

Treatment for Compartment Syndrome

This handout explains what Compartment Syndrome is and what you can expect.

What is Compartment Syndrome?

Compartment syndrome happens when there is an increased amount of pressure in one of the four compartments in your lower leg. The increased pressure squeezes the nerves and vessels causing decreased blood flow in the lower leg. As a result, less oxygen gets to the muscles and causes pain. While it most often occurs in the calf, it may also occur in the foot, thigh, or hand.

Types of Compartment Syndrome

Acute Compartment Syndrome (ACS)	Chronic Exertional Compartment Syndrome (CECS).
<ul style="list-style-type: none"> • Often caused by trauma. • Creates sudden swelling and pain in the lower leg. • The pressures in your lower leg rise fast. It squeezes your nerves and vessels. • Skin may look black and blue. • This is a medical emergency. 	<ul style="list-style-type: none"> • Caused by rising pressures in your lower leg. • Linked to pain with exercise. • Cramping, burning, pain, tightness or aching. • Numbness or tingling to your lower leg with exercise. • Symptoms start after a certain amount of time, distance or force of exertion. • Symptoms get worse the longer you exercise. • Symptoms stop when the activity is stopped. • Severe tightness of the limb to touch.

What are the tests for Compartment Syndrome?

If you think you have ACS, you should go to nearest emergency room for tests.

Some of the tests for CECS include:

- **Popliteal Entrapment Study.** An imaging study that looks for narrowing of the vessel behind your knee. A narrowed vessel limits blood flow to your calf muscles.
- **Ankle Brachial Index (ABI).** This measures the blood pressure in the vessels of your arms and ankles. You will be asked to point and flex your feet. Blood pressures are taken in each position.

- **Compartment Pressure Measurement.** A needle is placed in your leg to measure the pressure in a compartment. This test is done at rest. It may be done again after exercise so we can compare the pressures.
- **Watching You Walk.** A physical therapist will watch how you walk to see if it causes symptoms.
- **Magnetic Resonance Imaging (MRI).** A strong magnet, radio signal, and a computer takes pictures of your organs and vessels. It looks for defects such as scarring, tumors, etc.
- **Venous Ultrasound.** This imaging study uses sound waves to create pictures of your veins and valves. It may show blockages or faulty valves which could be the cause of your symptoms.

What is the treatment for Compartment Syndrome?

Acute Compartment Syndrome (ACS) should be referred to the emergency department for further evaluation and possible surgery.

Treatment for Chronic Exertional Compartment Syndrome (CECS) is based on your symptoms and test results. Physical therapy is often the first treatment. A walking test may help determine if shoe insert(s) or extra support would help. There is a chance that you may need surgery. Compartment Release (or fasciectomy) is a surgery done to open the compartments of the lower leg. This makes space for the tissues to expand.

What can I expect before Compartment Release surgery?

A vascular surgery NP/PA will answer your questions during your pre-op visit. You will not be able to eat or drink for at least 6 hours before surgery.

What can I expect during surgery?

Surgery may include removing part of the tissue. This helps to relieve the pressure on your vessels. You may also have drains placed. The incision is closed with sutures under the skin. Small pieces of tape called Steri-Strips are put over the incision, followed by a bandage. This needs to stay on your leg until your first post-op visit.

What can I expect after surgery?

- Your leg(s) will be sore and swollen. It is common to have some pain or discomfort after surgery. We prescribe pain medicine if you need them. Severe pain not helped by ice, rest, elevation, and pain medicine is uncommon. Call your doctor if this happens.
- Most patients can go home on the day of surgery or next day.
- You may have a drain in your incision. If you do, your nurses will show you how to care for it.
- You will need to use crutches for the first few days. A physical therapist will show you how to walk with crutches.
- Do not drive if you are taking prescription pain pills.
- It is very important to follow up with our Vascular Surgery Clinic team. They watch your progress.
- You will have several visits with physical therapy. They help you gain strength back and return to your normal activities.

Follow-Up

You will be seen at the Vascular Surgery Clinic at UW Health West Clinic on Junction Road after your surgery at*:

- 2 days
- 5-7 days
- 2 weeks
- 4-6 weeks
- You should see your surgeon at 12 weeks to be cleared.

***Note:** If you live out-of-state, please see the next section about follow-up care.

When to Call

Call your doctor if you have:

- Redness and/or warmth at the incision site.
- Foul-smelling or pus-like drainage (green or yellow) from the incisions.
- A fever of more than 101.5 degrees by mouth for 2 readings 4 hours apart.
- A sudden increase in pain that is not controlled by your pain medicine.
- Bleeding or drainage along with pain and swelling.
- New symptoms that affect your daily routine.

