Living Well With Limb Loss

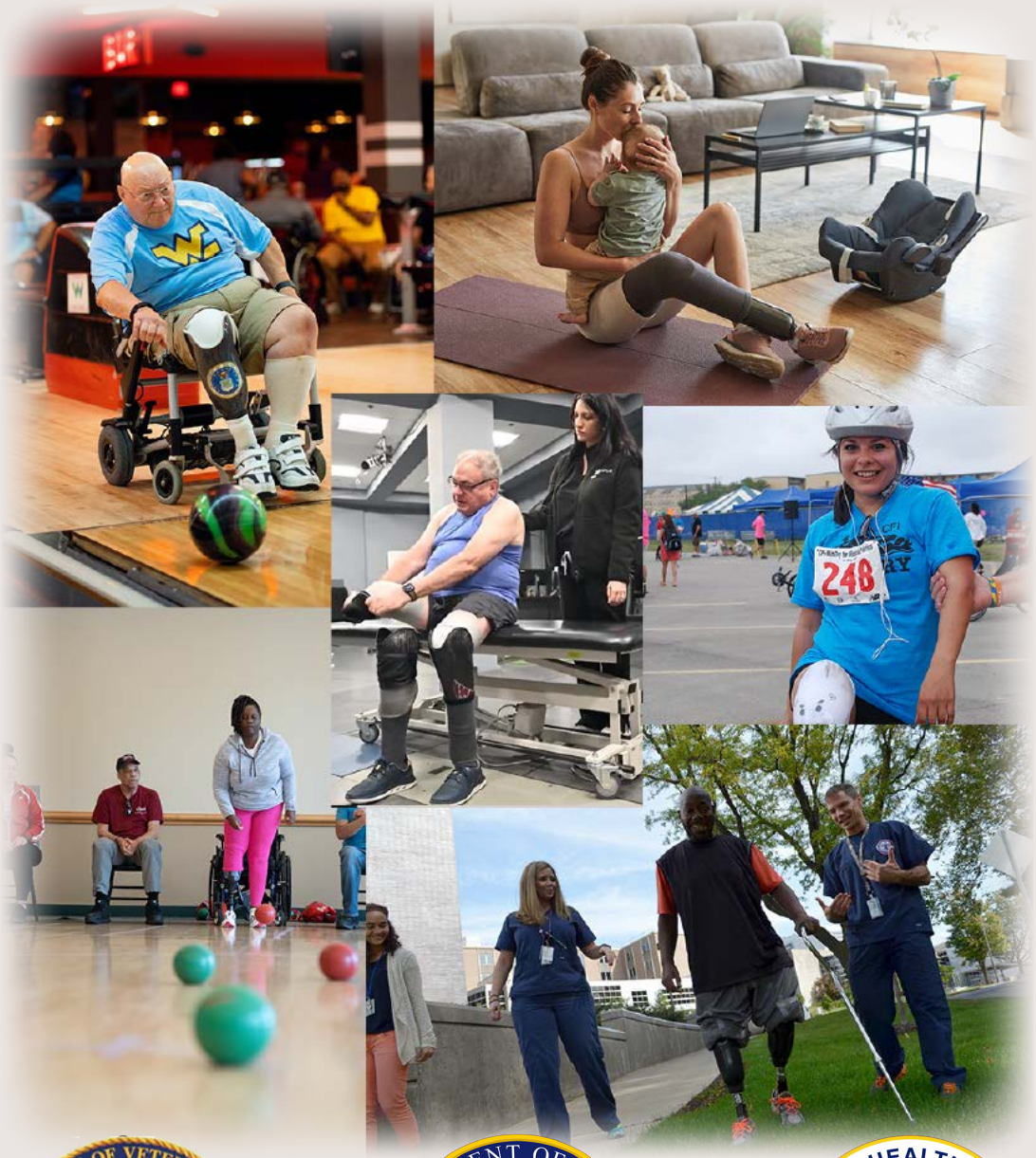

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Table of Contents

Introduction

With input from patients like you, this handbook was written by healthcare teams in Veterans Affairs (VA) and the Department of Defense (DoD) who help patients with lower limb amputation. It is meant to guide you through the process from surgery to living a full and active life.

In this handbook, you will find information on:

- Managing Pain
- Taking care of your limb after amputation and healing
- Rehabilitation
- Lifelong care and opportunities

It's important for you and your family to have as much information as possible during your recovery. Understanding the healing process, what to expect, and the steps involved can help you feel more confident and prepared.

Surgery

The word **amputation** is used to describe the removal of all or part of a limb. The decision to undergo amputation is one that is shared by you and your family, your surgical team, and your rehabilitation team (rehab doctor, prosthetist and therapists). The goal is to restore your limb to a functional level, while maintaining as much limb length as possible. Your surgeon will explain how much of your limb can be preserved depending on the extent of damage or disease in your leg.

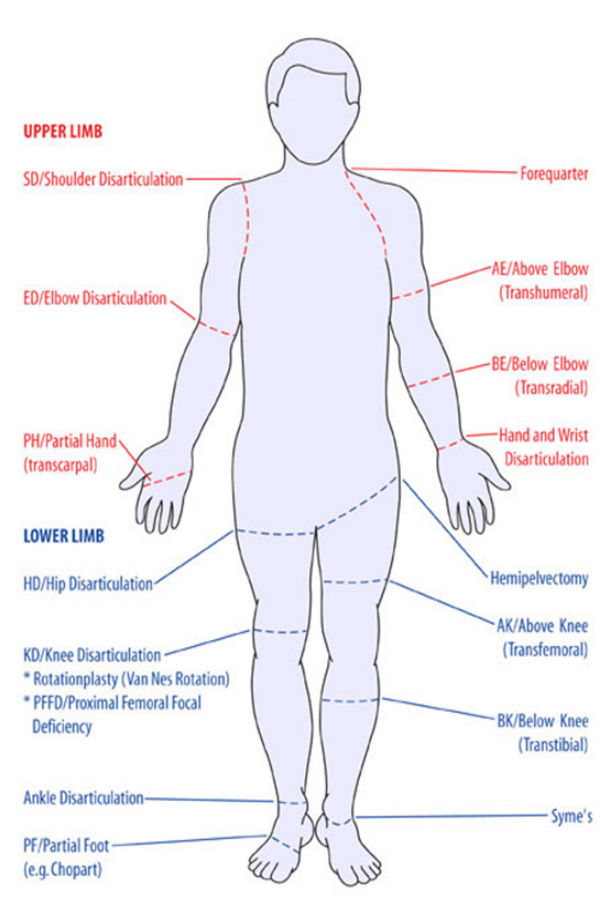
The level of amputation will be based upon:

- Your overall general health
- Your ability to heal
- Best possible length for function and quality of life in the future

Level of Amputation

The amputation level does affect your rehabilitation plan. In general, moving from the toes or forefoot up towards the hip and pelvis will increase the complexity of the rehabilitation.

The picture shows the various levels of amputation that may occur. The rehabilitation process will include helping you heal from the amputation and maximize your functional level with and/or without a prosthesis.



A **partial foot amputation** is the removal of one or more toes or bones of foot. Prosthetic devices and special shoes help improve walking, protect the amputation site and the remaining foot.

A Symes amputation or **ankle disarticulation (AD)** is at the ankle level where all the bones of the foot are removed and often the heel pad is left to cover the end of the tibia, which is the larger lower leg bone. You can usually put weight through the end of your limb after healing with allows for frequent successful use of an ankle level prosthesis.

A **transtibial amputation (TT)** otherwise referred to as a below-knee amputation occurs between the ankle and the knee joint. This level of limb loss will require use of a wheeled mobility device and/or mobility aids such as a walker or crutches part or all the time. Often a transtibial prosthetic leg can assist you in performing activities in standing and walking.

A **knee disarticulation (KD)** is an amputation through the knee joint. The full length of the femur (thigh bone) is preserved. A wheeled mobility device should be part of our mobility options. At this level and above prosthetic salutation become more complex as does the rehabilitation process.

A **transfemoral amputation (TF)** otherwise referred to as an above-knee amputation occurs between the knee joint and the hip joint.

A **hip disarticulation amputation (HD)** is an amputation that occurs up near the hip joint where the femur (thigh bone), including the ball portion of the hip joint, is removed.

Note: Nearly all individuals with limb loss can increase their mobility and independence with a wheeled mobility device. Use of a prosthetic leg requires a great deal of strength and endurance, and not all individuals are appropriate. Your ability to stand and walk prior to amputation are factors in determining what equipment and devices will be best to assist you in getting into and out of bed and various types of seats.

The Amputation Specialty Care team

The Amputation Specialty Care team is a group of health care professionals who work together to support your recover after a limb amputation. The team may be referred to as an interdisciplinary team because it includes experts from different fields. Here is a breakdown of the team members and their roles:

You: You are the most important member of the team. Your active participation and sharing of personal goals are essential for your recovery.

Family: Your family's involvement is welcomed and important. They can provide help and support during your recovery journey.

Surgeon: The surgeon is the doctor who performs your amputation surgery. Depending on your situation, this could be a vascular surgeon, general surgeon, orthopedic surgeon, plastic surgeon, or a trauma surgeon. They are involved in your care during and after surgery.

Rehabilitation Specialty Physician (Physiatrist): This doctor oversees your rehabilitation process. They evaluate your needs, prescribe necessary equipment, and coordinate services. They also prescribe medications and tests and consult with other doctors and experts as needed.

Physical Therapist (PT): The PT designs exercise programs to strengthen and stretch your muscles, improve endurance and train you to move safely using walking aids or wheelchairs. PTs also help manage pain in your residual limb care to promote a whole health to thrive throughout your life.

Occupational Therapist (OT): The OT teaches you new ways to perform daily activities like dressing, bathing, using the toilet, and cooking safely. They assess your home environment and recommend equipment such as grab bars and shower chairs.

Prosthetist: The specialist designs and fits your prosthesis (artificial limb). You will work closely with the prosthetist to address any concerns with your prosthesis.

Nurse: Nurses care for you from your arrival until you leave the hospital. They monitor your wounds for infection, provide care before and after surgery, manage pain medications and assist in the daily activities.

Psychologist: The psychologist helps you adjust emotionally and cope with the changes after amputation.

Recreation Therapist (RT): The RT helps you return to hobbies and leisure activities you enjoyed before and introduces you to new ones. They also organize community outings and connect you with local organizations that match your interests.

Kinesiotherapists (KT): Present at some hospitals, KTs provide exercise programs to improve your strength, endurance and mobility.

Social Worker: The social worker connects you with community financial, housing, job re-training, and transportation assistance resources. They work with the entire team to assist in planning for when you leave the hospital, and counseling to cope with your limb loss.

What does the Amputation Specialty Care team do for me?

The Amputation Specialty Care team will develop a customized plan for you and your rehabilitation journey. This plan will include:

- Your Short Term and Long Term Goals
- Care of your Amputated (residual) Limb
- Care of your Non-amputated Limb
- Overall Health and Wellness
- Mental and Physical Fitness
- Equipment Needs
- Prosthetic and Non-prosthetic Options
- Safe Mobility
- Lifelong Care

Will a Prosthesis Be Helpful for Me?

You will work with your Amputation Specialty Care team to determine if using a prosthesis might be helpful for you, and if the potential benefits outweigh the potential harms. Unfortunately, sometimes the use of a prosthesis is not helpful or may not be safe. For example, someone who was not walking prior to their amputation due to poor strength and poor health may benefit more from use a wheelchair instead of a prosthesis to reach their highest level of safe mobility and independence.

