

“As an orthopaedic surgeon, I see too many sports-related injuries in young athletes that might have been avoided. Many of our research projects, therefore, center on ways to intervene before these injuries prevent teens from being able to develop their athletic potential.”

Dr. Christopher S. Ahmad

*Orthopaedic Surgeon, Center for Shoulder, Elbow and Sports Medicine  
Director, Center for Adolescent and Pediatric Sports Medicine*



*Dr. Christopher S. Ahmad, who has an undergraduate degree in mechanical engineering from Columbia University School of Engineering and Applied Science, received his MD from New York University School of Medicine. He completed his orthopaedic residency at Columbia Presbyterian Medical Center, now NewYork-Presbyterian/Columbia, followed by fellowship training in sports medicine at the Kerlan-Jobe Orthopaedic Clinic in Los Angeles. While there, Dr. Ahmad served as assistant team physician for the Los Angeles Dodgers, Kings, Galaxy, and Lakers.*

*Dr. Ahmad, an Assistant Professor of Orthopaedic Surgery at Columbia University College of Physicians and Surgeons, has received several awards for outstanding research in the field of sports medicine. In addition to being a member of the American Orthopaedic Society for Sports Medicine and the American Academy of Orthopaedic Surgeons, he is one of the youngest members of the prestigious American Shoulder and Elbow Surgeons Society. He is the author of numerous peer-reviewed research articles and also serves as a reviewer for the American Journal of Sports Medicine and the Journal of Shoulder and Elbow Surgery.*

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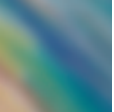
For an appointment, please call **(212) 305-4565**

## NEWYORK-PRESBYTERIAN HOSPITAL/COLUMBIA UNIVERSITY MEDICAL CENTER

NewYork-Presbyterian Hospital/Columbia University Medical Center in conjunction with its academic partner Columbia University College of Physicians and Surgeons comprise one of the leading academic medical centers in the nation. Among the major centers of excellence at NewYork-Presbyterian/Columbia is the Morgan Stanley Children's Hospital of NewYork-Presbyterian, one of the most comprehensive pediatric hospitals in the United States. NewYork-Presbyterian/Columbia provides state-of-the-art inpatient, ambulatory and preventive care in all areas of medicine, and is committed to educating and training future generations of health care professionals, as well as conducting basic research with the goal of translating discoveries into new therapies for fighting disease and improving health. NewYork-Presbyterian Hospital currently ranks sixth in U.S. News & World Report's "America's Best Hospitals" survey and is the only hospital in the New York, New Jersey and Connecticut metropolitan region to be listed on its prestigious Honor Roll.

# Winning Techniques for Injury Prevention and Treatment

Center for Shoulder, Elbow and Sports Medicine



*The world-renowned Center for Shoulder, Elbow and Sports Medicine has made pioneering contributions to the field dating back to the founding of Columbia's original Shoulder Service in the 1950s under the direction of Charles S. Neer, MD. Revered as the "father of modern shoulder surgery," Dr. Neer performed the first total shoulder replacement, created the classification system for proximal humerus fractures, and developed the acromioplasty procedure for impingement syndrome and the capsular shift procedure for glenohumeral instability, and dramatically changed the direction of orthopaedic surgery.*

Today, the Center, which includes Louis U. Bigliani, MD, Theodore Blaine, MD, and William N. Levine, MD, the Center's Director, as well as Christopher Ahmad, MD, combines orthopaedic surgery, rehabilitative sports medicine, physical and occupational therapy, and clinical and basic science research to provide the most advanced treatment to patients. These patients include injured competitive athletes and dedicated amateurs who seek to return to their sport quickly and at the same level that they enjoyed prior to the injury.

Dr. Levine serves as the Head Team Physician for the 29 varsity athletic teams of Columbia University.

