



# Step-By-Step Hair Transplantation Surgery: FUE's Method+

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## Abstract

The authors present in this paper the step-by-step procedures in hair transplant surgery by FUE's method, pre-op considerations, after care treatment, medications, local scalp procedures and how to avoid errors to get the best results.

**Keywords:** Hair Transplant Surgery, FUE's Method, Step by Step

## Operating Room

Comfortable Atmosphere: Music-TV, Room temperature about 22°C.

### Medications:

**Sedative:** Midazolam 7,0 mg, 30' before surgery (optional).

**Numbing cream:** Emla (lidocaine, prilocaine)-local.

**Maintain IV line**

**Syringe:** The smaller capacity reduces pain and local pressure.

**Needle:** Use 30- or 32-gauge needles.

**Anesthesia:** Lidocaine epinephrine 1/100.000 diluted in normal saline.

**Nerve Blocks:** Supra orbital, Supra Trochlear, Greater Occipital, Lesser Occipital.

Some authors prefer local anesthesia in scalp bald area, and donor area, intradermal (not too deep). Firstly, tumescent with long needle, secondly infiltrative with short needle to avoid local vascular compression and edema. During this process, prefer security up position operating table (hypotension).

Must have in the Operation Theater: Cardiac Monitor, Defibrillator, Oxygen, Intubation Equipment.

Complications: Vasovagal reactions-0, 5 mg atropine I'm, reverse Trendelenburg or supine position, valium oral 5-10mg. Knowledge of ATLS, ACLS is important.

### PO Medications

Clindamycin 300mg orally twice a day for 5 days (initially 2 hours before procedure).

Paracetamol 500mg tablet orally 8/8h in case of pain.

Pentoxifylline 600mg tablet twice a day.

Methylprednisolone 16 mg after meals 5 days, last 2 days once a day.

### Opening the Channels

Shaving razors, cut in several pieces, according to follicle size and width, can be used. Hold with vidia forceps and check the normal inclination of scalp hair.

### Appropriate Clinical Preservation of FU's

Avoid storage injury (desiccation) of cells tissues. FU's has a great risk of desiccation because of low volume perifollicular fat. Do not trim. Choose proper storage of FU's during removal (Petri's plaque). Only implant intact follicles. Full circulation to the graft

Quick Response Code:



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is restored in 7 days. Do not remove epidermis. The graft must be placed 0.5 to 1.0mm above the surface of scalp. The follicular units must be taken from areas genetically strong and not sensible to alpha reductases (close to the ears, neckline - be careful in others areas). Some surgeons use beard or pubic hair. Crusts fall spontaneously in 7 days. If not, use foam 30 minutes once daily when bathing. If itching in donor area persists, use aloe vera shampoo once a day only on the donor area.

### After Surgery Procedures

Fully inform patients of aftercare procedures, with written information!

Inform patients that they must not use aspirin, vitamin B and E or similar before operation. Patients must inform if they have any allergies! If chronic illness or medications are taken, that must be informed (diabetes, heart disease, high blood pressure, tuberculosis etc...) Smoking 24 hours before surgery must be avoided for it will extend the convalescence time. Patients with history of hepatitis A, B, or C will not be taken in. Alcohol must be avoided three days before surgery.

Wash the head once a day for seven days. Begin 2 day PO. First wash will be in the surgeon's clinic. Spray lotion during bath in the transplant and donor area at night, before going to sleep. Use neck pillow at least one month, and more if necessary. Wash head can be mobile. Use shampoos with 5% panthenol, herbal extracts, argan oil, vitamin E, aloe vera 15%. Formulate at your preference. Gentle touching of the shampoo with hands palm. Do not massage.

Use a recipient with water. Do not shower; avoid direct drops of water in the scalp for 2 weeks. After this period, prefer gentle running water. Avoid extremes (hot water-cold water) and choose lukewarm water. Avoid scratch or rub the transplanted area. Dry head with paper towel or air dry. Never use hair dryer. Lay down on your back to sleep, protect head from direct impacts. Avoid sports, fitness, steam room, swimming and sun baths during the first month. When cutting the hair use only scissors in the first 6 months. Dye hair only after 6 months. The use of elastic bands two days post-op avoids excessive edema in frontal area due to anesthesia.

Do not smoke first 3 days.

Avoid alcohol and sex intercourse in the first 7 days.

Avoid dusty places.

Avoid fitness, swimming, sports and direct sun over head for at least 30 days.

### Support Treatment for the First Year

Anti hair loss shampoo after 7 days PO, Multivitamins, 1 tablet a day, Biotin tablet once a day, Saw palmetto 100mg a day.

Situations to be avoided during surgery: Graft crushes injury: use sharp forceps and implanters. FU's are skinner, do not grasp bulbs, be gentle, they are very sensitive to crush injury.

**Use normal saline solution:** Ph normal human serum-7.4; Plasma lyte A-Ph7.4; Osmolality-normal serum 280-310 mOsmol/l; Normal saline; 308 mOsmol/l.

**PRP-Controversial:** Some surgeries showed no difference between PRP and placebo.

**Hair Growth:** Donor area: 2 to 6 weeks; Implanted hair: 3 to 4 months, after 6 months, 70% result; 12 months-100% result but in some cases 15 months.<sup>(1-3)</sup>

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### Conflicts of Interest

Author declares that there is no conflict of interest.

### References

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2. Emra Cinik Clinic basic information Istanbul Turkey
3. Dr Alp Aslan, Este Cerrahi Clinic, Torun Center Istanbul TR