Your team will consider factors like:

- How well you get around without a prosthesis. Getting around better without a prosthesis means it's more likely that a prosthesis might be helpful.

- How well you can use your hands for fine motor tasks like fastening buttons.
- Your balance, strength, and sensation (ability to feel).
- Limitations in movement of your joints, referred to as joint contractures, will make using a prosthesis very challenging if you can't stand up straight with good posture.
- Joint, muscle, nerve, or brain problems that could make it more difficult or unsafe to use a prosthesis.
- Your ability to remember new information and learn new skills. There is a lot to learn when using a prosthesis and it requires remembering the many steps to putting the limb on (donning) and removing the limb (doffing) to use a limb safely and to avoid injury.
- Your general health (heart, lungs).
- Risk of wounds on your residual limb or other parts of your body.

Coping with Lower Limb Amputation

Losing a body part is a significant life event that can lead to a wide range of emotions. Each person's feelings and reactions will be different depending on personality and specific circumstances of the amputation. Common emotions include sadness, anxiety, frustration, embarrassment or anger, even if the amputation was necessary for medical reasons. Some people might feel relief, especially if the amputation alleviated pain, others may view it as a challenge to overcome, and some may grieve the same as for a lost family member.

Body image refers to the personal view of our own bodies. After amputation, it's natural to feel differently about your appearance as you adjust to the new shape and look of your body. This change may affect your self-image and confidence. Rehabilitation team members, including psychologists and social workers, can help you process your feelings, gain perspective, and learn how to respond to others.

There's no right or wrong way to feel after an amputation. Emotional recovery, like physical recovery, depends on factors such as age, gender, circumstances of your limb loss (trauma, disease, birth), previous coping mechanisms, support from family or friends, cultural values, and socioeconomic factors.

Here are some suggestions for coping strategies after amputation:

Caring for Your Body

1. **Get your rest.** Proper sleep allows your body a chance to recharge and heal
2. **Establish a daily routine.** Work with your rehabilitation team to identify activities you enjoy and find ways to overcome any obstacle that holds you back.
3. **Get outside.** It's important to get out of bed, get dressed, and, whenever possible, go out of the house. Every day you go outside you are being active. Fresh air lowers stress.
4. **Eat well.** Eating good food can help you feel better, keep you from getting sick, and give you energy when you need it.
5. **Get moving.** Doing fun physical and recreational activities is a great way to exercise. Even light movement can boost your mood by releasing endorphins!
6. **Practice relaxation techniques.** This will help relax muscles, decrease pain, and relax and focus the mind.
7. **Be mindful of alcohol.** Alcohol is a depressant and can make you feel worse. Cut it out or keep it social.

Coping Strategies

1. **Spend time with supportive family and friends.** Being around people who care about you can help you feel better and less alone.
2. **Recognize and talk about your feelings.** If you sad or down most of the day or many days at a time, you may be experiencing depression. It's ok to ask for help, talk to your doctor or someone you trust. It's normal to feel anger and frustration. Let yourself feel them, but don't let them take over.
3. **Write about your thoughts.** Keeping a journal or writing letters can help you process your emotions.
4. **Speak up for yourself.** Let people know what you need and what you don't. On a low energy day, take it easy, something relaxing like going to a movie.
5. **Talk about your grief and loss.** Your loved ones may be struggling with the changes in your life. Sharing your feelings can help everyone adjust and heal together.
6. **Try mental exercise.** Activities like meditation, guided imagery and hypnotherapy can help you feel calmer and more in control.
7. **Try a support group.** Ask your care team or go to the Amputee Coalition (amputee-coalition.org) to connect with others who understand what you are going through.
8. **Focus on the good things in your life.** Spend time on hobbies, relationships and activities that bring you joy.
9. **Seek professional help.** If your feelings of sadness or stress become overwhelming, talk to a rehabilitation care team member, they will help you find the right support.

Mental Health Strategies

1. **Be an active part of the team.** Stay involved with your rehabilitation case team, even when you not feeling motivated. Sometimes just showing up for an appointment is enough to jump start your recovery. Commit yourself to work with the care team, even those times you don't feel like it.
2. **Avoid big decisions when overwhelmed.** Don't make major choices like starting or ending a relationship, buying or selling a house or car, when you are feeling stressed or sad. You might regret it later.
3. **Get professional help.** If needed, talk to your rehabilitation team about getting a mental health evaluation.
4. **Explore alternative strategies.** In addition to counseling there is medicine, massage, acupuncture and hypnotherapy for pain, sleeplessness, anxiety, or depression.
5. **Replace the negative with the positive.** Try replaying negative thoughts about your body and life with positive ones. Focus on your support system, hobbies and things that make you happy.
6. **Consider peer support.** A peer visitor, someone who lives with amputation, can offer valuable support and help you feel less alone. They understand what living life with amputation is like.

Spiritual Approaches

1. **Dream and set goals.** Keep dreaming and redefine success. Set goals for the future, start small, and work towards them.
2. **Accept support.** Say "yes" to help from loved ones while remaining independent.
3. **Create new routines.** Build new habits and memories to bring hope to the present and future.
4. **Reach out to a spiritual leader.** If your religion or spirituality is important to you, a clergy member can offer great support, no matter what your faith.

Amputation is a big loss, and it takes time to adjust. Be kind to yourself during this process. Try not to isolate yourself or pull away from others. Use your experiences to build new memories and start new traditions to work towards your goals. You will need to adjust to changes in your abilities while you keep pushing forward. Remember, only a part of you has changed; the core of who you are is still the same.

Veterans Crisis Line
DIAL 988 then PRESS 1

Veterans Crisis Line www.veteranscrisisline.net

Dial 988 and Press 1 or text 838255
This is 24/7, confidential support for Veterans and their loved ones. The Veterans Crisis Line connects Veterans and their loved ones in crisis with qualified, caring Department of Veterans Affairs responders through a confidential toll-free hotline, online chat, or text. Support for deaf and hard of hearing individuals is available.

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Understanding Your Pain and Discomfort

There are many different types of discomfort, pain, and sensation that you may experience after an amputation. These can last through the healing process, but for some it may need to be managed for life. There are treatments for pain and discomfort and the best treatment for each experience depends on the type of pain or discomfort you are feeling. It is important to work with your team to address what you are feeling.

Reporting Your Pain and Discomfort

Your medical team will ask you to describe your pain on a scale from 0 (no pain) to 10 (worst pain).

They will ask you where it hurts, how much it hurts, how often it happens, and how much it affects your daily life. This information will help your team address the pain.

Your emotional state can affect pain, so managing stress and mental health is very important. Your team is there to answer your questions or concerns.

Residual Limb Pain

Residual limb pain occurs in the part of your leg that remains after surgery. This pain may be described as soreness, sharpness, or throbbing. It is normal to have some residual limb pain or discomfort after amputation, and it usually decreases as the surgical incision heals and the swelling comes down. It is also common to experience residual limb pain during rehabilitation and when learning to use a prosthesis (artificial limb). However, sometimes severe residual limb pain could be a sign of a problem. If you feel pain, tell a rehabilitation or medical team member so they can work to treatments and care to make you feel more comfortable. Whether it's the healing process after surgery, the rehabilitation treatment or prosthetic care, your team has strategies to address residual limb pain.

Phantom Limb Pain

Phantom limb pain is pain felt in the part of the limb that is no longer there. It is very common, and most people living with an amputation will experience this type of pain at some time in their recovery. We have learned from people with living with an amputation that the experience of phantom limb pain (how intense, frequent, and the description of phantom limb pain) is unique to the person. In some people, phantom limb pain lasts only for seconds during a day, while in others, phantom limb pain can be more intense and last longer. Some people describe phantom limb pain as sharp, electricity, nerve pain, or shooting. Stress and anxiety can affect your experience with phantom limb pain. There are many approaches to treatments like wearing a compression sock (such as a shrinker), practicing rehabilitation techniques like graded motor imagery (an example of which is mirror therapy) or desensitization, use of prescribed medications and using a prosthesis. Proper pain management helps reduce anxiety and supports recovery.

Sometimes, phantom limb pain can be the result of something other than amputation. For example, a nerve getting pinched in the lower back. Your medical team might request diagnostic tests or send you to see a specialist to work out potential other causes of phantom limb pain.

Phantom Limb Sensations

Phantom limb sensations are non-painful sensations in the part of the limb that has been amputated. These sensations are common and have been described as itching or tingling, whereas others feel that their limb is still present and that they can move or reposition it. No one really knows what causes them. For some people, exercising regularly can be helpful.

What I need to do:

- When your healthcare team asks you about your pain, let them know! Rate it on a scale of 0 to 10 and describe how it affects your daily activities.
- Let your team know if you feel that your pain is not well controlled.
- If you are feeling anxious or distressed, make sure to let your health care team know.

Managing Your Pain and Discomfort

Medications

Your medical team will work with you to manage your pain after your amputation, and they'll work with you to find the right medications. They will watch for side effects like drowsiness, constipation, and trouble breathing so tell them if you experience these.

Other medications like antidepressants or those designed for nerve pain, or even anti-inflammatory drugs for flare-ups may be part of your treatment plan. Make sure you understand the potential side-effects of all medications (including vitamin, mineral, food, and herbal supplements) that you might be taking. Your team is there to answer any questions or concerns.

Rehabilitation & Wellness Practices

Along with medications, other methods can help manage your pain, such as:

- Massage
- Acupuncture
- Desensitization therapies like touching or tapping the residual limb with items such as a cotton ball or a towel.
- TENS devices (low level of electrical stimulation)
- Compression using a shrinker or elastic wrap to reduce swelling and provide sensory input to your limb.
- Biofeedback as a way of teaching your body to reduce tension in your muscles through breathing. This can also help with sleep.
- Graded Motor Imagery using visualization of your limb performing movements
- Rehabilitation exercises with your physical therapist, occupational therapist, or other team member.

Key Points to Remember:

- Pain management plans are unique to each person. No single treatment works for everyone, so work with your team to find what's will work best for you.
- The goal is to manage your pain so you can do what activities are important and enjoyable for you.
- Stress often plays a role in pain, especially after amputation. Communicate with your health care team about how you feel and ask for help with stress and mental health.
- Take your medications as prescribed. This will help the medical team know if the medications are helpful or if changes need to occur. Always report side effects to your medical team.

Residual Limb

Post-Operative Dressing

After surgery, your residual limb will have a dressing to promote healing. There are two types of dressings: rigid and soft. Both are there to protect the limb, reduce swelling and shape it, and prevent loss of joint range of motion. Rigid dressings are made of casting material and are changed as the swelling goes down. Soft dressings are elastic bandages used to reduce swelling at the lower part of your limb. If the dressing changes are painful, and you may need pain medicine before the change.

Healing of the Incision

Once the dressing is removed you will see stitches or staples holding the incision together so it can heal. These will eventually be removed when your body is ready, as directed by your surgical team. You can help it heal by keeping the area clean, eating well, controlling your blood sugar (if you have diabetes), and avoiding smoking. The faster you heal the quicker you can progress.

Shaping the Residual Limb

After surgery the shape of your residual limb shape with be impacted by excess fluid causing swelling or what your medical team may call edema. Reducing the swelling will help it properly heal, decrease the pain, and will shape the residual limb which is critical for prosthesis users. Three common option to achieve this are using a shrinker, a liner, or an elastic bandage.

Using and Elastic Shrinker

A shrinker is an elastic sock rolled onto the residual limb once the stitches or surgical staples are removed. The shrinker provides simple pressure to help reduce swelling, shape the limb and promote an overall healthy limb. It should be worn most of the day, and wash or replaced if it gets dirty and replaced with wear and tear.

