what is the hospital stay. How long is the average person out of work? What's the time to return to sedentary activities? Can you comment on...on what the typical patient would expect.

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DARREN TISHLER, M.D.: Absolutely. We keep our patients in the hospital overnight with the procedure. This patient will be here a little later in the day tomorrow because we're just

starting late in the evening here. Patients typically go home on the day after surgery eating a clear liquid diet. I'm just gonna readjust the table. Could we have the table flattened out, please, and then up just a little bit for us. Now let's go up with the table.

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Some patients can go home the same day. We've had patients go back to work as soon as the day after surgery. It's definitely not something I'd recommend. I'd like to have a little bit of time for the patient. We'll take the scalpel. And what we're going to do is we're gonna make a little pocket here on the abdominal wall. Tell me if you guys have a pretty good picture here for that, to see what we're doing. I want to make sure you see. That's good right there at the table. And retractors.

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ROCCO ORLANDO, M.D.: And so you can see on this illustration as Dr. Tishler works that the...that the tubing that's going to go to the port through which the band I filled has been...now been brought out through the abdominal wall and he will now be attaching that port, that to the device and placing it through that small incision directly beneath the skin.

So, Dr. Tishler, how...how long would it be on average for a person to be back to normal unrestricted activities?

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DARREN TISHLER, M.D.: Oh, absolutely. Depends on what kind of work people do. If someone's in a fairly sedentary type job, desk job kind of thing, they can go back to work as soon as they feel comfortable. I'm just gonna get the...What we're looking for is the fascia, which is the...the coating on top of the muscle, on the rectus muscle. It's that muscle that gives you your six-pack abs. Hold on one second. Let's have the [Stix?] punch. I'm just making that pocket. On the average, though, time from work, a week, two weeks with this operation. [Talk?] about two weeks if they go back earlier. That's good. Usually easier to get less time off from work than more time.

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This part of the case can be a little bit challenging. That's because people have big abdominal walls. I want to get right down to that muscle. And it's really critical that we get the port right down on the muscle. We want that port to be steady so that when we have to do the adjustments in the office, we can have a nice steady foundation to put the needle into. When you have a nice steady base, it's easy to get the needle into it and it becomes an essentially painless office-based procedure.

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ROCCO ORLANDO, M.D.: Does it hurt to adjust the band in the office, when you're making those adjustments?

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DARREN TISHLER, M.D.: Most patients don't feel much of...of anything, as far as discomfort is concerned from...from that part, from the adjustments. Some patients feel the needle stick, but we can usually go right through the scar. Okay. I have a nice pocket made here now. We're gonna place our...I want to take a feel there. That's great. Now we're just gonna take a Raytech and pack it in there for a minute.

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ROCCO ORLANDO, M.D.: And how do you decide how much fluid to put in the band?

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DARREN TISHLER, M.D.: Well, again, it's another part of the fact it's a very standardized operation and we have the experience of many surgeons who have done this over time. And... I'm gonna put that perpendicular right there. We're just gonna cut our tubing right now. I'll talk about the adjustments in just a second. I'm just gonna connect this. Let me have the port. Let me have a blue towel also. I think it will help everyone see this a little better. That's the part that requires small fingers.

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We're connecting the port to the tubing. I only have a little sponge. Can I have a sponge? Here we go. Absolutely, we'll give you a good view of the port in one second here. Can you guys see this shot? Okay. I'm connecting the tubing.

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ROCCO ORLANDO, M.D.: And that's showing very well. And it's very important that this be a very secure connection, and so that's why it's just a little difficult for Dr. Tishler to get these two pieces together, because one does not want it to become disconnected.

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DARREN TISHLER, M.D.: Right. Part of the beauty of it is that it does not come unconnected here. And, in order to make that happen, it's got to be a very tight connection. It's like connecting hosing with a hose clamp. And, we just about have it in...connected all the way here.

