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Before, During, and After Surgery

o you're giving serious consideration to micrograft transplant surgery. This chapter explains how to best prepare for a follicular unit micrograft transplant procedure, what it will be like during surgery, and what to expect after the procedure is completed.

The first step after scheduling a procedure is to stop smoking if you are a smoker. Also avoid non-prescription blood-thinning medications and food supplements that may cause excessive bleeding during surgery. A thousand or more tiny incisions are made on the scalp during micrografting surgery, and rapid blood clotting keeps the scalp relatively free of blood during the procedure; this allows the surgeon to work more effectively. Some medications are used during surgery to slightly reduce bleeding; however, it is helpful if the patient takes some additional measures as well. Smoking thins the blood, and certain over-the-counter medications such as aspirin and vitamin supplements such as vitamin E also reduce blood clotting, which can result in extra bleeding during surgery. Excessive bleeding during micrografting does not present a significant medical risk; however, it does slow down the procedure. Avoid aspirin and vitamin E supplements for at least two weeks prior to the surgery.

After scheduling the appointment, prescription medications including pills for pain and antibiotics will be prescribed for use after the surgery. It is best fill to the prescriptions before the scheduled surgery, as you may not feel like waiting in a pharmacy after surgery.

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On the day before surgery it is courteous to call the doctor's office or leave a message and confirm your appointment.

The morning of the procedure, shower and wash your hair, but do not use any conditioners or styling products. Use a shampoo without conditioner if possible. If you plan to pay for your surgery with a check, be sure to bring your checkbook. Generally it is good to eat a light meal prior to surgery so that medications provided just before surgery are not taken on an empty stomach, unless advised otherwise by your doctor. Fruit such as grapes, bananas, or apples are good choices. Avoid drinking excessive quantities of liquids, and avoid stimulants such as caffeine and nicotine.

Select layers of comfortable clothes for the surgery. Loose-fitting pants, and shirts with buttons that do not pull over your head are recommended. Jogging outfits with zippered tops are ideal. Operating rooms are frequently heavily air-conditioned and can be very cool, and you will be lying in one place without moving much for several hours. Without some layers of clothing, you may feel chilled. Wear a few layers so that you can adjust what you are wearing easily, and consider bringing a pair of warm socks as well.

Get a ride to the doctor's office, and be sure to arrive on time, or even a little early. After surgery you may still feel a bit drowsy and your reaction time may be slightly impaired. For safety, doctors recommend against driving yourself home after surgery. So it is best to get a ride to the doctor's office, and arrange in advance for a "designated driver" to give you a ride home following the procedure.

Once you've arrived at the office you will put on a surgical top over your other clothing, and will receive medication for the surgery. A tranquilizer pill, and other medication to reduce pain and swelling will be administered at this time. This is also a good time to use the bathroom, even if you think that you don't feel like it. It is inconvenient to have to get up in the middle of surgery to use the toilet.

The surgeon will reconfirm the surgical plan with you, and will mark the area for treatment directly on your scalp. Some photographs will be taken.

You will walk into the room where the surgery will be performed, and lie face down on a special vinyl-covered foam mat

designed to keep you comfortable and in the proper position during the procedure.

A narrow strip of hair covering the donor area on the back of your scalp will be trimmed and then the scalp on the back of your head will be cleaned with an antiseptic solution. By this time the pills you took several minutes earlier will start having an effect, and you will be fairly relaxed. The donor area will be numbed with injections of anesthetic medication. There will be a pinprick sting with the first injection, and shortly after that your scalp will feel numb, and it will remain numb for the next several hours.

In addition to the anesthetic, the donor area will be injected with a quantity of saline solution. The saline injections swell the donor site slightly and make harvesting a strip of tissue easier. With a single-blade scalpel, the surgeon will remove the strip of donor tissue. The donor tissue is handed off to a team of medical assistants who begin cutting it into follicular unit micrografts. Meanwhile, the open area on the back of your scalp is closed with sutures. It is a two-step process, with the deepest layer of scalp tissue sewn together with dissolving sutures, followed by the outer layer of skin being closed with removable stitches. Some surgeons use staples to close the donor site; I have found that while suturing takes a bit longer to perform, my patients find sutures to be more comfortable after surgery. A bandage is placed over the closed wound, and mild pressure is applied to reduce bleeding, usually with a headband.