- If shrinker causes pain, coldness or numbness, remove it and contact your healthcare team. It may be too small.
- If the shrinker becomes loose, contact your team for a new one.
- Ask for more than one, so you can wash the shrinker daily.
- The shrinker needs to be snug and cover the residual limb completely.
- Before seeing a prosthetist, wear the shrinker for at least 8 hours to ensure proper assessment.

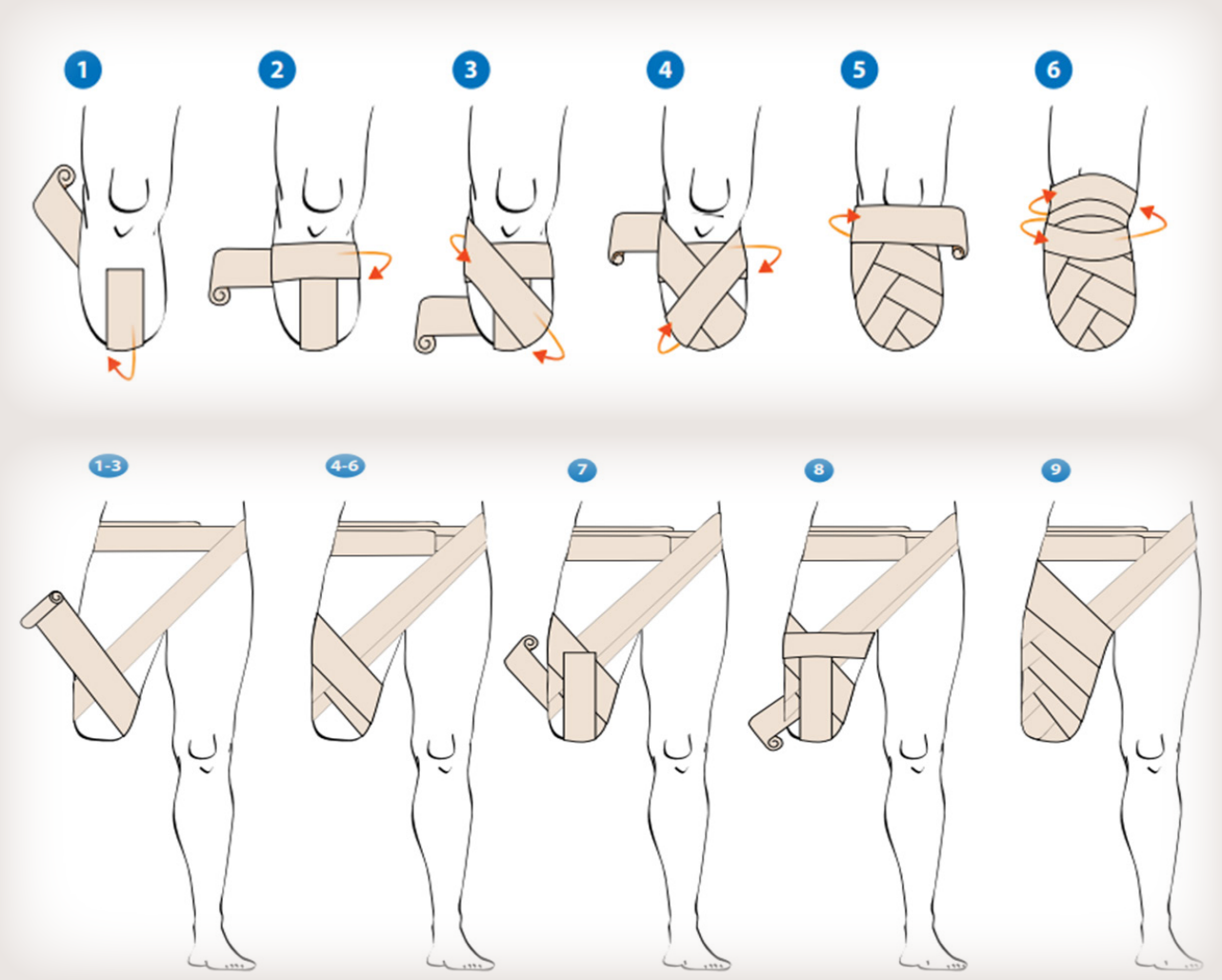
Using a Silicone Liner

Silicone liners, or liners of similar materials, can also help reduce swelling and protect your surgical site. These liners are used like shrinkers but need extra care, as they can cause sweating, which may irritate the skin. The prosthetist and rehabilitation team will help fit you to the right size. Liners are more commonly prescribed for use with prosthetic limbs than strictly for residual limb management.

- If the liner causes discomfort, remove it and contact your rehabilitation team member.
- Clean the liner daily and rotate with others.
- The liner should fit snugly against the end of your residual limb.
- If the liner stretches out, contact your therapist or prosthetist for a new one.

Residual Limb Wrapping

An elastic bandage can be another option for managing swelling and shaping the residual limb. This requires a specialized training to perform this correctly and safely. Here are illustrations of proper technique for below knee and above knee amputations.



- Residual limb for below knee amputation can typically be covered with a 4-inch bandage, and 6-inch bandage for above knee limb loss.
- If there is any pain from wrapping, remove the bandage and contact your rehabilitation provider.
- Bandages need to be washed or replaced regularly.
- Do not perform this method of compression without proper training from a rehabilitation team member.
- A figure-8 pattern and total limb coverage are mandatory to safely promote limb health.

Inspecting Your Residual Limb

Check your residual limb often for any skin problems, like sores, infection, rashes, or calluses. If you have diabetes or poor circulation, inspect it more frequently, as you may not feel irritation. REMEMBER - Look at both legs for possible problems.

- Always look at both legs for issues.
- In the beginning, inspect your limb every time you remove your prosthesis. Later, once a day is usually enough.
- Check all areas, including the back, creases, and bony spots. A mirror can help.
- Look for redness, blisters, or marks that don't fade within 10 minutes.
- Report any problems to your rehab team.

Inspecting Your Residual Limb

1. Always look at both legs for issues.
2. Pat your limb with a towel until it is dry. Allow it to air dry for around 15 minutes before putting on your prosthesis.
3. Avoid alcohol-based products, as they can dry out the skin.
4. Don't soak in hot tubs or baths for too long, as it can cause swelling.

Desensitization, Massage and Tapping

Often the residual limb can develop uncomfortable or unwanted sensations. Desensitization, massage and tapping all help make your residual limb less feel more comfortable with various clothing materials, improve tolerance to pressure and may reduce phantom limb pain.

Desensitization

This strategy involves rubbing the residual limb with different materials.

- Perform desensitization twice a day for 2-3 minutes, preferably when you're not wearing a compression garment.
- Start with a cotton ball and rub gently in a circular motion.
- Gradually use rougher materials, like a paper towel, then a terry cloth towel or shower sponge.

Massage

Massage improves circulation and may loosen scar tissue.

1. Use one or two hands to gently knead your residual limb. Avoid massaging over sutures or staples, but you can massage around them.
2. After sutures are removed, increase pressure to massage deeper tissues and muscles, including the scar area.
3. Massage for at least 5 minutes, 3-4 times daily. You can do it more often if it helps with phantom limb pain.

Tapping

Tapping can easily be performed throughout the day.

1. Gently tap your residual limb with your fingertips (do not use your nails). You can gently tap over the suture line even before sutures are removed (use clean hands).
2. Tap for 1-2 minutes, 3-4 times daily. Do this more often if you find it helps decrease phantom limb pain.

Summary of Residual Limb Care

Your residual limb will change shape over time. Factors like changes in body weight and changes in your activity level may affect the size and shape of your limb. Eating a balanced diet, regular participation in activities you enjoy, and following your doctor's advice about medication will help maintain the shape of your limb. For women, pregnancy, can cause fluctuation in volume of the residual limb. If you notice significant changes in your residual limb, consult your rehabilitation team.

What to Do:

- Inspect your residual limb regularly for skin areas of irritation, blisters, or red marks.
- Use a long-handled mirror to check all areas of your limb, especially the back and bottom of the limb and along areas of creased skin.
- Report any skin concerns to your rehabilitation team.
- If your shrinker, liner, or prosthetic socket don't fit, let your rehabilitation team know.

Care of the Non-Amputated Limb

If your amputation is due to diabetes or circulation problems, the care of your remaining limb is extremely important to prevent additional amputations. Diabetic neuropathy can make it hard to feel blisters or sores on your limb. Poor circulation, smoking, and uncontrolled diabetes increase the risk of blisters and sores. Regardless of the cause of amputation it is critical to protect your other limb. It's now at risk for overuse wear and tear injuries. It's important to check the health of this limb with your rehabilitation team to keep it strong and in good shape to help you succeed in every-day activities.

What to Do:

- Check your non-amputated foot daily for redness, blisters, or sores, using a mirror or a family member or friend's help.
- Wash and dry your foot properly, especially between your toes.
- Trim your toenails and have a health professional provide regular foot care and monitoring.
- Proper footwear is very important. Never walk barefoot, and ensure your shoes fit properly.
- Ask your team if you would benefit from special insoles or orthotics.
- Embrace your whole health, manage your diabetes and minimize risk factors such as smoking.

Getting Around After Amputation

After your amputation, or sometimes even before, your rehabilitation team will help you learn how to get around and take care of yourself without the use of a prosthesis using your non-amputated leg. For those who have had amputations of both of your legs, your team will help you to learn strategies to get around without the use of legs at all. Your rehabilitation team might call these "non-prosthesis rehabilitation goals," or "single-limb rehabilitation goals."

Why is it important to learn to take care of yourself without a prosthesis?

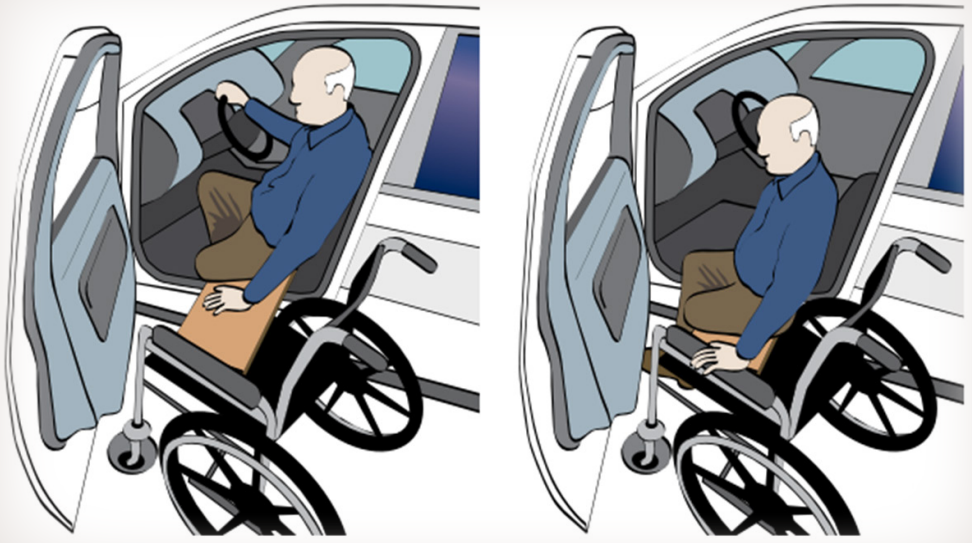
- We want you to be safe during the healing process, to give your residual limb the best chance of healing.
- We want you to be able to return home while you're healing if possible, and to be safe in your home whether or not you end up using a prosthesis.
- Not every person has the strength and ability to use a prosthesis.
- Even people who end up using a prosthesis "all day, every day" will have times when they can't use the prosthesis or are out of the prosthesis at the beginning and end of the day.
- Learning to get around as well as possible without a prosthesis will also make it more likely that you'll be able to benefit from using a prosthesis.