00:35:39

We were talking about the adjustments before, and those adjustments we use on a very protocol basis, based on patient's hunger, how much they can eat, how often they feel hungry and on their weight loss. We really want to see their weight loss be about one to two pounds of weight per week, and that's ideal for this. It doesn't seem like much right away, but you look at that, that's over fifty pounds a year. So now you can see our tubing is connected completely. Here's the actual port. I'll try and give you a....

00:36:16

ROCCO ORLANDO, M.D.: So typically how often are the band adjustments required?

00:36:20

DARREN TISHLER, M.D.: Band adjustments, we wait on the band adjustment for the first adjustment to be six weeks after the band's been put in. We want that pocket we made to heal real nicely first. We don't want the patient vomiting or having any nausea early on. So sometimes they don't even lose any weight early on.

We're now gonna put our four stitches in the fascia. Start with a far one towards me.

00:36:55

ROCCO ORLANDO, M.D.: And so these sutures that Dr. Tishler is placing now are to secure the port to the muscle layers of the abdominal wall so that it's quite steady and easy to access during the times that adjustments are required.

00:37:09

DARREN TISHLER, M.D.: And, we've tried...or, surgeons have tried all kinds of approaches for this. The best approach, I think, is four stitches in four corners to securely hold that port in place. It may take a minute or two longer here in the operating room, but it makes the adjustments so much nicer for the patients when that port is completely steady on the abdominal wall. Sometimes they need to use ultrasound or fluoroscopy and x-ray to see it, but for the most part we can do it right in the office just by feeling the band. I'm sorry, feeling the port.

00:37:45

So we make those adjustments based on the patient's symptoms. There is no perfect amount of fluid that you can find by looking up on the Internet some formula. We base it on symptoms and, like the story of Goldilocks and The Three Bears, it can't be too tight, it can't be too loose, but it's got to be just right. If the band is too tight, it doesn't mean that someone's gonna lose weight faster. What it actually...will happen is, the patient will get what we call maladaptive eating behavior where they start to eat only liquid calories to compensate for the fact that solids won't go through. So we really want to make sure the band is just right, the patient feels full after eating a reasonably sized meal.

00:38:35

Now we're gonna go ahead and thread these four sutures through each of the four openings in the port.

00:38:48

ROCCO ORLANDO, M.D.: Several questions, Dr. Tishler. Do these bands need to be removed? Can they stay lifelong? Is more surgery always required to remove the band? What's the...What's the long term view, after a band is placed?

00:39:02

DARREN TISHLER, M.D.: The band is made of very...silicone material. I expect it to be there forever. Only in extreme situations does it need to be removed.

00:39:25

ROCCO ORLANDO, M.D.: And can the band damage the...the stomach? That's...Several questioners have expressed that concern.

00:39:31

DARREN TISHLER, M.D.: Well, there are certain risks that can happen with any procedure. This procedure, one of the risks is what we call band erosion, where the band can wear a hole in the stomach. It sounds really horrible and its...that would be a reason where the band would have to be removed. However, not usually a life threatening emergency. And since the technique has been switched over to what we call the pars flaccida technique, which I use, I believe that erosion rate has really gone down quite a bit, because we're real careful with how we position that band in the stomach.

00:40:14

ROCCO ORLANDO, M.D.: So it would be fair to say that that's a very in...infrequent complication of this procedure?

DARREN TISHLER, M.D.: Yes.

00:40:23

ROCCO ORLANDO, M.D.: Now, we also have several questions. If you've had other operations in the past, for example a cesarean section or a gall bladder operation, can you still have a lap-band?

00:40:34

DARREN TISHLER, M.D.: I'm sorry, which kind of operation?

ROCCO ORLANDO, M.D.: If you've had, say a cesarean section or a gall bladder operation--

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00:40:37

DARREN TISHLER, M.D.: Well, this patient...This patient here has actually had a...a cesarean section. Four. Okay, I like that. I'm going to tie this down. Now we're just tying the port down. One more time. We'll try and give you a good picture when we're done here of just where the port is sewn in place.