Follow Up If You Live Out-of-State

Plan to stay in town for at least 1 week after surgery. This will allow you to be seen twice at our Vascular Surgery Clinic. We will help to set up visits with your local physical therapist and work closely with them to watch your progress.

If you have any questions or concerns once you are at home, please call the Vascular Surgery Clinic at 608-263-8915.

Care After Compartment Release Surgery

After surgery, it is important that you watch for pain and swelling. This is very important. If you have either of these, you are doing too much. You are not ready to move onto the next step.

Days 1-3 After Surgery

- Keep the bandage and ACE wrap on until your first visit with Vascular Surgery. The ACE wrap should be wrapped snugly. You should feel support on your leg. It should not cause swelling or pain in your foot. If it feels too tight or too loose, re-wrap the ACE bandage.
- Wrap the ACE snugly, starting at the bottom of your toes up to your knee.
- You may have a dressing called a Profore boot. This helps with swelling.
- Decrease your activity. Use crutches when you move around.
- Keep your legs up when at rest.
- Ice surgical area 6-8 times per day for 20-30 minutes at a time.
- Do not drive.
- Do not shower until you have had your first visit with Vascular Surgery.
- Strip drains as you were taught.
- 48 hours after surgery, you can start range of motion exercises.

Range of Motion Exercises	Tips When Taking a Shower
<ul style="list-style-type: none"> • Move the top of your foot toward your leg, stretching the back of the leg. • Move the top of your foot away from your leg, relaxing the back of the leg and stretching the front of the leg. • Move your toes and foot outward at the ankle (away from the center of your body). • Move your toes and feet toward each other at the ankles. 	<ul style="list-style-type: none"> • Take off dressing to shower. • Take short showers. • Pat the incisions dry. • Do not take off the strips of tape over the incisions. You may cut off the edges of the tape if they peel up. • Do not use ointments, creams, or powders on the incisions. • Rewrap your legs with the ACE wrap after your shower. • Do not shower with a Profore boot or with a drain in place. • Do not take baths until the incision is fully healed.

Weeks 1-2 After Surgery

- Continue to wrap your leg(s) daily with the ACE wrap.
- Slowly increase your activity. Use crutches when you walk.
- Avoid activities that cause pain or swelling. No impact, strenuous or repetitive activity.
- Keep your legs up when at rest.
- Ice the surgical area 4-6 times per day for 20-30 minutes at a time.
- Do not drive.
- You may start range of motion activities. This may include a few quad sets, leg lifts, calf pumps, but NO reps.

Weeks 3-4 After Surgery

- Wear compression socks if you can or wrap your leg daily with an ACE wrap.
- Increase walking and gentle exercises to help you stretch/strengthen your leg. You may also start doing light no-load stationary biking, treadmill or track walking. You can walk in a pool if your incision is fully healed.
- Avoid activities that cause pain or swelling. No impact, strenuous or repetitive activity.
- Keep your legs up when at rest.
- Ice the surgical area after exercise.
- Start physical therapy.
- You may start scar tissue massage. Do this by rubbing baby oil or lotion onto the incisions. This helps prevent scar tissue from forming. You can ask your physical therapist for tips on how to do this.

Weeks 5-7 After Surgery

- Continue to wear compression socks daily.
- Increase walking as well as gentle exercises to help stretch/strengthen your leg. You may start light impact and more strenuous exercising. **Do not run.** You can use a stationary bike, treadmill for walking, and elliptical trainer as tolerated. You can also swim or walk in the pool with short flippers if your incision is fully healed.
- Avoid activities that cause pain or swelling.
- Ice the surgical area after exercise.
- Continue to work with physical therapy. Work on scar massage.

Weeks 8-12 After Surgery

- Continue to wear compression socks daily.
- You may start light running. Advance as tolerated.
- Avoid pain with activities. You may advance as tolerated with impact, strenuous and repetitive exercises.
- Continue to work with physical therapy.
- Get clearance from your surgeon before returning to normal sport and work activities.

Phone Numbers

Vascular Surgery Clinic at **(608) 263-8915** from 8:00 am to 5:00 pm Monday through Friday.

After 5 pm, please call **(608) 263-6400** and ask for the “vascular surgery doctor on call.” Give your name and phone number with area code. The doctor will call you back. If you live out of the area, call **1-800-323-8942**.

If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 9/2018 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#8061.