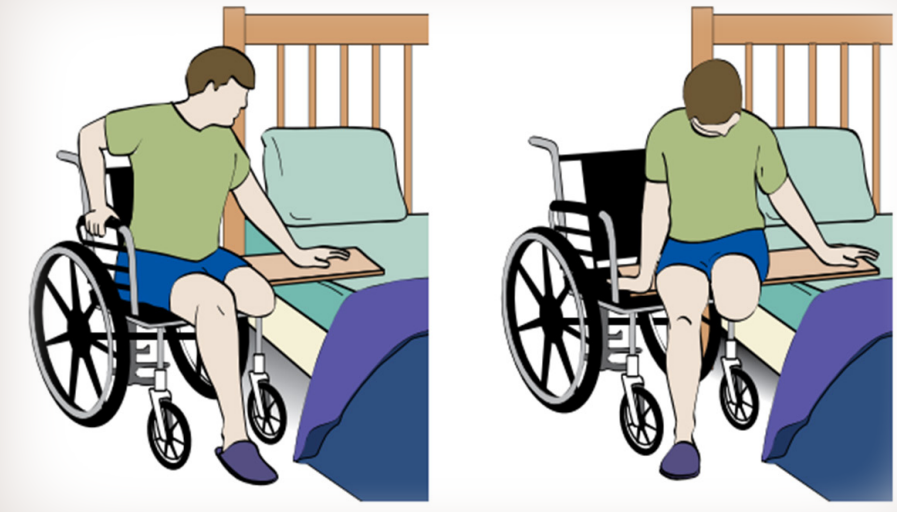
You may need to explain to friends, family, or even some medical team members why it's so important to work on these skills. If you end up using a prosthesis regularly, these skills will be important in case you aren't able to wear your prosthesis at times for some reason. This becomes your "back-up strategy" for how to get around your home and community and take care of yourself. For example, prosthesis users might have to get up at night to go to the bathroom and not have time to put on their prosthesis. Or they might need to take time off from prosthesis use while they are trying to heal a residual limb wound or waiting for some changes to be made to the prosthesis.

Safe Mobility and Self-Care

As you gain strength, you will practice activities, known as transfers, to improve your independence and reduce the risk of falling. Physical and occupational therapists will teach you how to transfer from surfaces such as bed to chair, or chair to toilet, and help with adaptive equipment like a wheelchair or shower bench. Your rehabilitation team will also help you learn new strategies for how to do personal tasks like grooming, bathing, and dressing. Discuss any additional equipment needs, such as grab bars, with your team.

Your rehabilitation team will help you figure out what's safe for you after amputation. For some people, using a wheelchair all or most of the time is the safest way to get around and take care of themselves. Some people may be able to safely go short distances with one leg using a walker or other assistive device. Your therapists will start with basic building block skills like how to move around in bed, sitting steadily on the edge of the bed, and transferring between the bed and wheelchair. If they feel it's safe, they may work on standing up from a seated position and sitting back down again, and more difficult tasks such as standing for a few minutes or even walking with one leg using a walker. Follow the advice of your therapists and don't try to do things that they haven't said you're OK to do on your own.





Safety and Fall Prevention

After a lower leg amputation, falls are common, especially if you forget you are missing a leg or if it is dark. It is important to know how to get up from the floor and call for help if needed. Your therapist can help you with tips to avoid falls and safely get up if you do fall. Make sure your home is safe to reduce the risk of falling.

Household Safety Tips:

- Remove small rugs to prevent slipping.
- Use chairs with arms for easy standing.
- Clear hallways and common areas of clutter.
- Ensure proper lighting in all rooms and use motion-sensor lights for dark areas.
- Keep a cell phone in a pocket or small over shoulder bag in case you need to call someone for help.
- Consider using voice activated devices that can be programmed to call for assistance or help you locate missing items
- Store a flashlight in your nightstand for emergencies.

Bathroom Safety Tips:

- Install grab bars in the tub to help with balance.
- Use a tub bench or seat for easier washing while sitting.
- Use a hand-held showerhead to adjust water temperature while seated.
- Ensure good lighting, especially around the medicine cabinet. A magnifying glass can help identify medications.
- Install an elevated toilet seat with grab bars to make sitting and standing easier.
- Use non-skid mats in areas where water may pool.
- Keep a bedside commode or urinal near your bed.

Equipment Needs

Your rehabilitation team will assess what equipment you need at home and in the community, such as shower chairs or ramps, to make your home safer. Mobility aids like wheelchairs or walkers may be prescribed to help you get around safely. Again, don't try to get around on one leg with a walker or other device unless your therapists have worked on it with you and said you're safe to do it on your own. Trying to get around on one leg can lead to joint or muscle injuries and increase the risk of falling. Always stay aware of your movements to minimize falls and protect your residual limb.

Using assistive devices or technologies can get you out into the community and out of your home so be sure to let your rehabilitation team know of your interests and hobbies. Returning to, or finding new activities, should not be limited because you feel you are not able to get around. Customized wheelchairs, walker, crutches and many other devices are available today and can be prescribed for you by your rehabilitation team.

Blueprint for Fitness

Working with your rehabilitation team

Rehabilitation helps you become as independent as possible. The rehabilitation team will create a program based on your needs and personal goals, helping you improve mobility, strength, and function. They will guide you toward achieving the best possible results with and without a prosthesis and plan ongoing care. Rehabilitation focuses on improving muscles, bones, and joints through range of motion (ROM), strengthening, fitness, and balance. Strengthening programs often focus on your whole body, arms, trunk, other leg, and residual limb. For example, strong arms make transfers, walking with a device, and wheelchair mobility easier, and core muscles give your body stability to participate in enjoyable activities in sitting and standing. Rehabilitation starts as soon as your doctor gives you the go-ahead.

Resting to move better

Having the best possible range of motion (ROM) in your residual limb is key to making everyday mobility easier. When muscles and joints get tight and lose movement, it's called a contracture. This is common for people with above-knee or below-knee amputations who sit for long periods. A contracture makes it hard to fit a prosthesis and may even make it impossible. It can also make walking difficult and sitting or lying uncomfortable. Learning how to prevent contractures will reduce your risk of developing them. Good overall ROM in your other leg will also help you move or walk better, feel less tired, and reduce stress on your joints and back. Preventing tightness in your joints and muscles, building strength, and improving balance are important for walking with or without a prosthesis. Here are the essentials in maintaining good ROM and avoiding contractures.

2.5.2 Prevent Contractures:

Do the Following

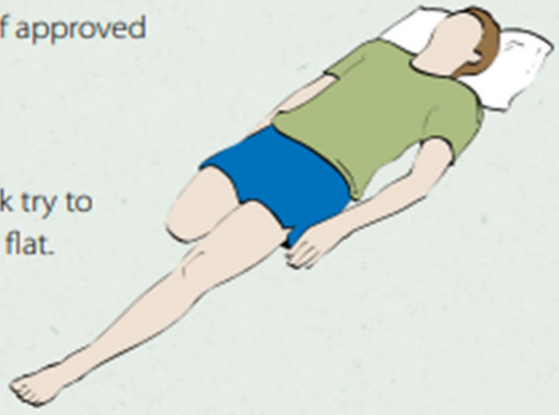
Below-Knee Amputation

- Elevate your residual limb on a well padded board when sitting in a wheelchair

- When you sleep on your back try to keep your legs stretched out flat.

Above-Knee Amputation

- Try to lie flat on your stomach for 15-20 minutes several times a day if approved by your doctor.



- When you sleep on your back try to keep your legs stretched out flat.

Do not do the following

Below-Knee Amputation

- **Do not** sit or lie with your knee bent (flexed) in a chair (including your wheelchair) or on the side of the bed for prolonged periods of time.

- **Do not** place a pillow under your knee- while you are sitting or lying down.

- **Do not** put weight or pressure on the end of your residual limb.

Above Knee Amputation

- **Do not** sit in the bed for long periods of time.

- **Do not** lie in the bed with a pillow under your residual limb.

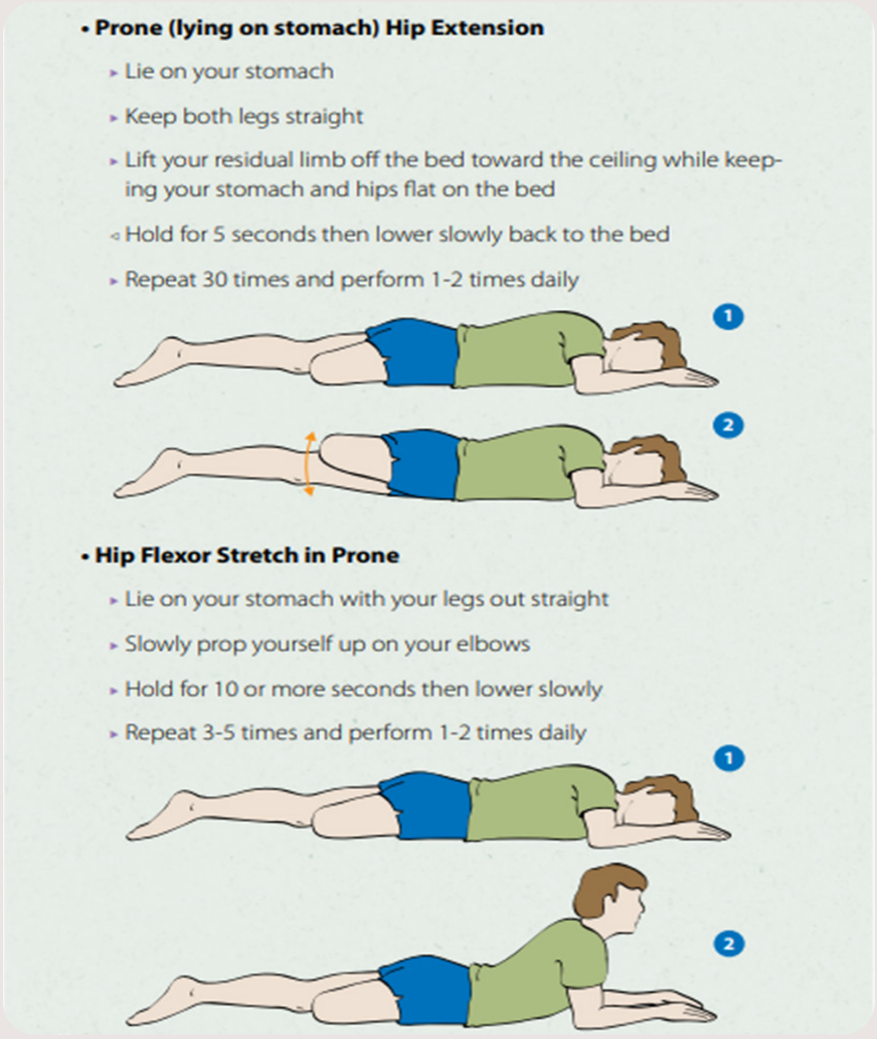
- **Do not** lie on your back pushing the residual limb out to the side (spreading the residual limb).

