



# PIPS *Steps*

A PUBLICATION OF THE PITTSBURGH INSTITUTE OF PLASTIC SURGERY

## HELPING HANDS

When most people think of plastic surgery, they tend to think of cosmetic surgery, for which plastic surgeons are perhaps best known. What most people don't realize is that many plastic surgeons are expert hand surgeons as well simply because hand surgery requires the same attention to detail, the same delicate surgical technique, the same appreciation for function as it relates to form and vice versa as does cosmetic surgery or, for that matter, any of the surgical procedures which are associated with plastic surgery.

The hand, as I think most of us appreciate, is a marvelous and remarkably intricate tool. Man has yet to construct any mechanical device which combines both the complexity and reliability of the human hand. Hand anatomy and function are so complex and the treatment of hand problems, whether congenital (birth related) or acquired (for instance, via injury), is so multifaceted, some plastic surgeons, and indeed practitioners of other surgical specialties such as orthopedic surgery, limit their practices exclusively to treatment of hand problems. While, like most plastic surgeons, I don't limit my plastic surgical practice to the treatment of hand problems, nonetheless hand surgery is an area of interest of mine and one which complements my primarily cosmetic surgical practice, given the similarities of those two disciplines.

As I indicated, hand problems can be categorized as either congenital or acquired. Examples of congenital hand problems include Syndactyly in which two or more fingers are fused together; extra fingers (most commonly the little finger); malformed and even missing fingers. Plastic surgeons have developed remarkable solutions to these problems which, in the case of a missing finger for example, may amount to transplantation of a toe (inclusive of associated arteries, veins, nerves and tendons) to replace the absent finger.

Other examples of hand problems are those which we acquire either as a result of age or the result of trauma (injury). Most of us who have lived for at least several decades recognize that, as we age, we lose mobility of our thumbs and fingers secondary to arthritic changes in the joints of those digits. Generally speaking, such problems are best treated with analgesics, such as good old Aspirin, heat and massage. Certain forms of arthritis, particularly Rheumatoid Arthritis which can produce devastating changes in the joints of the digits associated with significant positional deformities of those digits, lend themselves to correction via joint replacement using silicone joints. Very few plastic surgical patients are as happy as the individual who, once crippled and compromised by the

deformity of Rheumatoid Arthritis, regains reasonably normal hand function through joint replacement surgery and, consequently, is able to return to a more comfortable and productive life.

More common acquired hand problems include the development of tumors (or growths) of the hand, both benign and malignant, the most common of which is known as Ganglion, a benign outgrowth of joint lining which often assumes an appearance and consistency similar to a white grape. Interference with the normal sliding motion of the flexor (bending) tendons of the digits by the tendon sheath or tunnel which surrounds them often leads to what commonly is known as Trigger Finger, so named because of the way the finger so afflicted behaves, requiring forcible extension should it become "locked" in a flexed position, resulting in sudden "release" of the finger, much like the action of a gun trigger. The solution to a Trigger Finger is relatively simple and amounts to a division of the tendon sheath or tunnel in which the tendons slide in order to provide greater freedom of movement to those tendons. A problem which was first described more than a hundred years ago and still continues to baffle medical science as to its cause is Dupuytren's Contracture, a descriptive term applied to the thickening of the fascia or the tough gristle-like connective tissue situated between the skin of the palm and the deeper hand anatomy, specifically arteries, veins, nerves, tendons, etc. Such contraction, usually along the long axis of a finger (most commonly the ring finger) and corresponding area of the palm, results in a progressive, sometimes permanent flexion deformity of the fingers so afflicted and, if not treated, can result in the permanent assumption by that finger of a flexed and consequently non-usable position secondary to "fusion" of the joints of the finger. The solution amounts to removal of the diseased contracted fascia which, if treated early, usually results in return to normal function of the finger so afflicted.

And, of course, since we still live in a society in which the hand is very important to the livelihoods of most of us and, therefore, is used regularly by most of us, hand injuries resulting in lacerations (cuts) of tendons and other structures as well as fractures of bones still are quite common and benefit by prompt but expert treatment with an eye toward rehabilitation utilizing in many cases appropriate therapists, usually Occupational Therapists, for help.

Surprisingly perhaps, virtually all of the surgical procedures which I have described, albeit briefly, in this article can be undertaken on an outpatient basis and many times require anesthesia of only the upper extremity of which the deformed or diseased or injured hand is a part. Often these surgical procedures translate to little post-operative pain although, given the nature of the problems they are designed to treat, can translate to weeks, months and even years of post-operative therapy, exercise, etc.

**PIPS**

THE  
PITTSBURGH INSTITUTE OF  
PLASTIC SURGERY

*... where the art of plastic surgery is State of the Art. ...*