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# Dermatologic Surgery

Dermatologic Surgery encompasses a wide variety of methods to remove or modify skin tissue for health or cosmetic reasons. These methods provide high-quality, cost-effective skin surgery which includes scalpel surgery, laser surgery, chemical surgery, cryosurgery (liquid nitrogen), electrosurgery, aspiration surgery, liposuction, injection of filler substances, and Mohs micrographic controlled surgery (a special technique for the removal of growths, especially skin cancers).

The skin is susceptible to many diseases, discolorations, and growths. It may also be damaged by excessive exposure to the sun and the effects of aging. In most cases, skin problems requiring dermatologic surgery can be addressed in the dermatologist's office or in an outpatient setting, usually under local anesthesia, with minimal pain, and low risk of complications.

## Indications for Skin Surgery

- To establish a definite diagnosis (a skin biopsy).
- To remove benign and malignant skin growths that may interfere with the body's normal function, or may cause symptoms such as pain, itching, or bleeding.
- To improve the skin's cosmetic appearance by removing growths, discolorations, or skin damage caused by aging, sunlight, or disease. Removal Methods

Treatment options for removal of malignant or benign growths include:

**Biopsy** - Removing a piece of the skin for examination under the microscope for diagnosis.

**Curettage and Electrodesiccation** - Scraping malignant or benign growths with a sharp surgical instrument called a curette. An electrosurgical unit may be used to stop bleeding (cauterize).

**Surgical Excision** - Cutting into the skin, removing the growth, and closing the wound with stitches.

**Cryosurgery** - Applying or spraying liquid nitrogen onto the skin to freeze and destroy the tissue.

**Laser Surgery** - Destroying skin growths or broken blood vessels by modifying tissue with powerful light waves.

**Mohs Micrographic Controlled Surgery** - Removing a tumor and examining the tissue under the microscope to determine the extent of malignant cells before more tissue is removed. While the procedure is time-consuming, it yields a very high cure rate and conserves as much normal tissue as possible. It is used for large or aggressive tumors and tumors located in areas of high risk for recurrence, such as on and around the nose.

**Photodynamic Therapy** - Applying a chemical called aminolevulinic acid to the skin and exposing the skin to a special light source.

**Topical Chemotherapy** - Applying a chemical such as 5-fluorouracil, diclofenac sodium, or imiquimod to destroy precancerous growths and some cancerous lesions.

**Radiation Therapy** - Using x-rays to destroy tissue in certain types of skin cancer, as well as in selected individuals for whom surgery is not possible.

**Dermabrasion** - Removing the outer layers of skin and softening irregular edges. After the skin is frozen with a spray medication, a high-speed, rotary abrasive wheel is used.

**Tumescent Liposuction** - Removing and recontouring the body of excess fat with little blood loss and exceptional safety.

## Types of Skin Cancer

Skin growths are classified as either benign (noncancerous) or malignant (cancerous). There are three main types of skin cancer. The most common and least serious is the basal cell carcinoma (BCC) which typically appears as a shiny, small lump on sun-exposed skin. It may bleed, develop a crust, seem to heal, and then bleed again. Although these tumors grow slowly, they can become very large and penetrate deeply.

The second type of skin cancer is squamous cell carcinoma (SCC) which may appear as a bump, a red scaly growth, or

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an ulcer. SCC can spread beyond the skin to the lymph nodes and internal organs, and can even cause death.

Melanoma is the least common but most serious form of skin cancer. It usually appears as a dark brown or black mole with uneven borders and irregular colors, or has shades of black, blue, red, or white. Melanoma most commonly occurs on the upper backs of men and women, and on the lower legs or women. It also can develop on the face, scalp, fingers, toes, and any other area of the body. There is a rare form of melanoma that occurs in families with many unusual or atypical moles, some of which may need to be removed to avoid problems.