Strengthening with a Purpose

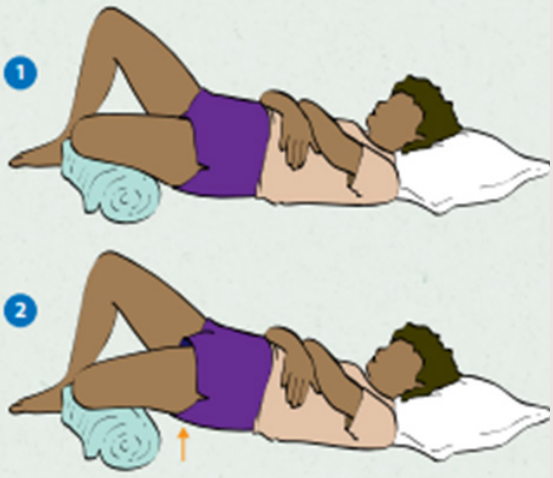
Your team, including your physical and occupational therapists, will tailor your rehabilitation program to meet your specific needs. This may include managing swelling to shape your residual limb, adding exercises to improve your upper-body endurance and even progressing to full body exercises. You'll also work on balance and daily activities. If standing or walking with a prosthesis is a goal for you, strengthening your trunk and residual limb to support your weight through your prosthesis will also be a focus. Your team will discuss and develop a plan for return to activities like driving, recreation, work, and errands. You may face new challenges, and your team will support you in achieving the goals you set with the team to track progress and guide treatment.

What I need to do:

- Staying active in your daily therapy is key to your progress. The more time you put in, the better your results.
- If you experience any pain or have concerns, let your team know right away.
- Complete the exercises on the next pages after your therapist goes over them with you.



- **Bridging**
  - Lie on your back
  - Place a rolled up towel or blanket under your residual limb
  - Bend the non-amputated leg and place your foot on the bed
  - Push down through your legs, lifting your buttocks and hips off of the bed
  - Hold for 5 seconds then slowly lower
  - Repeat 30 times and perform 1-2 times daily



- **Quad Sets (for Below-Knee Amputations)**
  - Lie or sit semi-reclined on a bed
  - Keep your residual limb straight and bend your non-amputated leg so your foot is on the bed
  - Tighten the muscles on the top of your thigh, straightening the knee of your residual limb
  - Hold for 5 seconds then relax
  - Repeat 30 times and perform 1-2 times daily

Physical Rehabilitation After Leaving the Hospital

The goals of rehabilitation start with the healing of your limb, then focus on strengthening your muscles (including those in your residual limb), and finally to improving your overall ability to perform daily activities.

As you progress, your therapist will add more exercises to get you in the best shape possible. These exercises will help you maximize:

- ROM to straighten your hip and knee to stand and walk
- Strength to control bending your knee to move from standing to sitting
- Strength in your glutes and trunk stabilize your body when sitting, standing and walking

Strong muscles and good range of motion can also reduce knee, hip, and low-back pain. Soreness after exercise is normal and may even occur a day or two later, and then it will resolve. You will see benefits if you continue with your program at home and with your therapist.

Cardiovascular

You will work on improving your cardiovascular fitness, including arm endurance. Using a wheelchair, walker, or crutches takes a lot of energy, and even walking with a prosthesis requires effort and that is why it is important to focus on improving your endurance to avoid fatigue.

Balance

Limb loss affects your balance, both when moving and standing still, increasing the risk of falling. Balance training will help you when sitting and reaching and when standing and walking on one leg using an assistive device like crutches or a walker. Developing good balance is important for your independence and daily activities and will boost your confidence.

What I need to do:

- Practice your home exercise program every day to maintain ROM of all joints, to keep your muscles and your core strong.
- Attend all therapy appointments.
- If any exercises are difficult or cause pain, let your therapist know.

Choosing the Right Wheeled Mobility Device

Introduction

If you have a limb amputation, getting around safely and comfortably is important. Everyone can use a wheelchair or another wheeled mobility device to help stay independent some or all of the time, even if you are able to use a prosthesis to walk. There are many types of wheeled mobility devices, and choosing the right one depends on your needs, lifestyle, and daily activities. This will help you understand the options available and how to take care of your device.

Types of Wheeled Mobility Devices

1. Manual Wheelchairs

- These wheelchairs are human powered by your arms or by a caregiver pushing you.
- There are different kinds, including standard, lightweight, and ultralightweight wheelchairs.
- Ultralightweight wheelchairs are customized for people who want to move independently, and they are easier to push and maneuver.
- Some manual wheelchairs have a rigid frame for better performance, while others fold for easy storage.

2. Power Assist Devices

- These are add-ons to a manual wheelchair that provide power or reduce effort needed to push a manual wheelchair.
- They can be more easily stowed than a full power wheelchair or scooter for travel purposes.
- Power assist/add-on are varied and are not well suited to all terrains and user skill levels. Some still require manual braking, hill descent management and wheelchair skills training to address front caster limitations on various terrain and environmental barriers.

3. Power Wheelchairs

- These are electric wheelchairs that run on batteries.
- They are most commonly controlled with a joystick.
- Power wheelchairs can include features like tilting seats, reclining backs, and elevating leg rests for comfort and health needs.

4. Mobility Scooters

- Scooters are another option for people who need help moving around but do not require a full-time wheelchair.
- They have handlebars for steering and are best for people who can still stand or walk short distances.

Choosing the Right Device

Your rehabilitation care team will work with you to determine the best mobility device for you. They will consider the following factors when prescribing you a mobility device.

- **Your strength and endurance** – If pushing a manual wheelchair is tiring, a power wheelchair or power assist device might be a better choice.
- **Your living environment** – If your home set up has a lot of uneven terrain, hills or other obstacles, a proper wheeled mobility device can help you navigate these.
- **Your daily activities** – If you are active and like to play sports, an ultralightweight or sports wheelchair may be appropriate.
- **Your transportation needs** – If you drive or take public transportation, the size of the device and the ability to secure or transport it in a vehicle will need to be considered.

Wheelchair Skills and Training

If you use a wheelchair, learning basic skills can help you stay safe and independent and will help preserve your joints, especially your shoulders, to prevent wear and tear. A physical or occupational therapist or other rehabilitation team member can teach you skills to help you feel more confident using your device, such as:

- Moving forward, backward, and turning
- Going up and down ramps and curbs
- Transferring in and out of the wheelchair safely
- Doing a “wheelie” to get over small obstacles

Taking Care of Your Mobility Device

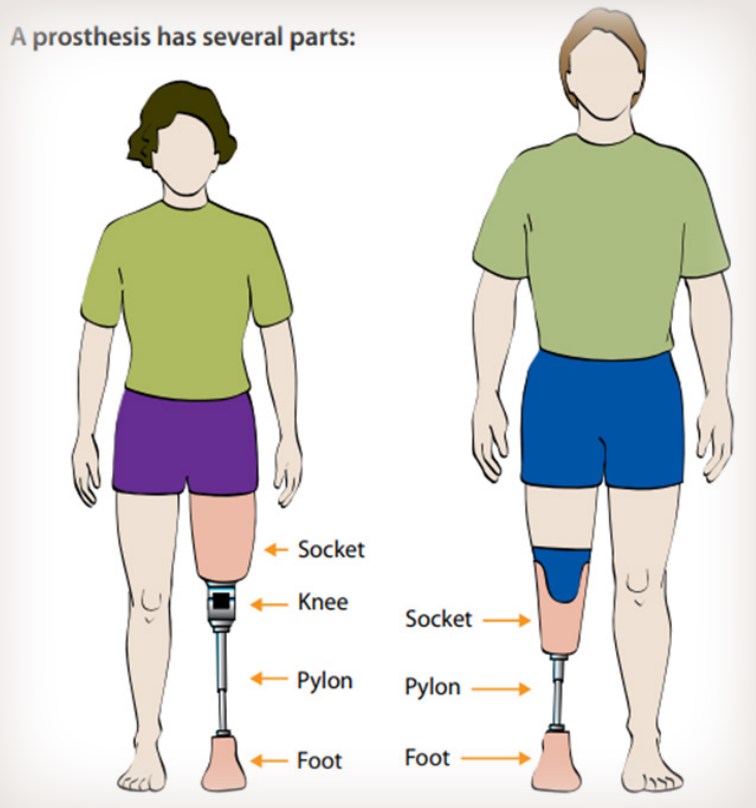
To keep your wheelchair or scooter working well, follow these care tips:

- Check the wheels and tires regularly for wear or damage.
- Keep the brakes or wheel locks working properly for safety.
- Charge the power wheelchair and scooter batteries, as recommended.
- Clean the seat and frame to prevent dirt buildup.
- Schedule regular maintenance with a professional, if needed.

Using a wheeled mobility device can improve your independence and quality of life. Living independently with limb loss may be safer and easier if you use a wheeled mobility to safely perform tasks such as using the bathroom at night, shopping in the grocery store or navigating your favorite metropolis on public transportation. For some people, this can be a great primary way to get around, and for others a wheeled mobility device will compliment walking with a prosthesis. Whether you and your rehabilitation care team choose a manual wheelchair, power wheelchair, or scooter, picking the right device and learning how to use it properly will help you stay active and mobile both in your home and outside in the community. If you need help choosing or adjusting a device, talk to your amputation care provider.

The Parts of the Prosthesis

A **prosthesis**, or artificial limb, is a device custom made for you to replace the part of your leg that was amputated. The intent of a prosthesis is to assist you in safe mobility.



The prosthetic **socket** is the top part of the prosthesis and is the part that comes in contact with your residual limb. It connects your body to the prosthesis and helps transfer your weight to the ground. A well-fitting socket is very important not only for comfort but to ensure success in moving around. It shouldn't be too tight that it cuts off circulation and not too loose that you don't feel like you can control the limb. Your prosthetist will make a model of your residual limb to create a socket that fits perfectly. Some sockets are held in place by liners with pins, suction or other methods for keeping the limb on.

A prosthetic leg is made up of mechanical components that work in place of your limb. A prosthesis assists in functional activities such as standing and walking. For people with above-the-knee amputations, the prosthetic **knee** helps you walk smoother and safer and supports the leg from buckling while standing. There are many different designs of prosthetic knees, and your team will help determine the right knee for you based on your goals.

The lightweight rod connecting your prosthetic foot to the rest of the prosthesis is commonly called a **pylon**. It can be adjusted by your prosthetist based on your height and how you move.

The prosthetic **foot** is at the bottom of the prosthesis. It comes in different designs and will fit into your shoe. Some prosthetic feet have more movement in the foot or at the ankle than others, but all feet will help you maintain safe contact with the ground for support.

Above Knee Amputations: A Different Ballgame

Using an above knee prosthesis is challenging for many reasons. This level of amputation includes the loss of most of the leg including the knee muscles, so it may feel like you are learning to walk again.

Why is using an above knee prosthesis so difficult?

- It doesn't help you stand up.
- You cannot feel your foot or knee, so it takes practice to trust it
- Putting it on may require standing up and balancing on the other leg
- The socket covers the thigh and comes up into the groin
- By design, the socket is uncomfortable
- It may create discomfort sitting in your car or on the toilet
- Walking is much more work for the heart and lungs
- This will increase your risk of falling.

If your goal is to get an above knee prosthesis, talk to your team about developing your rehab plan to increase your strength, improve your balance and maximize your overall fitness.

Fitting the Prosthesis

The key to using a prosthesis successfully is getting the socket to fit correctly and making sure all parts are properly aligned. Fitting and alignment can be tricky and require a skilled prosthetist. It requires cooperation, patience, and good communication between you and your prosthetist. Teamwork is essential. Proper fitting and alignment are important because they affect how well you can walk and how comfortable you feel.

