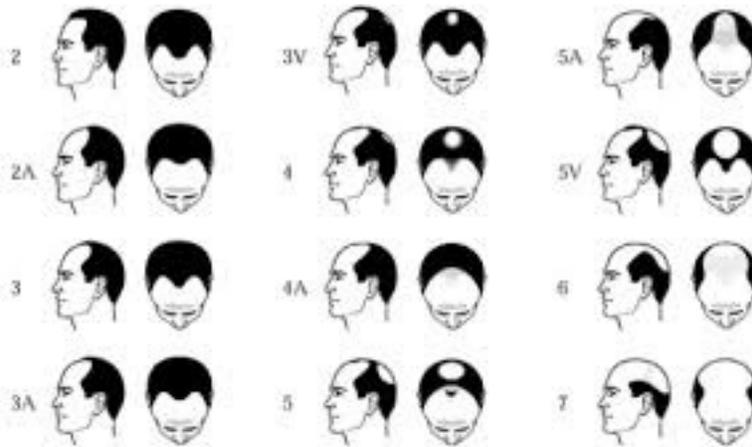


Robotic Hair Transplants in Dallas Texas and Mansfield Texas

Dr. Mark Bishara at The Paragon Plastic Surgery & Med Spa is dedicated to the diagnosis and treatment of hair loss in men and women using the most advanced technologies. Dr. Bishara is a leader in applying advanced robotic technology to hair restoration.

Our office is one of the first facilities in the world to utilize the ARTAS® Robotic System to perform follicular unit extraction (FUE). The advantages of FUE over traditional hair transplant methods are having no linear scar in the donor area and having no post-operative limitations on physical activity. Robotic technology enables FUE to be performed with unparalleled precision.

Impacts of Hair Loss

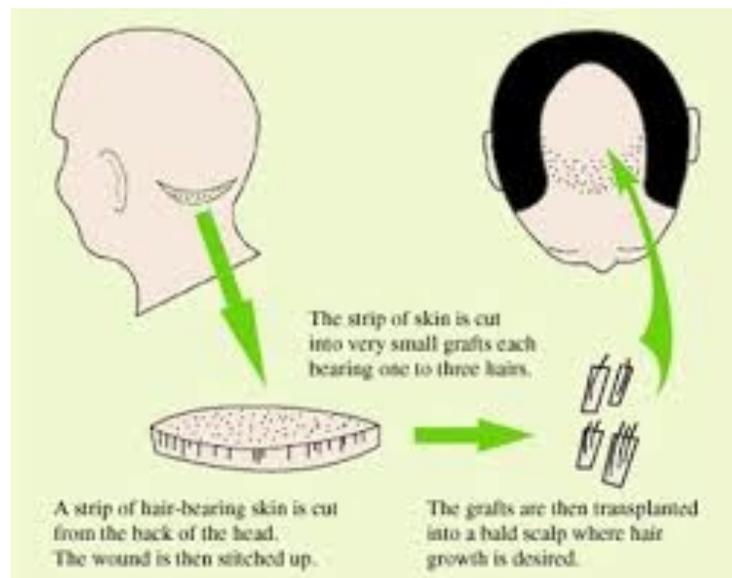


Hair loss is a common condition that affects men and women of all ages. Statistics shows that 35 million men and 21 million women are experiencing hair loss. If you're noticing your hairline

is receding, or you're seeing more hair than usual in the shower, you may be wondering how hair loss will impact your life.

Years of effort have failed in your battle against hair loss. Topical creams and "miracle" pills" have only produced unacceptable results. Your decision to resolve this problem through a hair transplant procedure will yield excellent and immediate results. Modern surgical procedures offer the best hope for a full head of hair that is indistinguishable from a completely natural one. While the process always involves the physical removal and implantation of donor hair from one region to another of your scalp, there are various, progressively more modern, techniques used to achieve this goal.

