



# Pediatric and Adolescent Quarterly Update

4th Quarter 2015

## Common Pediatric Hand Injuries (Part 2)

by Lee G. Phillips M.D.

Hand injuries are very common in children. They can range from fractures (or broken bones), to bites and tendon or nerve damage. Diagnosing and treating these particular injuries appropriately is key to allowing the child back to their normal routine. Our pediatric hand physician understands the importance of this, and the importance of customized, age-appropriate care.



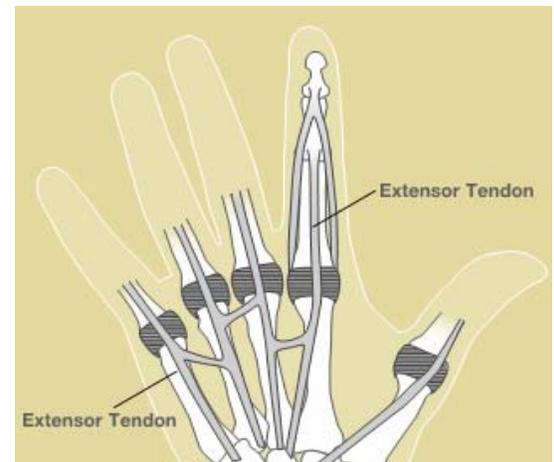
**Bites** There are as many as three million animal bites in the United States each year with dogs responsible for up to 90%. Bites occur most frequently on the fingers of the dominant hand of children. The major concern of all bite wounds is infection. In the United States, about 1% of dog bites and 6% of cat bites require hospitalization. Infections occur more frequently in cat bites because cats have extremely sharp, pointed teeth that can cause deep puncture wounds. Because most pets in the United States

are vaccinated, most cases of rabies result from the bite of a wild animal, not a domesticated pet. Report animal bites to your public health department.

Human bite wounds may not seem dangerous, but the risk of infection is high. These wounds contain very high levels of bacteria. A human bite wound can be caused directly – a child bites another child – or indirectly – a hand strikes a tooth, breaking the skin on the hand. Even though the wound may appear minor, an infection can lead to a severe joint infection. About one third of all hand infections are caused by human bite wounds.

Bite wounds to the hand require meticulous cleansing, the use of antibiotics, and an updated tetanus vaccination. Even if a bite does not break the skin, it may cause a crushing and tearing injury to underlying bone, muscles, tendons, ligaments and nerves. If the tendons or nerves have been injured, additional treatment will be necessary. Follow-up care is crucial in the case of bite wounds, to ensure that infection is diminishing or has not developed, and to restore the hand as much as possible to its former condition.

**Tendon and Nerve Injuries** Extensor tendons straighten the wrist, fingers, and thumb and are just under the skin on the back of the hands and fingers. A minor cut or even a jamming to a finger can injure them. Mallet Finger refers to a drooping end-joint of a finger and Boutonnière Deformity describes the bent-down (flexed) position of the middle joint of the finger. Tears caused by jamming injuries are usually treated with splints, holding the tendon in place until the tendon is healed. This may take six to twelve weeks to heal completely. Other treatments may include stitches (for cuts in the tendon) or a pin may need to be placed through the bone across the joint as an internal splint.





**Children's Orthopaedic  
and Scoliosis Surgery Associates, LLP**

# Pediatric and Adolescent **Quarterly** Update

**4th Quarter 2015**

The muscles that bend (flex) the fingers are called flexor muscles and their tendons connect the muscles to bone. Deep cuts can injure the tendons or nearby nerves and an injury that looks simple on the outside can be much more complex on the inside. When the tendon is cut, you cannot bend your finger. A cut tendon cannot heal without surgery and nearby nerves may need to be repaired as well. After surgery, the repair must be protected with a splint and you are not allowed to try to bend your finger on your own for about a month. The injured area will need to be moved to limit stiffness and these exercises can be tricky, so a hand therapist will help you.

Nerves serve as the "wires" of the body that carry information to and from the brain. Motor nerves carry messages from the brain to muscles to make the body move. Sensory nerves carry messages to the brain from different parts of the body to signal pain, pressure, and temperature. Nerves are fragile and can be damaged by pressure, stretching, or cutting. To fix a cut nerve, the insulation around both ends of the nerve is sewn together. A nerve in a finger is only as thick as a piece of thin spaghetti, so the stitches have to be very tiny and thin. The repair may need to be protected with a splint for the first 3 weeks to protect it from stretching apart since it is so delicate. The nerve fibers then usually grow down the empty nerve tubes up to one inch every month, This means that with an injury to a nerve in the arm 11 or 12 inches above the fingertips, it may take as long as a year before feeling returns to the fingertips.

To schedule an appointment with our Pediatric Hand Specialist, Dr. Lee Phillips, please call our office.

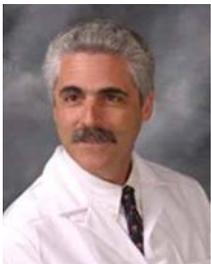


## Meet our team of Physicians

For appointments, please call

**(727) 898– BONE (2663) or (813) 879 BONE (2663)**

For more information please visit [www.chortho.com](http://www.chortho.com)



**Jeff Neustadt, M.D.**

Board certified and fellowship trained in pediatric orthopaedics with an emphasis in scoliosis surgery.



**Scott Beck, M.D.**

Board certified and fellowship trained in pediatric orthopaedics with an emphasis in lower extremity.



**Greg Hahn, M.D.**

Board certified and fellowship trained in pediatric orthopaedics with an emphasis in scoliosis surgery.



**Drew Warnick, M.D.**

Board certified and fellowship trained in pediatric orthopaedics surgery with an emphasis in sports medicine and hip preservation.



**Paul Benfanti, M.D.**

Board certified and fellowship trained in pediatric orthopaedics with an emphasis in foot and ankle, and sports medicine.



**Lee Phillips, M.D.**

Fellowship trained in pediatric orthopaedics & pediatric orthopaedic hand surgery with an emphasis in upper extremity.

St. Petersburg Office  
625 6th Avenue South  
Suite 450

St. Petersburg, FL 33701

Tampa Office  
3440 W. Dr. MLK Jr. Blvd  
Suite 200

Tampa, FL 33607

Sarasota Outreach  
5881 Rand Blvd  
Sarasota, FL 34238

Pasco Outreach  
4443 Rowan Road  
New Port Richey, FL 34653

East Lake Outreach  
3850 Tampa Road  
Palm Harbor, FL 34684

**Phone:** (727) 898-BONE (2663) or (813) 879-BONE (2663) **Fax:** (727) 568-6836 or (813) 872-0286