While the micrograft donor site is being closed, the donor tissue will have been cooled and trimmed to form the first few hundred follicular unit micrografts by the surgeon's team of medical assistants. The medical assistants will use stereomicroscopes to cut around the natural pattern of hair follicle clusters within the donor scalp tissue, as they form grafts containing one, two, or three hairs. Even the largest of these grafts will be smaller than a grain of rice. The graft cutting process will continue for a few hours.

After the donor tissue is harvested and the opening on the back of the scalp is closed, the recipient sites on the front and top your scalp will be prepared. You will most likely change position on the surgical table, and the area that will receive the grafts will be numbed with anesthetic injections. The surgeon will prepare some of the recipient sites for the grafts. I use a miniature surgical blade that was originally designed for eye surgery to make the tiny slits that will receive the follicular unit micrografts. Great care is taken in placing and angling the recipient sites to assure that the grafts will grow out in a natural direction and without a detectable pattern. Some grafts will be between existing growing hairs, and great care is taken to avoid damage to existing hair follicles while assuring adequate space between each graft.

The follicular unit micrografts are placed into the recipient sites according to the surgical plan. Typically single-hair grafts are used to create a hairline, and multi-hair grafts are used to fill in the top and back areas, where they add greater hair density. As the first hundred recipient sites are filled with grafts, the surgeon will prepare additional sites. Meanwhile the medical assistants are continuing to cut more follicular unit micrografts. Placing the individual grafts may take two to three hours, depending upon the quantity of grafts prepared. During this time, it is common for the patient to doze off, and occasionally reawaken. Eventually all the grafts are placed into recipient sites, and the surgery is completed.

After placing all of the grafts, your scalp is gently cleaned, so that the grafts are barely visible. Most of my patients leave the office without any bandages. Typically you will be given some water and something to eat after surgery. You will also be given some medications to reduce discomfort and swelling after the local anesthetic wears off. More photographs will be taken. If you need to call for a ride home, this is a good time to make that call. Before leaving, you will pay for your surgery. The staff will ask you questions and observe you, for your own safety, to assure that you are okay to leave.

At home you should avoid vigorous activity and excessive exposure to the sun, which could injure the grafts. Once you are home you may want to take a prescription pain pill, primarily to reduce discomfort from the donor area, which may feel a bit "tight." The pain medication will also help you rest more comfortably. Many patients find that the discomfort following surgery is minor and take some ibuprofen; some patients choose not to take any pain medications at all.

Follow the instructions for care and cleaning your scalp during the healing period which will last about a week. Very gentle shampooing helps to remove traces of blood crusts after the first day, and keeps the scalp clean. Within a few days the grafts will heal so well that they will be just about invisible, especially if they were placed between existing hairs. You will be applying an antibiotic ointment every day to keep the new grafts moist, and to help avoid infections. You will also take prescription antibiotic capsules to further reduce the risk of infections. If any unusual complications occur, including excessive swelling, redness, bumps, or bleeding, contact the office and be prepared to go in that day. Most micrograft patients choose to go back to work one or two days after surgery.

After about a week, you will return to the surgeon's office for the removal of sutures at the donor site. This takes only a couple of minutes and is painless. The surgeon will inspect your scalp to assure that everything is healing well and will take more pictures. During your visit, you may meet other prospective patients in the office who will ask you about your micrografting experience.

Within a week the transplanted hair follicles will appear to be growing new hairs. These are the hairs that they had been growing before they were transplanted.

Usually these old hairs fall out as the transplanted follicles go into the telogen or resting stage after transplantation. Minoxidil lotion can be used to help minimize the shock to the new hair follicles; loss of the donor hairs within the first week is perfectly normal. Immediately after surgery the transplanted grafts will begin to develop new connections to the blood supply. Once the new blood supply is fully established, they will begin to grow new hairs on a permanent basis. This usually takes four to six months.

The new hairs will grow at the rate of about one-half inch a month, just as all the other hairs on your head grow. After about four to six months the transplanted follicles will have grown out hairs long enough to begin contributing some additional density to your hair. The transplanted follicles will continue growing new hairs for as long as the hair follicles still on the back of your head keep growing new hairs.

If you want additional hair density, after six to nine months, you are ready for another micrograft procedure. Some patients are satisfied with a single follicular unit micrografting procedure, and others

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choose to have additional procedures to add thickness. Additional procedures can be done six to nine months apart, which allows the new grafts adequate time to heal, and produce visible hairs. The new grafts are then placed between the existing hairs, regardless of whether the existing hairs were naturally occurring or transplanted.