During the fitting process, your prosthetist will teach you how to properly put on and take off your prosthesis, how the components work, how to care for your prosthesis, and they will give you the supplies needed to wear the prosthesis. Once the prosthesis is fitted, your team will refer you to a physical therapist who will teach you safe movement with training on proper standing and walking techniques. Learning to walk with a prosthesis takes many weeks, and sometimes months; with patient and persistence, you'll make steady progress. Stay committed and trust the process.

You will likely receive prosthetic socks to wear with your prosthesis. These socks fit between the socket and your residual limb to improve the fit and function of the prosthesis. Socks can be tricky to get used to at first, but once you learn the varying thicknesses (referred to as "ply") of the socks you will be able to improve the fit of the prosthesis as your limb fluctuates during the day and changes shape and matures over time. Socks usually come in 1 ply, 3ply and 5 ply. Your team members will provide you with socks and explain when to add or remove them. Once you are consistently wearing 8-10 ply of socks, it is important to let your prosthetist know as they may need to adjust the socket to keep it fitting properly.

You may be prescribed a liner which can be made of silicone or another soft material. It is worn directly on your residual limb. It may have a pin, lanyard, or rubber ring for suction for keeping the limb on. Your prosthetist will show you how to put it on and take care of it.

How to get a Prosthesis:

Both VA and DoD approach amputation and prosthetic care with a team of specialists during amputation specialty care clinic appointment. The team will consider several factors to determine if a prosthesis is right for you. These include the level of amputation, the health of your residual limb and other leg, your overall health and fitness, and most importantly, your goals. If a prosthesis isn't suitable, wheeled mobility options are available to support you in moving around independently. The decision may be revisited later, and if things change, a prosthesis might be prescribed in the future.

The VA provides prosthetic services as part of Veterans' healthcare to ensure you get the best care and support. Getting a prosthetic limb at a Veterans Affairs (VA) Medical Center involves getting into Amputation Specialty Clinic. A consult is not required to get into this clinic as the only requirement is having limb loss. The process at Department of Defense (DoD) centers is similar.

Here's an overview of the process:

1. **Initial Appointment**: You will meet with your VA Amputation Specialty Clinic team or DoD Amputation Care team. The team will review your health, assess your amputation, and decide if it is the correct time to consider a prosthetic limb. If you are ready, the team will create a prescription for a limb and help connect you with a prosthetist.

2. **Referral to a Prosthetist:**
   a. **In the VA:** The team will assist you in determining your best options for a prosthesis. Some VA medical centers have prosthetists on staff whereas others work closely with prosthetists in the community.
   b. **In the DoD:** The team will assist you in determining your best options for a prosthesis. Three DOD medical centers (known as Advanced Rehabilitation Centers [ARCs]) have prosthetists on staff whereas others work closely with prosthetists in the community.
3. **Evaluation and Measurements:** The prosthetist will take measurements of your residual limb and discuss your needs. The components of the limb are selected based on your daily activities and goals.
4. **Fitting and Customization:** The prosthetist will create a custom prosthetic limb based on your measurements. They may start with a test socket allowing for adjustments to be made to ensure it fits comfortably and works properly before a permanent prosthesis is created.
5. **Follow-up Appointments:** Your team will see you in clinic for a checkout appointment to be sure the prosthesis is right, and you are ready for training. You will then continue to follow up with the team every few months to be sure it still fits well and works correctly. The prosthetist and physical therapist will work together to make adjustments as you get stronger.
6. **Training:** Once the prosthesis is ready, you will work with a physical therapist to learn how to use the prosthesis. Training includes working on balance, strengthening, walking, and learning how to manage the fit of the limb and care for the prosthesis itself.
7. **Ongoing Care:** The VA Amputation Specialty Clinic team or DoD Amputation Care team will be your team for life and will support you with regular checkups, repairs, and replacements when necessary to keep the prosthesis in good condition. Annual visits to this clinic are important to address any needs you have and to ensure regular maintenance of your limb is provided.

Both VA and DoD are committed to helping you recover and get back to your daily life by providing the support and care needed for your prosthesis.

Caring for your Prosthesis and Residual Limb

- **Wash your residual limb daily** with mild soap and warm water to prevent irritations and infection once the suture line is healed.
- **Wear your shrinker or compressive sock** when you're not wearing your prosthesis, especially in bed.
- **Clean the inside of the socket** by wiping it down with a damp clean cloth. Be sure not to allow pooling of liquids in the socket.
- **Manage your socks** to create the ideal fit with your prosthesis. When the socket is too tight, remove a sock. The residual limb commonly shrinks during the day, so add a sock when it feels loose. It is recommended to add or remove just one-ply at a time.
- **Change prosthetic socks daily** or more often if you sweat a lot. Wash prosthetic socks with warm water and mild soap. Follow the manufacturers recommendations to make them last longer. Talk with your team about replacing socks as they wear or thin out.
- **Avoid wrinkles on prosthetic socks.** Carefully roll socks onto the limb to so they are flat on the skin or liner. Wrinkles can cause skin problems.
- **Dry your shrinker flat**, air dry or blot with a towel, avoid using a dryer.
- **Wash your liners daily** with mild soap and water (no perfumes or dyes). It is important to allow them to dry sticky side facing in and fabric side facing out before putting them on again. This will prevent anything from getting stuck inside the liner.
- **Wear the same shoes** you wore for your fitting session when you start your therapy session as your prosthesis was aligned with these shoes. Talk with your prosthetist about changing shoes when you feel confident in walking.
- **Slowly increase the time you wear your prosthesis**, follow your team's advice on how much to wear your prosthesis, starting with short periods and gradually increasing until you can wear it all day.

Developing good habits in how you care for your residual limb and your prosthesis will help prevent setbacks during your initial rehab and will ensure long term success.

Instructions for Donning and Doffing a Prosthesis

Transtibial (Below-Knee) and Transfemoral (Above-Knee) Prosthesis

Purpose: These instructions provide general guidance on properly donning (putting on) and doffing (taking off) both transtibial (below-knee) and transfemoral (above-knee) prostheses to ensure safety, comfort, and optimal function. There are many different methods to donning and removing a prosthesis, so check with your team to see if these instructions are best for your set up. Always follow any specific instructions from your prosthetist or rehabilitation team member over these general guidelines.

Donning (Putting on) the Prosthesis

Step 1: Prepare the Prosthesis

- Inspect the inside of the socket to ensure the prosthesis is clean and free of any debris or dirt. Remove with your clean hand or a damp cloth.
- Verify that any socks, liners, or other components are clean, smooth, and free of tears.

Step 2: Prepare Your Residual Limb

- Sit comfortably and safely on a chair or bed with your prosthesis within reach.
- If you are wearing a shrinker, remove it now.
- If you use a prosthetic liner, turn the liner completely inside out and place the end of the liner on the end of your residual limb. ***It is important to avoid creating a cup with the liner as this will create an air pocket.***
- Next, roll the liner on, ensuring it is smooth without wrinkles or air pockets.
- If you wear prosthetic socks to improve the fit of your prosthesis, you will apply the sock after rolling the liner on and before sliding your limb into the socket. ***Be sure to check the sock to make sure there aren't any wrinkles as that can cause the socket to not feel comfortable.***

- It is important use a gradual approach and add or remove one ply at a time changing your sock ply gradually. ***For example, you might find that a 5-ply sock is too much but that a 3-ply sock is not enough. This is when you will remove the 5-ply and replace it with a 3-ply sock and a 1-ply sock to achieve a 4-ply sock fit.***

Step 3: Position the Prosthesis

For **transtibial prosthesis:**

- Scoot forward in your seat while still sitting safely in your chair.
- Line up the prosthesis with your residual limb and tip it back onto its heel.
- Gently slide your leg into the socket.

For **transfemoral prosthesis:**

- Scoot forward in your seat while still sitting safely in your chair and shift your weight onto your opposite hip.
- Line up the prosthesis as you were instructed by your team. *Using a landmark on your body and a landmark on your prosthesis may be helpful.*
- Gently position the socket over your residual limb and begin to slide your limb into the socket.

Step 4: Secure the Prosthesis

- **For transtibial prosthesis:** If the socket has a locking mechanism (such as a pin or suction system), engage it to ensure the socket is held in place. You should be able to hear a click (pin-locking) or air rushing out (suction) in addition to feeling the socket around your limb. Secure any sleeves or straps that help secure and keep the prosthesis on. Not all prostheses have sleeves or straps.

- **For transfemoral prosthesis:** If your prosthesis has a locking pin, suction, or lanyard system, ensure it is properly engaged. Listening for a click of the pin or the sound of air rushing out of the valve will let you know that you are putting on the prosthesis properly. Secure any sleeves, straps, or belts around the thigh or hips, ensuring the socket feels snug and comfortable.

Step 5: Stand Up and Check for Comfort

- Stand up carefully to check that the prosthesis feels secure.
- You may hear additional clicks of the pin or a burst of air through a suction valve as your limb moves further down into the socket when you stand.
- Shift your weight on and off the prosthesis gradually before trying to walk.
- Safely and with any needed walking aids, take a few steps, checking for comfort, alignment, and overall responsiveness of the prosthesis.
- If you feel pinching or pain, try removing the prosthesis and going through the steps to put the prosthesis back on before further use.

Doffing (Taking off) the Prosthesis

Step 1: Sit in a Stable Position

- Find a comfortable, stable sitting position, such as on a chair or bench, where you can safely remove your prosthesis.

Step 2: Remove Suspension Sleeves, Loosen Straps

- Roll down your suspension sleeve starting from the top to release any seal that has been formed.
- Loosen and unhook any belts or straps that are securing the prosthesis.

Step 3: Release Locking Mechanisms

- Press the button to release any locking mechanisms (such as a pin, suction, or lanyard) gently to allow the socket to come off.

Step 4: Gently Remove the Prosthesis

- You may need to continue to press the pin or suction release button to comfortably slide out of the prosthesis. *Do not force it off; relax the muscles in your limb to prevent causing any abrasions when removing the limb.*
- **For transtibial prosthesis:** Hold the socket or pylon of the prosthesis and carefully slide your limb out the socket of your prosthesis.
- **For transfemoral prosthesis:** Hold the socket of the prosthesis and gently shift your body weight off your prosthetic side to slide out your residual limb.

Step 5: Inspect the Prosthesis and Your Residual Limb

- After doffing the prosthesis, check your residual limb for any irritation, redness, or sores.
- Use your inspection mirror to check not only what you can see on the front on the limb but also the bottom, back and sides of the limb. *If you see an area of redness, make a note of the area and check back in 10 minutes. If the redness does not go away, call your prosthetist or other team member to discuss improving the fit of the socket.*
- Inspect the prosthesis for any wear, damage, or signs of misalignment.

Step 6: Clean the Prosthesis (if needed)

- Wipe down the prosthesis with a damp cloth or as per instructions from your rehabilitation team or manufacturer.
- Make sure the prosthesis is thoroughly dry before storing it.

Tips for Safe Donning and Doffing

- **Take your time**: Ensure each step is done slowly and carefully to avoid injury.
- **Check for skin health**: After removing the prosthesis, check your residual limb regularly for any signs of skin irritation.
- **Use a mirror**: When adjusting the fit, especially for a transfemoral prosthesis, a mirror can help you ensure proper alignment.
- **Work with your amputation care team**: If you notice discomfort, unusual wear, or fit issues, reach out to your team so they can help troubleshoot what you are seeing and feeling.

By following these instructions, you can safely don and doff both transtibial and transfemoral prostheses, ensuring the best fit and comfort. Regularly checking for any issues with both the prosthesis and your residual limb will help to maintain the effectiveness and comfort of your device.