00:41:44

ROCCO ORLANDO, M.D.: Now we have some long term outcome questions that folks are asking. Can...Can someone get pregnant after they've had a lap-band? Is that a problem?

00:41:54

DARREN TISHLER, M.D.: Absolutely. And if I have a young woman who's interested in getting pregnant in the next couple of years, I'd probably recommend a lap-band procedure for her, because in the event of any nutritional problems during pregnancy I can always deflate the band. And, really, it becomes as if the patient does not have a band in place at all during the pregnancy when there is any kind of a nutritional problem. And as soon as the pregnancy is over with, we can go ahead and take the...the port, or [exit?] the port and fill it up again and get right back to the weight loss.

00:42:41

ROCCO ORLANDO, M.D.: Another concern longer term that's been expressed is, can you end up with a lot of loose skin after weight loss surgery?

00:42:49

DARREN TISHLER, M.D.: Well, that's probably the most common question I'm ever asked about this. Anytime you lose weight, you're probably gonna have some loose skin. The younger you are, the less chance there is of being loose skin. And as patients get a little older, they have a little more inches of loose skin. But I always look at it this way, if that...if loose skin is the biggest problem the patient has, well, then we're in pretty good shape.

00:43:17

And I'm just gonna make sure that that tubing is going in nice and smoothly into the abdomen. Okay.

00:43:24

ROCCO ORLANDO, M.D.: Dr Tishler, we have a comment from Dr. Ponce, who is a very experienced bariatric surgeon who does a number of lap-bands, who's comment is, Dr. Tishler, good job. [Both chuckle.]

00:43:37

DARREN TISHLER, M.D.: Well, that's always good to hear. I'm glad that other bariatric surgeons are watching this.

ROCCO ORLANDO, M.D.: They're cheering for you on the Internet.

00:43:44

DARREN TISHLER, M.D.: That's great. And we're just gonna put...I want to get a shot of that port before I close this up. I'll try and give you one picture of the port sewn right onto the muscle here. There we go. Can you guys see that pretty well? That's about the best picture I can give you. We've got about three or four inches of abdominal wall fat, but even with that it's pretty easy to get into this port. So we're gonna close that up now.

Instrument lab [tech?] counts okay? Beautiful. And now we're gonna start closing our port sites up

00:44:20

ROCCO ORLANDO, M.D.: And perhaps we could have a view of the...of the abdomen to show all of the incisions, because with all of the hardware in place it looks more imposing. But I think at this point you can get a sense for how small these incisions actually are.

00:44:36

DARREN TISHLER, M.D.: Do we have one of those rulers just for a sense of scale, Aria, to put down there? We can show you just about how big these are. This is the biggest incisions, which is about...about six centimeters long. One of these over here is about 2 1/2 and about an inch wide. And then the little ones, which you really can't see. Let's see if we can clean them up. There. These are just half a centimeter to a centimeter long altogether. And they really...If someone loses weight, those incisions also start to shrink down in size.

00:45:06

We're gonna start closing up the skin. But now we can...If there's any more questions, we can definitely spend some time talking about...

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ROCCO ORLANDO, M.D.: So from the cosmetic standpoint, then that question has also been asked. Are these permanent scars? How visible are they?

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DARREN TISHLER, M.D.: Well, everybody has a little different ability to heal their wounds. We can try and make them as cosmetic as possible. And, again, as people lose weight, the scars tend to shrink in size a little bit too. And they're actually not that big a deal for most people.

00:45:45

ROCCO ORLANDO, M.D.: Earlier in the procedure we talked about how many of the individuals who underwent this procedure had other health issues – high blood pressure, high cholesterol, diabetes. Can you comment on...on what...what are the...what's the impact of this kind of surgery on these other health issues? These other co-morbid conditions.