Follicular Unit Transplant (FUT)



The essence of this procedure is that the hair is transplanted into the balding area as individual follicular units (naturally occurring groups of 1-4 hairs), so that it will look totally natural and be undetectable as a hair transplant. Follicular unit transplant or

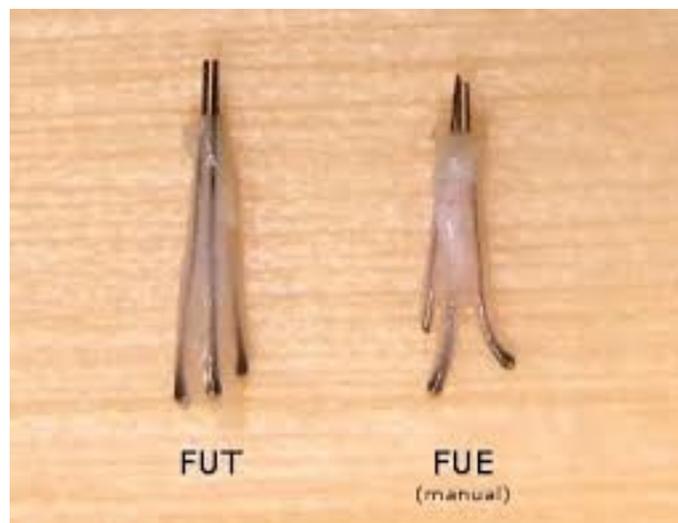
“strip harvesting” is a manual surgical procedure performed with the aid of a stereomicroscope. The procedure involves the removal of a thin strip, or follicular unit, containing one to four hairs each from the permanent zone on the back and sides of the head.

Then, using the stereomicroscope, these units are micro-dissected yielding individual follicles that are suitable for implantation. While the follicles are being prepared, the patient's scalp is readied for implantation. It is anesthetized and tiny recipient sites are incised into the scalp. The surgeon determines the arrangement of the donor and recipient sites and it is his technical and aesthetic skill that will determine the ultimate result of this procedure.

In its day, this procedure was a marked improvement over the earlier mini-micro grafting procedures that it replaced but FUT has, in its turn, been supplanted by more advanced procedures.

The misconception that most people have of hair transplantation is associated with the out-dated “plug” techniques in which patients leave the office with their head wrapped in bandages and enduring significant bleeding and pain. In modern follicular unit hair transplants, this is not the case.

Difference Between FUT and FUE?



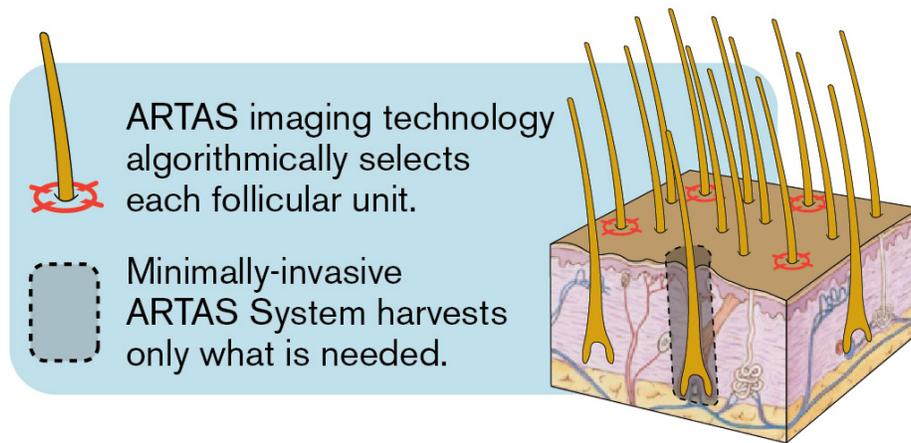
Follicular Unit Transplantation (FUT) and Follicular Unit Extraction (FUE) differ in the way the hair is harvested (removed) from the donor area in the back of the scalp. In FUT, the hair is removed in a single, thin strip and then dissected into individual follicular units using microscopes. In FUE, the follicular units are removed directly from the back and sides of the scalp, either manually, or by using a robotic device (see Robotic FUE).

Manual Follicular Unit Extraction (FUE)

The next evolution in surgical hair transplant surgery was the development of the follicular unit extraction. This technique involves a more delicate, but more precise, removal of the follicles on an individual basis. After anesthetization, micro incisions are made around each desired follicle and it is extracted. The process is repeated as necessary. Great care is taken to preserve the integrity of all aspects of each follicle. While the procedure is painstaking and time consuming, it results in less trauma to the scalp and a significantly reduced healing period.

After harvesting, small recipient sites are again incised into the scalp. The individual follicles are then grafted into the recipient sites where they will produce a permanent and natural looking head of hair. This last process, the preparation and implantation of the donor follicle into the recipient sites, is essentially identical in both FUT and FUE.

Again the skill and aesthetic sensibilities of the surgeon play a large role in the final appearance of the transplants used in this procedure.



