

Hand Surgery

Dramatic advances have been made in past decades in treating patients with hand injuries, degenerative disorders, and birth defects of the hand. At the forefront of these advances have been plastic surgeons-specialists whose major interest is improving both function and appearance of the hand. Plastic surgeons undergo intensive training in hand surgery during their training, and they (along with orthopedic surgeons and general surgeons) treat patients with a wide range of hand problems. If you're considering hand surgery, a consultation with a plastic surgeon is a great place to start. The surgeon will examine you, discuss the possible methods of treatment for your problem, and let you know if surgery is warranted or needed. If it is, the surgeon will discuss the procedure, including where the surgery will be performed (in the surgeon's office, an outpatient surgery center, or a hospital), the anesthesia and surgical techniques that will be used, possible risks and complications, the recovery and rehabilitation period, and the probable outcome in terms of function and appearance. (Since hand surgery is performed primarily to correct physical abnormalities, it is often covered by insurance. Check your policy or call your carrier to be sure.)

In all types of hand surgery, the possible complications include infection, poor healing, loss of feeling or motion, blood clots, and adverse reactions to the anesthesia. These complications are infrequent, however, and they can generally be treated. You can reduce your risks by choosing a qualified plastic surgeon and by closely following his or her advice.

The most common procedures in hand surgery are those done to repair injured hands, including injuries to the tendons, nerves, blood vessels, and joints; fractured bones; and burns, cuts, and other injuries to the skin and soft tissue. Modern techniques have greatly improved the surgeon's ability to restore function and appearance, even in severe injuries.

Some of the techniques now used by plastic surgeons include:

- Grafting — the transfer of skin, bone, nerves, or other tissue from a healthy part of the body to repair the damaged or injured part;
- Flap surgery — moving the skin along with its underlying fat, blood vessels, and muscle from a healthy part of the body to the damaged or injured site;
- Replantation or transplantation — restoring accidentally amputated fingers or hands using microsurgery, an extremely precise and delicate surgery performed under magnification. Most injuries could require several operations over an extended period of time.

In many cases, surgery can restore a significant degree of feeling and function to injured hands. However, recovery may take months, and a period of hand therapy will most often be needed.

Carpal Tunnel Syndrome:

The carpal tunnel is an anatomical passageway through the wrist carrying tendons and one of the hand's major nerves, the median nerve. Pressure may build up within the tunnel because of disease injury, fluid retention during pregnancy, overuse, or repetitive motions. The resulting pressure on the nerve within the tunnel can cause a tingling sensation

in the hand, often accompanied by numbness, aching, and impaired hand function. This can wake you up at night with hand pain and cause decreased grip and pinch strength. This is known as carpal tunnel syndrome. In some cases, splinting of the hand and anti-inflammatory medications will help relieve the problem. If this doesn't work, however, surgery may be required after a neurological evaluation. The results of the surgery can depend in part on how long the condition has existed and how much damage has been done to the nerve. For that reason, it's a good idea to see a doctor early if you think you may have carpal tunnel syndrome to prevent a permanent decrease in hand function.

Rheumatoid Arthritis

Rheumatoid arthritis, an inflammation of the joints, is a disabling autoimmune disease that can affect the appearance and the function of the hands and other parts of the body. It often deforms finger joints and forces the fingers into a bent position that impairs movement. Disabilities caused by rheumatoid arthritis can often be managed without surgery — for example, by wearing special splints or using physical therapy to strengthen

weakened areas. For some patients, however, surgery offers the best solution to the issue.

Whether or not to have surgery is a decision you should make in consultation with your plastic surgeon and your rheumatologist.

Plastic surgeons can repair or reconstruct almost any area of the hand or wrist by removing

tissue from inflamed joints, repositioning tendons, or implanting artificial joints. While your hand may not regain its full use, you can generally expect a significant improvement in function and appearance. Still, it's important to remember that surgical repair doesn't eliminate the underlying disease. Rheumatoid arthritis can continue to cause damage to your hand and sometimes requiring further surgery. You'll still need to see your rheumatologist for continuing care and hopefully stop the progression of the disease.

Dupuytren's Contracture:

Dupuytren's contracture is a disorder of the skin and underlying tissue on the palm side of the hand often causing contractures. Thick, scar-like tissue forms under the skin of the

palm and may extend into the fingers, pulling them toward the palm and restricting motion. The condition usually develops in mid-life and has no known cause (though it has a tendency to run in families). Surgery is the only treatment for Dupuytren's contractures. The surgeon will cut and separate the bands of thickened tissue, freeing the tendons and

allowing better finger movement. The operation must be done very precisely, since the nerves that supply the hand and fingers are often tightly bound up in the abnormal/diseased tissue. In some cases, skin grafts are also needed to replace tightened and puckered skin. The results of the surgery will depend on the severity of the contracture and condition. You can usually expect some improvement in function, particularly after physical therapy.

Congenital Defects:

Congenital deformities of the hand — that is, deformities a child is born with — can interfere with proper hand growth, function and cause significant problems in the use of the hand. Fortunately, with modern surgical techniques most defects can be corrected at a very early age — in some cases during infancy, in others at two or three years — allowing normal development and functioning of the hand.

One of the most common congenital defects is syndactyly, in which two or more fingers are fused together. Surgical correction involves cutting the tissue that connects the fingers, then grafting skin from another part of the body. (The procedure is more complicated if bones also are fused together.) Surgery can usually provide a better range of motion and a fairly normal appearance. Other common congenital defects include short, missing, or deformed fingers, immobile tendons, and abnormal nerves or blood vessels. In most cases, these defects can be treated surgically and significant improvement can be expected.

Recovery and Rehabilitation:

Since the hand is a very sensitive and important part of the body, you may have mild to severe pain following surgery. Your plastic surgeon can prescribe injections or oral medication to make you more comfortable. How long your hand must remain immobilized and how quickly you resume your normal activities depends on the type and extent of surgery. To enhance your recovery and give you the fullest possible use of your hand, your plastic surgeon may recommend a course of rehabilitation (physical and occupational therapy) under the direction of a trained hand therapist. Your therapy may include

hand exercises, heat and massage therapy, electrical nerve stimulation, splinting, traction, and special wrappings to control swelling. Keep in mind that surgery is just the foundation for recovery. It's crucial that you follow the therapist's instructions and complete the entire course of therapy if you want to regain the maximum use and function of your hand.