00:46:01

DARREN TISHLER, M.D.: Well, that is the whole point of doing these operations. It is not about the weight that is lost, but it's about the resolution of the co-morbidities. And the goal is to get rid of the high blood pressure, high cholesterol, sleep apnea, all those medical problems that...diabetes especially. We've seen some great studies showing that the lap-band is a great procedure for people with diabetes, especially if they have the procedure done early on after diagnosis of diabetes. We've had patients who start to get really good control of their sugars, really very quickly after undergoing the lap-band procedure. Just that first little weight loss makes such a big difference.

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One woman I think of who was on multiple medications for diabetes; both oral medications and insulin, and she's been able to cut down just to one medication right now. She's only a short time out from...from surgery.

00:47:07

ROCCO ORLANDO, M.D.: Dr. Tishler, where...how do you decide where to place the port on the...the reservoir? Where in the abdomen do you place it?

00:47:16

DARREN TISHLER, M.D.: Well, that's one of the few areas there's probably a little bit of variability. Number one, I want it on the rectus muscle, which is the muscle that runs right along side the abdomen, each side of the belly button. And that's really an ideal location for it. Under the ribcage so it's not too uncomfortable for the patient. And it's got to be in a spot where it's easy for us to get to, for those to...in order to access it.

00:47:50

ROCCO ORLANDO, M.D.: We've had another very practical question. Does insurance cover this operation?

00:47:55

DARREN TISHLER, M.D.: Had a feeling I'd get that question tonight. It depends on the insurance the patient has. Bariatric surgery, I believe, is indeed a disease. We've finally seen some movement towards that being recognized. Most of the major providers today have what they call riders for coverage where - or at least here in Connecticut - where the import is to buy the extra coverage. We've got a couple of bills before the state legislature right now looking at bariatric surgery coverage. Because I really believe all bariatric surgery is lifesaving surgery.

00:48:39

And we're just closing up these wounds with a little bit of glue. This is basically a variant of super glue.

00:48:51

ROCCO ORLANDO, M.D.: Dr. Tishler, we have another comment from one of your patients who had surgery on March 1<sup>st</sup> and has thus far lost twenty-three pounds, and says that she doesn't even feel that she's dieting and wants to thank you.

00:49:06

DARREN TISHLER, M.D.: Well, that is...that is great to hear...to hear that. That's the whole goal is a patient should feel like they're eating a small meal, but not feel like they're suffering. I put people on some diets sometimes before the surgery to get them ready for surgery. It's not the most fun thing in the world. It's hard. They feel hungry. With the lap-band procedure, patients can feel full and satisfied after eating just a very small meal. And the adjustability of the procedure is really where patients get all of the...the long term success.

00:49:43

ROCCO ORLANDO, M.D.: And we've got a couple of people also asking, as...with successful weight loss, does the port become visible after weight loss?

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DARREN TISHLER, M.D.: It depends how much weight the patient loses. The more weight loss, the more likely it is to happen. InnoMed makes some smaller ports that we can place when the abdominal size starts to shrink down a bit. And when that happens it's...that's a good thing we have to go in and put a new port in that's a little bit smaller. Wouldn't think of putting in a smaller port early on because it would be a little hard to access. And without accessing that port and doing the adjustments, we're not gonna see that...that great success.

00:50:29

We'll try and give you a shot here of our finished incisions. We've got our one, two, three, four and five incisions altogether. Our blood loss from the procedure was minimal. A couple of drops here and there. I would expect this patient to wake up, be walking tonight and, hopefully, this patient will be able to go home early tomorrow during the day and be back at work very shortly.

00:51:01

ROCCO ORLANDO, M.D.: Dr. Tishler, can you comment, what kind of support is available during the weight loss process?