Robotic Follicular Unit Extraction (RFUE)

The use of the most modern surgical techniques and state of the art imaging equipment allows a computer aided robot to harvest individual hair follicles for use in hair transplant surgery.

The computer assisted robotic system offers several significant advance from the purely manual procedure. The use of a computer interface and ever smaller dermal punches allows for a less invasive procedure with the wounds showing significant healing within 24 hours.

Currently, the ARTAS robotic system designed and built by Restoration Robots is the gold standard of computer assisted hair transplant surgery. The development of this tool, as well as its components, has produced a safer, quicker procedure that is aesthetically more pleasing and that heals more rapidly.

In 2011, Dr. Bishara began offering Follicular Unit Extraction (FUE) hair transplants using the ARTAS robotic system, for the extraction of follicular unit grafts. We are now performing all of our FUE hair restoration procedures using this technology.



ARTAS

The ARTAS system is specifically designed to eliminate many of the problems heretofore associated with surgical hair transplant problems. First it utilizes a computer assisted, image guidance system that surveys, maps and then chooses the optimal follicle donor sites. This process ensures an even distribution of donor sites across the entire donor area and produces far superior aesthetic results in aesthetics and far less trauma. The robot's image-guided system magnifies the skin, detects each follicular unit and the nuances of the skin/hair characteristics, and then extracts that follicular unit with precision.

Next, the robotic arm performs the harvesting of the follicles. It uses state of the art, incredibly small dermal punches to remove the follicles, individually, with the least amount of damage to the scalp and preserving the integrity of the follicle. This process is always conducted in the presence of a surgeon.

Manual Recipient Site Creation

After the harvesting of the follicles, they are stored and maintained until the procedure is completed. The surgeon then grafts the follicles into the recipient sites. It involves making decisions on hairline design, graft distribution, hair direction, recipient site size and depth. When done manually, the surgeon first designs the new hairline so that the hair transplant will look as natural as possible, particularly as the person ages. Next, the surgeon will demarcate the extent of the area to be transplanted and decide on the graft distribution (i.e., how much hair will be

placed in each part of the scalp) and then prepare a “recipient site” on the part of the scalp that has lost hair. The surgeon will then manually create incisions in the recipient site into which the follicular units will be placed. The entire procedure which typically includes two to three thousand grafts can be completed in under a day.

The procedure is performed in an outpatient setting. The patient arrives in the morning and will leave that same afternoon. The healing process begins immediately with slight scabbing in the first 24 hours. The grafts themselves need to root and develop a blood supply. This process normally takes 90 to 120 days and then they will grow normally for the rest of the patient’s life.

Robotic Recipient Site Creation



Additional steps in FUE include removal of the follicular unit grafts from the donor scalp, and coming soon, site creation and graft placement. The ARTAS Robot will soon perform one more step in this process, making recipient sites.

Benefits

The robot’s capability of making microscopic adjustments in real time, based on the characteristics of the patient’s skin, is a

technological breakthrough in the field of hair restoration. Not only does the robot not tire when performing thousands of graft dissections, it estimates the position of the follicle under the skin more reliably than a human. It has many benefits including:

Minimally Invasive

The smallest possible dermal punches are used and the depth of the incision is computer controlled. No surgeon, no matter how skilled, can match this precision in a manual surgery.

Better Aesthetics

Increased accuracy of harvesting grafts to minimize damage to follicles

No Linear Scar

The incisions used in the FUT method leave a very noticeable scar across the back of the scalp especially if the hair is worn short. Scarring is almost non-existent in the RFUE procedure.

Faster Procedure

The automation of the harvesting procedure significantly reduces the amount of time that the patient spends in the operating room.

Less Discomfort

The shallow, pinpoint removal of the follicles results in only a minor degree of numbness and pain that subsides within one to two days.

Rapid Healing

Healing begins immediately with normal scabbing occurring within 24 hours. Complete healing can be expected in two to three weeks.

Outpatient Basis

No general anesthetic is necessary and the procedure is done in an office setting. These facts and the minimal amount of soreness that follows should allow the patient to undergo the procedure and then return to work the following day.

No Disruption of Normal Routine

Aside from care for the donor and done sites, the patient's life is unaffected.

Before and after picture of a medium size robotic hair transplant:



The ARTAS system for robotic hair transplant provides a far superior surgical experience to a manual or mechanical procedure. In addition, it provides a finer, more natural appearance from day one in both the donor and implant areas. There is no doubt that the use of the ARTAS system produces the finest results in hair transplant surgery today.

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