

Lymphoedema and orthopaedic surgery

Is it safe to have surgery on my swollen limb?

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'I have been referred to a surgeon who has said I need carpal tunnel surgery on my affected arm. Do you think this is a good idea?'

Questions like this one regarding carpal tunnel surgery, or knee/hip replacements are common questions put to lymphoedema therapists, and unfortunately there is no simple answer. Most people with lymphoedema know that they must avoid any form of trauma to the affected limb, so surely any kind of surgery is out of the question. However, one of the cornerstones of lymphoedema management is the ability to move and exercise to within your limits. If pain from your joints is significantly limiting your ability to move, it may become impossible to keep up this important part of your swelling management strategy.

The purpose of this article is to explore the risks and benefits associated with undergoing orthopaedic surgery on your lymphoedematous limb, and to discuss the ways to improve your chances of having the best outcome should you and your surgeon decide that surgery is the best option for you.

What are the risks?

Any surgical procedure has inherent risks even for people without lymphoedema. Before undertaking any surgical procedure your surgeon should discuss these risks with you. Some of the most common associated risks include: infection, swelling and pain. There may be others related to the particular surgery you are considering. Infection risk, swelling, and pain are complications commonly associated with lymphoedema, and are also a consideration for those at risk of developing lymphoedema (for example, if you have had lymph nodes removed as part of your cancer treatment but do not currently have any swelling). Let's examine these risks individually:

Infection – Lymphoedema increases your risk of infection because the lymphatic system is an important component of your body's immune system. Maintaining skin integrity is such an important part of lymphoedema management because the skin is your body's first line of defense against infection. Scrapes, insect bites, and surgical procedures create openings in the skin that allow bacteria, that otherwise live quite safely on the outside of our skin, into the body. In your unaffected limbs this is not usually an issue because these bacteria would be picked up by your lymphatic system and transported to your lymph nodes (or glands) where the lymph is filtered and cleaned. Your immune system can therefore identify and launch a successful counterattack against any bacteria. In your swollen limb, if these same bacteria enter through a cut in the skin, the lymph fluid will not be properly filtered and cleaned in the lymph nodes, so the infection can continue to build in the tissues and cellulitis will develop which can make you feel very unwell.

There is also another type of infection that must be considered which is a risk during any hospital admission and that is a hospital-acquired infection. Common infections of this type include pneumonia, urinary tract infections, and bloodstream infections, many of which are antibiotic resistant strains. The risk of hospital-acquired infection is the main reason why hospital stays following surgery are now very short.

Swelling – Swelling is a common after effect of any orthopaedic surgery. It is part of the body's normal response to injury, and a necessary part of the healing process. Most

of the body's healing and defense mechanisms are found within the blood stream. When there has been tissue injury (for example during surgery) the surrounding blood vessels become more 'leaky' to allow these healing cells into the area. It is through these healing cells that the bleeding stops (clots), antibodies arrive to fight infection, and other proteins arrive to allow new blood vessels to grow and a scar to form. Therefore, in the short term following surgery, swelling and inflammation are an important part of the healing process. A concern for people with lymphoedema who are considering surgery is whether their swelling will worsen following surgery. The lymphatic system must cope with this excess fluid that arrives to start the healing process, and a compromised lymphatic system makes the removal of post-operative swelling all the more difficult. Prolonged or chronic swelling around the incision site may begin to cause problems such as delayed wound healing resulting in a poor cosmetic outcome of your surgical scar. Such swelling also increases the possibility of acute infection. Furthermore, the more oedema that exists around a joint, the stiffer the joint is, with a consequent reduction in range of movement and function.

Pain – Pain is one of the main reasons people seek orthopaedic surgery. However, it is likely you will experience a different type of pain in the initial days and possibly weeks following surgery as your tissues heal and recover. This pain may impact your ability to perform activities you were managing before surgery, for example putting on and taking off your compression garment(s).

What are the benefits?

Despite the risks of surgery, for some people the benefits of having surgery far outweigh the associated risks. Orthopaedic surgery is usually considered when increased pain and decreased range of movement are having a detrimental effect on someone's ability to move and overall quality of life. Pain and reduced range of movement will lead to decreased strength, which in turn can worsen pain and further decrease range of movement. Surgical intervention is often the only way to break this vicious cycle.

Movement and exercise are crucial components of lymphoedema management. Movement stimulates the lymphatic system to work better. If your ability to move is being severely affected by pain, and you become increasingly sedentary as a result, then your swelling is likely to worsen. A decreased level of activity is associated with weight gain, which will cause your swelling to become worse.

Your current quality of life is an important consideration. If you only have knee pain after playing tennis, but you prefer swimming anyway, then it is probably not worth undergoing surgery at this point. However, if you develop pain and pins and needles in your hand and fingers after only 20 minutes on the computer, the pain in your wrists wakes you up at night despite the use of a night splint, and your work requires a full day of computer work, then surgical intervention is probably something you should consider. In other words, if your current pain levels are not having an impact on activities you must do or enjoy doing on a regular basis, then you should postpone surgical intervention until you feel your quality of life is being more severely affected. You could think of that scenario as the cons outweighing the risks. However, if you feel that your pain is having a negative impact on your day-to-day activities then it is worth pursuing a surgical consultation.