Be Active, Stay Active: adjusting and expanding your goals

Lifelong Amputation Care

An annual visit with your Amputation Specialty Care team is recommended each year. The intent of the visit is to allow the team an opportunity to complete a comprehensive assessment of your functional abilities and discuss any needs you might have. It is during this visit that you will want to mention to your team any changes in your health, abilities, or goals since they last saw you. Letting your team know about equipment needs or replacing equipment is also important to bring up during this appointment. Wheelchair cushions and tires are two examples of equipment that might need to be replaced through the years due to wear and tear.

During these yearly check-ups, you should talk about your personal and daily life goals so the team can help you reach them. The team can provide advice on how to achieve your goals and may introduce you to new opportunities. Over time, your interests, personal goals, job plans, and family needs will change. That's why It is important to check in on your new goals now and then and discuss them with your family and rehabilitation team.

Being Active

Both the VA and DoD offer recreation and therapeutic arts programs to be active and connected to your community. Whether you are looking to do more or find something new, let your team know you are interested in these types of programs. Your team can help you get instruction, build new skills and even compete. Adaptive sports programs are designed for everyone, no matter your experience level - even if you've never been an athlete before. These activities can be adjusted to fit your needs, and if you decide to participate long-term, your team can assess whether you need special equipment or training.

If you enjoy art, music, dance, drama, or creative writing you may benefit from working with a trained professional through VA or DoD. Your amputation care team can also help determine is you need assistive technology, refer you to programs, or connect you with community opportunities to support your interests.

As you get more involved in sports or activities, you might notice that your prosthesis, wheelchair, or exercise routine needs adjustments to help you perform at your best. Some activities require dynamic balance, strength, and endurance. Your rehabilitation team will support you by adjusting your exercise plan, finding the right equipment, or recommending a prosthesis to help you reach your goals.

Secondary Prosthesis

A secondary prosthesis is like having an extra pair of shoes. While your everyday prosthesis is great for most activities -just like your favorite pair of sneakers- you might need a different prosthesis for certain tasks, just as you would wear work boots for a job, dress shoes for a formal event, and basketball shoes on the court. If you frequently participate in a specific activity, a secondary prosthesis could help you move more comfortably, safely, and efficiently.

Your team can assess your needs and recommend the right option. Some examples include:

- *Secondary Everyday Prosthesis* – A back-up prosthesis that allows you to continue your daily activities if your primary prosthesis is not available.
- *Water Prosthesis* - designed for water-based activities like showering, bathing or spending time at the beach.
- *Activity-Specific Prosthesis* – made for a specific job, sport, or recreational activity that your primary prosthesis may not support. This may include running, dancing, weightlifting, winter sports, or certain work environments.

A cleat doesn't make you a baseball player, but a baseball player needs cleats to play their best. In the same way, a prosthesis doesn't create ability- it simply helps you perform activities you enjoy more effectively and comfortably.

Whole Health and Mitigating Secondary Health Conditions

Whole Health

The VA Whole Health program supports your health and well-being. Whole Health centers around what matters to you, not what is the matter with you. This means your health team will get to know you as a person, before working with you to develop a personalized health plan based on your values, needs, and goals. If you would like to learn more about the Personal Health Inventory Self-Assessments and Personal Health Plans, go to http://www.va.gov/wholehealth/ to see how it can shape your well-being programs and clinical treatments.

Health Risks

Since you have an amputation, you may have an increased risk of developing other complications. These five potential health conditions are being highlighted for your awareness. You can make lifestyle choices to minimize or avoid these risks.

Diabetes and circulatory problems are the most common causes of amputation in the United States. Unfortunately, both diabetes and poor circulation can lead to many more problems and put you at risk of further amputation.

If you have been diagnosed with either of these medical conditions, here are some things to monitor:

- **Organ Health:** Diabetes can affect the brain, heart, kidneys, eyes, blood vessels and nerves. Regularly discuss any changes with your healthcare provider to catch issues early.
- **Heart and Circulation:** Poor circulation may harm your heart muscle putting you at increased risk for heart attacks and heart failure. Because walking with a prosthesis can increase the demand on your heart, these conditions can limit your walking endurance. Some heart conditions also create swelling in your leg and residual limb. Monitor for swelling and notify your healthcare team if swelling is impacting your ability to use a prosthesis.
- **Vison:** Diabetes often leads to vision problems. Vision is a key component your balance, and impaired vision will increase your risk of falling. Regular eye exams are important. Use of walking aids prescribed by your doctor or physical therapist like a cane or walker can help improve your balance. Always follow these experts' guidance for safety.
- **Kidney Function:** Diabetes can impair how your kidneys work. This can lead to fluid imbalance in your body and cause swelling in your limbs. This may complicate your prosthetic fit. If you require dialysis, work with your prosthetist and rehab team to manage these changes. Always adhere to dietary and medication recommendations.
- **Nerve Damage (Neuropathy):** Diabetes can cause nerve damage, reducing sensation in your remaining foot. This increases the risk of unnoticed injuries or temperature-related issues. Proper foot care, wearing well-fitting shoes, and avoiding walking barefoot are essential to prevent complications.

By actively managing these aspects, you can reduce the risk of further complications and improve your overall well-being.

Staying Active

Regular exercise is vital for everyone, especially for people with limb loss. It helps prevent complications associated with a sedentary lifestyle, such as back and hip problems. When walking with or without a prosthesis, using proper technique is crucial to maintain muscle balance and prevent strain on your lower back and other leg. Regular check-ins with your Amputation Specialty Care team can ensure your prosthesis fits well and that your walking and moving correctly in support of your overall health.

Strengthen your muscles and bones. Getting up and being active helps maintain strong bones and muscles. After amputation, some muscles may not be used as much, leading to weakness. Similarly, bones that are not regularly supporting body weight or being exercised can become brittle. Engaging in regular exercise with proper technique can prevent these issues. Your Amputation Specialty Care team, including your physical therapist, can guide you in developing a safe and effective exercise plan.

Manage your weight. Combining consistent exercise with a balanced diet makes weight management more achievable. Maintaining a steady and healthy weight reduces risk of heart problems, diabetes, and back pain. It also ensures your prosthesis fits comfortably, as weight fluctuations of even a few pounds can impact the way your limb fits in your prosthesis. Did you know foods with high salt content can cause swelling in your residual limb? Consult your healthcare team for a personalized healthy eating and exercise plan.

Embrace a healthy lifestyle. A healthy lifestyle enhances your overall well-being. Regular exercise can improve sleep, lower blood pressure and boost your mood! It may even reduce phantom limb pain. Your Amputation Specialty Care team is here to support you in setting and achieving your health goals. Ask your team to connect you with local programs and experts that can help.

Remember, staying active is the key to leading a health and fulfilling life. Your dedication to making smart health choices empowers you to overcome challenges and thrive.

Sex & Intimacy

Connecting with others is an important part of health and happiness. After an amputation, you may have concerns about intimacy and sexual relationships. Your Amputation Specialty Care team is here to support you through these changes.

Intimacy isn't just about sex; it's about sharing moments that make both you and your partner feel valued and connected. This can include holding hands, cuddling, or giving a back rub. Sharing time in a relaxing and fun environment nurtures intimacy as well as sexual activity.

Many people notice changes in their sexual activity, and recent research found people living with limb loss report sexual activity increasing over time, with 9% engaging at 6 weeks, 18% at 4 months and 24% at 12 months. It's normal for these changes to happen, and open communication with your partner can help navigate this new chapter together.

Just like any part of the rehabilitation process it is helpful to set goals. Short term goals focusing on intimacy and pleasure and creating a relaxing environment that nurtures closeness, is a great start. Over time, you might set goals related to sexual performance, like achieving an erection or orgasm. Remember, it's okay to take things at your own pace and adjust as needed.

Communicating with your partner and care team, talking openly about your feelings and needs, and concerns are crucial. Between you and your partner, this will strengthen your bond and help both of you understand each other's comfort levels and desires. Additionally, discussing any worries with your Amputation Specialty Care team can provide you with tailored advice and support.

When you reach a level of comfort the exploration of ways to meet your needs is vast. External assistance such as sex toys, genital lubrication, and medication can all assist with enhancing pleasure. Understanding and appreciating the benefits of intimate relationships can maintain healthy relationships, decrease stress, and improve quality of life living with limb loss.

Tips for Maintaining Intimacy:

- **Be Patient with Yourself:** Adjusting takes time. Give yourself grace as you explore ways to connect.
- **Explore New Ways to Connect:** Simple gestures like positive affirmations, flirting, practicing gratitude working on projects together, or going on dates can enhance your bond.
- **Prioritize Safety and Comfort:** Ensure that any new activities or positions are safe and comfortable for both you and your partner.

Remember:

- **Open Communication:** Discuss your feelings with your partner.
- **Adjust As Needed:** It's normal to make changes in your approach.
- **Maintain Connection:** Engage in activities that foster closeness and understanding with your partner.
- **Questions Are Normal:** You Amputation Care Specialty team is a resource for you.

Embracing these changes with patience and Open communication can lead to a fulfilling and connected relationship post-amputation. Your Amputation Specialty Care team is here to support you along the way.

Resources

- Resources
- Glossary

The following pages provide resources for the limb loss community. You are encouraged to explore the support tools listed here or perform your own search to find more resources that match your needs and interests. The following information offers a starting point for helping you get involved. Please note that over time some website links may change. An internet search of the organization's name should connect you.

Department of Veterans Affairs

Amputation System of Care https://www.rehab.va.gov/asoc/

The Amputation System of Care (ASoC) provides specialized expertise in amputation rehabilitation incorporating the latest practices in medical rehabilitation management, rehabilitation therapies, and advances in prosthetic technology. It is a system of care designed to provide Veterans access to the full continuum of care.

Orthotic, Prosthetic & Pedorthic Clinical Services https://www.prosthetics.va.gov/PROSTHETICS/OPPCS/

VA's Orthotic, Prosthetic & Pedorthic Clinical Services (OPPCS) provides orthotic, prosthetic and pedorthic devices for Veterans across. The top priority of VA OPPCS is to facilitate Veteran access to, and services for, the most appropriate commercially available O&P technology to optimize each served Veteran's physical well-being.

National Veterans Sports Programs and Special Events https://department.va.gov/veteran-sports/OPPCS/

Many opportunities exist for Veterans to engage in health and healing through adaptive sports and therapeutic art programs. Specialized rehabilitation can optimize your independence, community engagement, well-being, and quality of life...and it's fun.

Rehabilitation and Prosthetic Services https://www.prosthetics.va.gov/OPPCS/

VA's Rehabilitation and Prosthetic Services is responsible for the national policies and programs for medical rehabilitation, prosthetic and sensory aids services that promote the health, independence and quality of life for Veterans with disabilities.

This includes providing limbs and equipment, home modifications, and many other services.

Information Available on Rehabilitation and Prosthetic Services Programs

- Automobile Adaptive Equipment (AAE) Program: https://www.prosthetics.va.gov/psas/AAE.asp
- Assistive Technology Program: https://www.rehab.va.gov/AssistiveTechnology/index.asp
- Clothing Allowance: https://www.rehab.va.gov/PROSTHETICS/psas/Clothing_Allowance.asp
- Driver Training Program: https://www.rehab.va.gov/PROSTHETICS/factsheet/Driver-Training-FactSheet.pdf
- Home Improvements / Structural Alterations (HISA) benefit: https://www.prosthetics.va.gov/psas/hisa2.asp
- Disability Housing Grants for Veterans: https://www.va.gov/housing-assistance/disability-housing-grants/
- Prosthetic and Sensory Aids Service and Guide Dogs Veterinary Health Insurance Benefit: https://www.prosthetics.va.gov/serviceandguidedogs.asp
- Caregiver Support Program https://www.caregiver.va.gov

Caregivers play an important role in the health and well-being of Veterans. The Caregiver Support Program offers training, educational resources, and multiple tools to help you succeed. Please contact the Caregiver Support Line 1(855)260-3274 for advice on being a caregiver.