A change in a mole can indicate a serious problem. If a mole becomes larger, changes color, is asymmetric, develops an irregular border, itches, crusts, bleeds, or is painful, consult a dermatologist immediately. **Treatment for Skin Cancer**

Treatment for skin cancer varies according to the location, size, aggressiveness of the cancer, and the patient's general health. In 1110s1 cases, the dermatologist will take a small piece of the abnormal growth for an evaluation (biopsy) to determine whether it is malignant; the tissue is examined under a microscope. Malignant tumors may require additional treatment. **Benign (Noncancerous) Growths**

Many noncancerous growths such as actinic keratoses, seborrheic keratoses, cysts, warts, and moles can be removed by using dermatologic surgery methods.

**Actinic Keratoses** - Are rough, reddish, pre-cancerous lesions that appear on sun-exposed areas of the body. They may be treated with cryosurgery, curettage, dermabrasion, laser, topical chemotherapy, photodynamic therapy, or chemical peeling.

**Seborrheic Keratoses** - Are warty, raised tan or brown growths with a thick, rough surface that often become itchy and irritated by clothing. They may be removed by curettage, cryosurgery, or shave excision.

**Cysts** are small closed sacs that contain fluid or solid material. They may be surgically removed to avoid problems such as inflammation and infection, or to improve cosmetic appearance.

**Warts** are growths that are caused by a virus and consist of thick layers of skin. People of all ages may develop warts anywhere on the skin. Warts may be removed by cryosurgery, curettage, electrosurgery, injections with chemicals, or laser surgery. Medical treatment is also available.

**Moles** - Are common skin growths that are usually tan or brown in color, are sometimes raised, and come in a variety of shapes and sizes. Over time, some moles may change, becoming lighter in color, or bigger. Dermatologists may remove moles by surgical excision or shave excision to stop irritation, to improve appearance, or to prevent some moles from becoming cancerous. **Cosmetic Improvement of the Skin** Many blemishes on the skin can be eliminated or at least improved by an appropriate dermatologic surgical procedure.

**Age or Liver Spots** - Are large "freckles" that develop on sun-exposed areas. These can be minimized by using a sunscreen and respond well to treatment with chemical peeling, cryosurgery, or laser removal. Medical treatments may also be used.

**Dilated Capillaries (Broken Blood Vessels)**-Can be eliminated by electrosurgery, IPL, injections, or laser surgery.

**Wrinkles** - Can be improved with dermabrasion, laser surgery, intense pulse light (IPL), photodynamic therapy (PDT), radiofrequency, collagen injections, dermal fillers, botulinum toxin injections, or chemical peeling. These methods can be used on discolored skin as well, resulting in a more youthful appearance. Combination therapy and special creams may be used with these procedures.

**Scars** - Are a result from acne, chickenpox, accidents, or previous surgery and can often be improved by dermabrasion, soft tissue fillers like collagen, collagen enhancers, hyaluronic acid, or fat that can be injected into the skin to fill depressions. Laser surgery, punch excision, or complete excisional revision may also be used. Raised scars can be surgically leveled or flattened with corticosteroid injections.

**Tattoos** - Can be removed with lasers, dermabrasion, chemical surgery or excision.

**Unwanted Fatty Deposits** - May be removed by dermatologic tumescent liposuction. Dermatologists have pioneered new methods for fat removal under local anesthesia, which avoids hospitalization. Liposuction for body areas such as the neck, arms, abdomen, buttocks, saddlebags, and knees may be performed in a safe, cost-effective manner. **Hair Loss** - Can be corrected by transplanting hair-bearing grafts or strips from the back and sides of the scalp to balding areas on the top or front. The dermatologist uses a special scalpel to remove the hair-bearing skin; then individual hair follicles are inserted into spaces created on the bald scalp. There is a three to six week period between transplants for healing before new growth can take place. Within six months, transplanted hair grows normally. Large areas of a bald scalp can be removed by scalp reduction surgery to reduce the size of the bald area. This can be combined with hair transplantation

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as well as oral medications and topical therapies to get a "full" look. The Surgical Dermatology Consultation

After obtaining a medical history, the dermatologist will examine and diagnose the skin problem, explain what could happen if it is not treated, describe the procedures available as well as the risks and benefits of different treatment options, and discuss follow-up care.

Consultations are usually required before cosmetic procedures to discuss the procedure, treatment options, possible complications, postoperative restrictions, patient expectations, and questions.