Exhaust all conservative measures first

In most situations where orthopaedic surgery is being considered, it is usually recommended that a more conservative approach such as physiotherapy be tried first. Some patients find this delay frustrating, but often having a specialist assess your

strength, range of movement, and current activities can help you to postpone or avoid surgery.

'I've been referred to a physiotherapist for my hip pain, what should I expect?'

Unfortunately there is often a delay between when your doctor sends a referral for physiotherapy and your initial consultation. It is worth asking your local service what the current wait time is, as this can vary depending on where you live and what level of severity your problem is.

At your first visit to the physiotherapist you will be asked questions about your general medical history (not just about your current problem), and you should be prepared with a list of any medications you are taking. If the physiotherapist is not familiar with lymphoedema they may want to know if there are any activities you should avoid. If you are unsure, make sure you talk to your lymphoedema therapist before your first visit with the physiotherapist so you can be prepared with answers. It is often a good idea to suggest that the physiotherapist speaks to your lymphoedema therapist directly. It is a good idea to think about what sort of activities make your pain better or worse throughout the day as this is information that will help your physiotherapist get a better idea of the exact nature of your problem and how it affects your daily life.

Your physiotherapist will measure your range of movement and strength, and will usually teach you a few exercises (usually 2-3) for you to start doing at home. You may even be given some suggestions on how to modify activities that regularly cause you pain. It is important that you ask any questions regarding your 'homework' before you leave your appointment. You will need to know how many times to do a particular exercise each day and what to do if any of the prescribed exercises seem to make your pain worse. Before you leave, your physiotherapist will tell you when they next want to see you to review your progress.

It is important to keep in mind that the one thing that will have the biggest impact on physiotherapy helping at all is whether or not you do your exercises! Remember that the stronger you are before surgery, the faster your recovery will be after surgery.

'I've been diagnosed with carpal tunnel syndrome and my doctor has suggested I have an injection into my wrist, but I know I'm not supposed to have needles in my swollen arm!'

The option of an injection (usually a corticosteroid injection) is considered to be a less invasive measure than undergoing surgery and can often provide a significant amount of pain relief. This is usually suggested if something like splinting, in the case of carpal tunnel syndrome, or physiotherapy, in the case of knee/ankle arthritis, fails to provide sufficient improvement. If you are considering having an injection into your affected limb to help with pain management, then this is another scenario where the risks (such as a possible increase in swelling) must be weighed against the benefits (such as pain relief).

You've got a date set for your surgery

You should advise your lymphoedema therapist that you have a date set for your surgery. He or she may want to adjust the date of your next lymphoedema appointment accordingly to review your progress. It will be important that you ensure you have made every effort to minimise the swelling in your limb before your surgery. This can be achieved through being very diligent with wearing your compression garments, or in some cases your lymphoedema therapist may suggest a short period of bandaging prior to surgery. You will also want to have a plan in place for resuming compression as soon as possible following surgery (this can often be done as soon as the surgical drains are removed). This will help to reduce the risk of prolonged post operative inflammation, which will, in turn, reduce the risk of cellulitis and wound breakdown. You should also

discuss with your lymphoedema therapist if you will need any special devices to help you get your compression garments on or off. In some cases you may need to arrange for friends or family to be available to help you for the first few weeks after surgery. If this won't be possible, you may need to discuss the possibility of arranging either nursing or social assistance with this for a short period when you first return home. Special mention must be made of those people with lymphoedema who already have a history of recurrent cellulitis, and those who may already be on a daily prophylactic dose of antibiotics. It is important to bring this aspect of your medical history to your surgeon's attention. If you have a history of cellulitis it will be worth discussing the possibility of beginning a treatment dose of antibiotics prior to your surgery. For those already taking prophylactic antibiotics, this level of antibiotic cover should be discussed with the doctor who originally prescribed this for you in case alternative antibiotics are recommended for the period before and after your surgery.

The 'Take Home' message

If your quality of life is being significantly affected by pain and you are planning to have surgery on your lymphoedematous limb to address this, then it is important that you discuss the risks of the surgery with your doctor, keeping in mind the additional risks that lymphoedema poses. It is also important to involve your lymphoedema therapist throughout this process by keeping them advised of any decisions you make. He or she may be able to offer support in terms of suggesting questions to ask your surgeon or physiotherapist, and may even suggest changes to how you will manage your swelling both before and after surgery.

With the appropriate advice and support, there is much you can do to minimise your risks and have the best possible outcome following your surgery.

<http://www.lymphoedema.org/Menu3/5Articles%20by%20healthcare%20professionals.asp>