Dial 988 and Press 1 or text 838255

Veterans Crisis Line www.veteranscrisisline.net

You are not alone. The Veterans Crisis Line is free and confidential. When you call, chat, or text, a qualified responder will listen and help. You decide how much information to share. Support doesn't end with your conversation. Responders can connect you with the resources you need.

Department of Defense

DOD Amputation and Prosthetics Clearinghouse
https://health.mil/Military-Health-Topics/Centers-of-Excellence/EACE/DOD-Amputation-Prosthetics-Clearinghouse

Extremity Trauma and Amputation Center of Excellence (EACE)
https://health.mil/EACE

TRICARE, Prosthetic Devices and Supplies
https://tricare.mil/CoveredServices/IsItCovered/ProstheticDevicesSupplies

Computer/Electronic Accommodations Program (CAP)
http://www.cap.mil/wsm/

Military One Source
https://www.militaryonesource.mil/

Community Resources

Amputee Coalition
http://www.amputee-coalition.org

Largest non-government organization advocating for amputees offering books, DVD/videos, and conferences providing support and information. $30/year membership. Included in membership is the monthly magazine called inMotion, as well a detailed guide for amputees called First Step. Highly recommended. 1-888-267-5669.

Glossary of Terms

- **Adaptive Equipment**: Any equipment that helps you to walk or move around safely such as grab bars in the shower
- **ADL**: Activities of daily living.
- **Ankle disarticulation**: amputation at the level of the ankle where the bones of the foot are removed and the heel pad remains in place for cushion at the end of the lower leg bones (tibia and fibula), also known as Symes.
- **AK**: Above knee amputation, also known as transfemoral.
- **Alignment**: The socket is attached to the prosthesis at certain angles. These angles need to be adjusted by your prosthetist and are determined by the position and anatomy of your limb, how you walk, and the characteristics of the artificial foot and or knee.
- **Ambulation**: Walking
- **Assistive device**: Any equipment that helps you walk or helps you with activities of daily living such as a walker, a shower chair or a cane
- **Bilateral**: Missing two limbs
- **Biofeedback**: A form of meditative training to control your body's reactions to feelings like pain, anxiety and stress
- **BK**: Below knee amputation, also known as transtibial.
- **Check socket**: Clear plastic socket made first to see if the socket fits properly
- **Components**: The term used for the different parts that make up your prosthesis
- **Contracture**: Tightening of muscles and joints, limiting motion around a joint (usually in your knee or hip)
- **Contralateral limb**: The unaffected or remaining limb
- **Desensitization**: Reducing sensitivity of limb by massage or other means
- **Distal end**: End of stump
- **Donning and doffing**: Putting on and taking off a prosthesis
- **Edema**: Accumulation of excess fluid or swelling in body tissues
- **Femur**: The thigh bone
- **Fibula**: The thinner support bone next to the tibia in your lower leg
- **Flexible inner socket**: Flexible plastic sometimes used inside the socket, which can sometimes provide additional comfort
- **Gait training**: Learning to walk with help of the therapist and/or prosthetist

Glossary of Terms

- **Gel Liner**: Silicone type gel sock that goes next to your skin for protection. There are many types and thicknesses.
- **Hard socket**: A socket made of hard materials only, if used with a flexible socket, the flexible socket sits within the hard socket
- **HD**: Hip disarticulation, amputation of the hip
- **Ischium or ischial tuberosity**: The bone you sit on
- **KD**: Knee disarticulation, amputation through the knee
- **KT**: Kinesiotherapist, a member of the team providing restorative therapies
- **Laminated**: Type of socket is made from carbon fiber, fiberglass and resin
- **Lateral**: To the side away from the body
- **Limb protector**: a dressing that provides support and protection of the limb after surgery, not used everywhere
- **Medial**: Toward the middle of the body
- **Mirror imaging**: A technique that is specifically used to help with phantom limb pain.
- **Muscle atrophy**: Diminishing size and strength of muscles
- **OT**: Occupational therapist
- **Orthotist**: A patient care practitioner who makes or fits a wide variety of bracing devices
- **Osseointegration**: bone anchored metal implant
- **Partial foot amputation**: removal of one or more toes or bones of the foot
- **Peer support**: A trained amputee talking to another amputee before or after amputation
- **Phantom limb pain**: Painful sensations in the part of the limb that is no longer present
- **Phantom limb sensation**: Sensations in the limb that is still present
- **Physiatrist**: Doctor who specializes in rehabilitation
- **Pistoning**: The movement up and down in your socket. This will happen when the fit or suspension is not adequate.
- **Plantar flexion**: To point the foot down
- **Proprioception**: The awareness of the position of your body

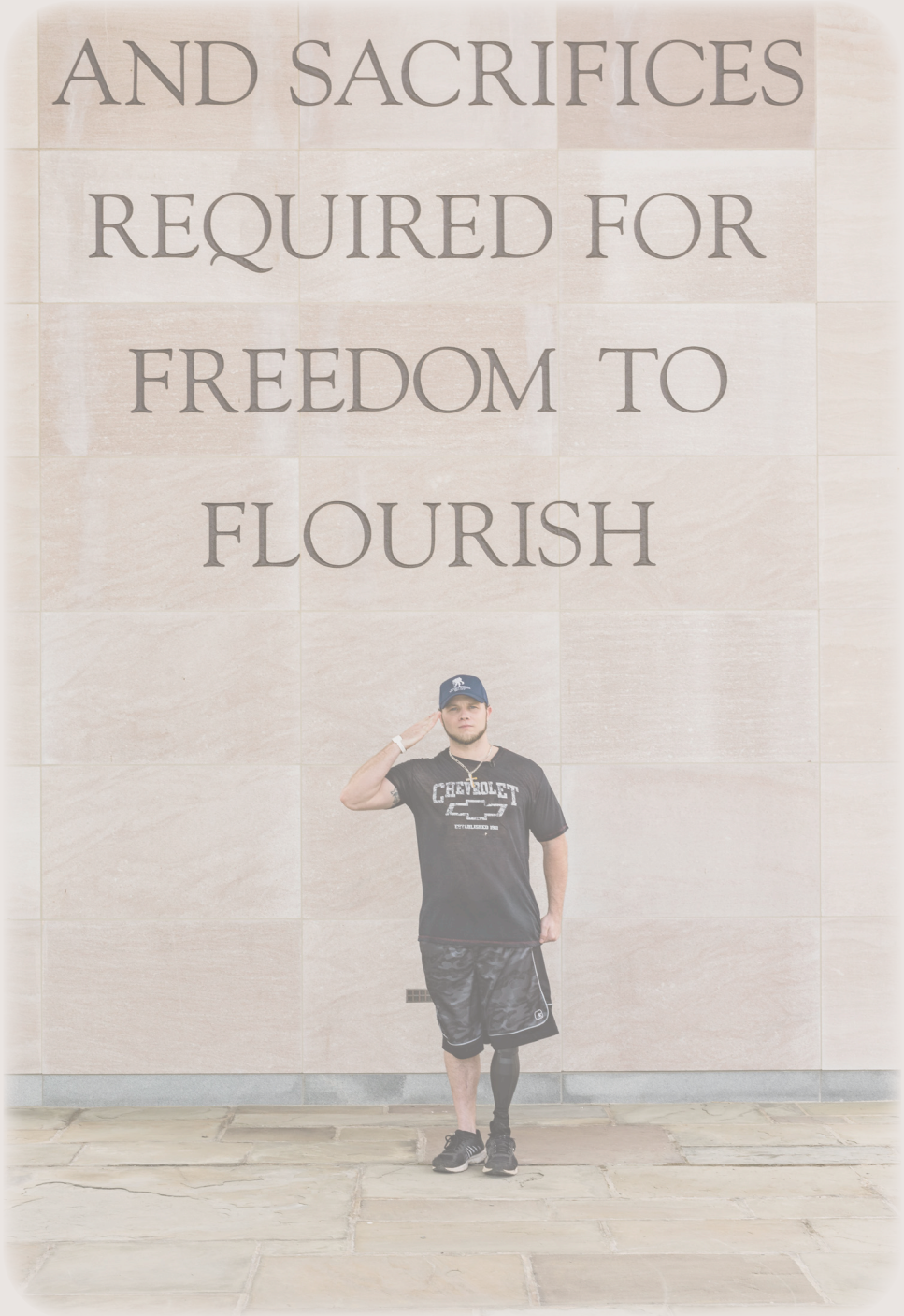
Glossary of Terms

- **Prosthetist**: pronounced “pross tha tist” The one who makes your artificial limb. Note: The prosthetist is not a doctor but frequently and increasingly has a 4- year college degree in prosthetics or a related field.
- **Prosthesis**: (noun) pronounced “pross thee’ siss” (“This pronounced as in the word “thing.”) This is the artificial limb
- **Prostheses**: pronounced “pros thee’ seez.” The plural of prosthesis.
- **Prosthetic**: (adjective) pronounced “pross thet tic” [For example, prosthetic department, a prosthetic knee, prosthetic foot. Your artificial limb is not a prosthetic; it is a prosthesis.]
- **Prosthetic socks**: Socks that go over your limb. These come in different thicknesses (ply). The higher the ply, the thicker the sock—usually 1-2 ply, 3 ply, and 5 ply.
- **PT**: Physical therapist
- **Pylon**: The “pipe” that goes between the foot and the socket
- **Residual limb (also residuum)**: Technical term for the part of your limb that is remaining, also known as the stump
- **Revision surgery**: Surgery to modify the residual limb
- **Rigid Compression Dressing**: dressing made from casting and placed on the limb immediately after surgery; not used everywhere
- **ROM**: “Range of motion.” These are exercises materials to improve flexibility and prevent contractures
- **Shrinkers**: Elastic stockings meant to reduce the swelling or “edema” in your limb
- **Socket**: The part of the prosthesis custom made to contain your residual limb attaching the prosthesis to your body
- **Stump**: The more common name for the part of the limb that is remaining
- **Suspension**: The method used to keep the socket on your limb
- **Symes**: Amputation at the ankle joint, also known as an ankle disarticulation
- **Tapping**: A technique to decrease the sensitive feelings in a residual limb
- **Tibia**: The support bone (shin bone) next to the fibula in your lower leg
- **Transfemoral amputation**: An amputation above the knee
- **Transtibial amputation**: An amputation below the knee

Appendix

Bone Anchored Prosthesis

Osseointegration, also known as OI, is a surgical procedure where a metal device is implanted into the bone of the residual limb. The metal anchor in the bone extends through the skin where it attaches to the prosthesis. Where OI prevents the need for a prosthetic socket, it is not for everyone. The risks and benefits of OI should be discussed with the health care team along with a thorough evaluation and workup to determine if you are a candidate for the surgery and appropriate for the extensive rehabilitation program.



For additional information, visit:
https://www.healthquality.va.gov/guidelines/Rehab/amp/
Scan the QR Code with your smart device to read the Patient Summary of the 2025 VA/DoD Clinical Practice Guideline for Lower Limb Amputation Rehabilitation.