

Sean Mulvaney, M.D.

About Lipogems (Micro-fragmented Adipose)

Lipogems is used in musculoskeletal medicine to focus your body's ability to heal. It has many well-done published studies which demonstrate both its effectiveness and safety in many musculoskeletal conditions, including osteoarthritis and tendinopathies.

Lipogems is an FDA approved process for preparing adipose and has been in clinical use for 10 years and over 25,000 cases. Adipose (fat) is an excellent source of mesenchymal stem cells, vascular cells called pericytes and structural collagen fibers referred to as a matrix. These cells start and support the body's own repair process. These cells bind to the injury site and release hundreds of chemical messengers which repair the damaged tissue.

What to expect and how to prepare for a Lipogems procedure

- **2 weeks prior to the procedure:** Depending on the procedure, you may need to arrange for a driver to bring you home. IF you are having a lower extremity procedure, and IF you will not be able to manage using crutches, arrange for a wheelchair rental for 3 days (the day of and 2 days after your procedure). (Wheelchair rental available at Annapolis Healthcare Supplies, (40 dollars for 2-3 days), 410 295-7300.) We can provide crutches as needed.
- *This procedure cannot be done if you are currently taking anticoagulation (anti-blood clot) medication.* Ask your prescribing physician if you are safe to briefly stop these medications to have an SGB. Have him/her fax a note to our office stating your anticoagulation can be temporarily stopped and restarted the day after the procedure. (fax 410-505-0531)
- **5 days prior to the procedure:** Stop taking anti-inflammatory drugs like ibuprofen, Naprosyn, Celebrex, etc. Anti-inflammatory drugs and corticosteroids such as prednisone can blunt or stop this process, so it is important to not take any anti-inflammatory drugs for 5 days before getting Lipogems therapy, or for at least three weeks after Lipogems therapy.
- **The day before the procedure:** Thoroughly shower and clean your skin. You will not be able to shower for 24 hours after the procedure.
- **The day of the procedure:** If you are having an upper body procedure wear a top that can button or zip up.

What happens during the Lipogems procedure?

Lipogems is created using your own adipose tissue (fat). First, we will do a small liposuction to get some of your fat. This is a minor surgical procedure done with sterile technique. We usually get good quality adipose from the upper buttock area, but other areas, such as the abdomen, may be used. You will lay face down on a comfortable body pillow, your skin over the liposuction area will be cleaned with a surgical skin cleaner (Chloroprep) and then the area will be draped with surgical drapes. The collection sites will be marked with a surgical marking pen, and local anesthetic will be injected at two skin entry sites. Then a tumescent solution of saline, lidocaine and a small amount of epinephrine is injected with a blunt cannula into the fat below the skin. This solution helps break up the fat, numbs the area and minimizes any bleeding under

the skin. After the solution has set for at least 12 minutes and the area is numb, an adipose collection cannula is inserted under the skin and the adipose is gently aspirated (withdrawn). This is usually a comfortable process, but you may feel an occasional pinch during the aspiration. The liposuction harvests a small amount of adipose, usually about 200 milliliters or less, (for comparison, a 12-ounce soda can is 355 milliliters). I do my best to leave a cosmetically pleasing and balanced aspiration site. Rarely there may be some small dimpling in the skin which will even out naturally over the next six months. The aspirated fat is then processed using the proprietary Lipogems system, which gently washes the adipose with saline to remove the inflammatory oils while filtering and exposing the mesenchymal stem cells and pericytes in the adipose so they can best facilitate injury repair. The skin at the injection sites is numbed with a small needle and local anesthetic. Dr. Mulvaney will then precisely inject the Lipogems into the injury sites using ultrasound or fluoroscopic guidance.

What to do after your procedure

- I will give you specific medicine to control any discomfort you may have after the procedure. Avoid NSAIDs like ibuprofen but acetaminophen can be used for mild pain. Let me know if you have a history of opioid addiction so we can use appropriate pain medication.
- You will have an elastic bandage around the fat aspiration site to help reduce bruising; this should stay on for one full day. This elastic dressing can be safely removed and replaced if you need to take it off to change clothes.
- Avoid showering for 1 day and avoid immersion in water for 3 days. Any bandages can be removed after 1 day. You will be given a bag with new dressings so you can change them if they get wet. The tumescent solution may leak out of the small incision for a day or two, if this happens just change the dressings as needed.
- Depending on the part of the body treated, you may be placed in a sling or on crutches for 1 to 3 days. Do your best not to tense or load the treated area during this time as it may displace the Lipogems from the injury site.
- After 3 days, unless otherwise instructed, the treated body part should be used and slowly moved through its full range of motion. It will be sore, but you will not be doing damage by moving it, in fact it needs to move to heal. Refer to the rehabilitation instructions for the treated body part found on drseanmulvaney.com.
- For the next month, avoid activities that specifically hurt you before being treated. Exercise is vital to good health and finding a way to cross train around your injury is important not only for your physical health, but also for your mental health. Ask me about cross training options for your injury.
- Some brief (10 minutes or less) period of heat or ice therapy will not hurt the therapy, but it is not required.
- Usually, depending on the initial injury, physical therapy is started from two weeks to four weeks after injection.
- Improvements in pain and function should be expected from 12 weeks to 16 weeks after injection.