00:51:08

DARREN TISHLER, M.D.: Ah, that's important too. The key for a successful weight loss is our multi-disciplinary program. WE have a system where we have nutritionists, cardiologists. We have sleep stud...or, sleep experts for sleep apnea. And we really get patients linked up in the system. Probably the most important person in our system is Nina Arnold. She's our nurse coordinator who really takes the patients from that first time they think about having surgery all the way through to the point where they've been successful more than a year out of surgery.

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We have support groups that meet on a monthly basis. I think support groups are another critical factor. Patients who have had weight loss surgery are always willing to share their stories. I could probably talk about bariatric surgery for several hours, but a patient talking to another patient who's had surgery is really invaluable. There's nothing that will give a patient a better idea of what they're gonna go through.

00:52:04

And this is a permanent lifestyle changing operation. Now, granted, the lap-band can be removed, but I like people to think that it is permanent. We want them to have successful weight loss for their entire life. And it's that network of...of the program that we have that really makes our patients successful with their weight loss in the long term.

00:52:24

And we're just...We're done with the operation here. We can start finishing things up here and [reversing?].

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ROCCO ORLANDO, M.D.: We've had another question, Dr. Tishler. Can you explain exactly how the band is adjusted using that port?

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DARREN TISHLER, M.D.: Absolutely. What we do is...I'm gonna come over here on the side. Get my gloves off here, as we finish up here. The...The port sits on the abdominal wall and we take a small needle and we place that needle through the abdominal wall, right in the side, and we aspirate the port to gain access there. And once we locate the port, we measure how much fluid's in the port to begin with and then we can add or take away fluid as needed to make that perfect adjustment for the patient.

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ROCCO ORLANDO, M.D.: And your expectation, Dr. Tishler, for this patient is when would you expect that she would be going home?

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DARREN TISHLER, M.D.: I'd expect her to go home tomorrow morning. I'd expect her to be having liquids. That is a bit of a restricted diet for the first several weeks. Our patients go home on a liquid diet for the first two weeks after surgery. We then bring them up to a puree diet, and then after that puree diet we'll move along to eating solid food right before...right before the first adjustment to really know just how much fluid to put in that...in that band.

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ROCCO ORLANDO, M.D.: And how often is the program having informational sessions about surgical weight loss?

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DARREN TISHLER, M.D.: We do our initial information sessions with our patients every week. They're usually about an hour to two hour session where we have our patients watch a video about weight loss surgery. And it's not really about deciding at that moment if weight loss surgery is for you. It's just about getting that information. But once we get the information, we work with the patients on a...on a regular basis to get them through that intense process of getting ready for surgery, which some patients do find to be more stressful than anything else – the anticipation of surgery.

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ROCCO ORLANDO, M.D.: Okay. Well, before we close, do you have any final comments, Dr. Tishler?

00:54:45

DARREN TISHLER, M.D.: Well, I...I think the bottom line is that the lap-band procedure is a safe, effective operation for weight loss. It's the only procedure that is reversible and adjustable for our patients. Really like to offer that to patients.

Last things in closing, I want to thank everyone here. Dr. Shaw from anesthesia. Aria and Myra. Dr. Bloom. Dr. Orlando. And everyone over with Olympus to help us out and over at InnoMed, who's really brought a great product. And there's some people there who really truly believe in that product and because of that belief they have in the product they're doing, I think, a great job of bringing us just the most modern procedure available for...for weight loss surgery.

00:55:36

ROCCO ORLANDO, M.D.: Okay. Well, I'd really like to thank everyone for joining us and viewing this here at Hartford Hospital in Hartford, Connecticut during the lap-band procedure. Thank you very much for watching. For those of you who need CME, you can click on the CME button on your webpage. I'm Dr. Orlando. And for Dr. Tishler, good night.

00:55:58

NARRATOR: This has been a lap-band procedure performed at Hartford Hospital in Hartford, Connecticut. The presentation is a continuing medical education program. To obtain more information or to make an appointment, or make a referral, please click on the buttons on your screen.

00:56:24

[END OF WEBCAST.]