Christopher S. Ahmad, MD, serves as Head Team Physician for the 17 varsity teams fielded by the City College of New York and as the Director of the new Center for Pediatric and Adolescent Sports Medicine. Physicians also care for students from several high schools in Manhattan and New Jersey.

Dr. Ahmad, who specializes in advanced arthroscopic surgical techniques for sports-related injuries of the shoulder, elbow, and knee, has a special interest in shoulder instability, elbow injuries, and anterior cruciate ligament (ACL) injuries.

### ■ Shoulder Instability

Shoulder instability, which can lead to dislocation of one of the joints in the shoulder, is a common problem in young athletes who participate in throwing sports. Dr. Ahmad uses arthroscopic techniques to correct posttraumatic shoulder instability, as well as to repair and strengthen the ligaments that keep the shoulder in the joint.

### ■ ACL Injuries

Dr. Ahmad and his colleagues are recognized specialists in ACL reconstruction, managing a high volume of complicated cases of all ages and levels of athletic ability. They have particular expertise in managing ACL injuries in patients who are still growing, using techniques that minimize or avoid injury to the growth plate.

### ■ Elbow Injuries

Elbow injuries — common in throwing sports — often require correction through “Tommy John” surgery. This surgery, which involves replacement of the ulnar collateral ligament, was invented by surgeon Frank Jobe, MD, with whom Dr. Ahmad trained.

#### INFORMATION AND REFERRAL

To refer a patient, request a telephone consultation, or to learn more about the Center for Shoulder, Elbow, and Sports Medicine, please call

**(212) 305-4565**

or visit our website at

**[www.nyp.org/columbiaortho](http://www.nyp.org/columbiaortho)**

#### TRANSLATING RESEARCH INTO PRACTICE

Dr. Ahmad and his colleagues conduct both basic and clinical research, with an important emphasis on prevention. In the area of ACL injuries, they have focused on the epidemic of ACL injuries in female athletes. In a recent study published in the March 2006 American Journal of Sports Medicine, Dr. Ahmad compared the musculature of women to men, determining that at the onset of menarche, female quadriceps become more dominant than hamstring muscles putting them at risk for an ACL injury. He is now addressing ways to change that muscle balance — making females less quadricep dominant while increasing their hamstring strength.

As Director of Biomechanics Research in the Center for Orthopaedic Research, Dr. Ahmad also participates in the evaluation and testing of products and fixation techniques in ACL reconstruction surgery to facilitate healing and enable accelerated rehabilitation. In addition, the Center has an IRB-approved study that is looking at outcomes following ACL reconstruction.

Dr. Ahmad has also targeted shoulder injuries in the adolescent population, evaluating shoulder adaptive changes in young baseball players and developing ways to prevent injury related to overhand throwing in athletes whose skeleton is still maturing. Researchers studied 300 adolescent baseball pitchers, measuring their range of motion in laxity and identifying the point in time during skeletal growth when these adaptive changes occur.

## OUTSTANDING CARE FOR ORTHOPAEDIC CONDITIONS

NewYork-Presbyterian Columbia Orthopaedics provides care through services focused on the following specialty areas:

- Foot and Ankle
- Hand and Microvascular
- Hip and Knee
- Pediatric Orthopaedics
- Shoulder, Elbow and Sports Medicine
- Spine
- Sports Therapy
- Trauma
- Tumor and Bone Disease

## AT THE FOREFRONT OF RESEARCH

The department's Center for Orthopaedic Research investigates novel therapeutic concepts through translational studies that bridge basic science and clinical practice. Current and prior research activities include research on the molecular pathophysiology of shoulder rotator cuff disorders, molecular mechanism of osteolysis, osteoblast biology, sarcoma research, molecular mechanism of bone regeneration, normal function of diarthrodial joints, osteochondral healing, and growth plate abnormalities.

## DECADES OF DISTINCTION

The origins of NewYork-Presbyterian Columbia Orthopaedics date back to the founding of the New York Orthopaedic Hospital, which opened in the mid-1800s to treat needy children afflicted by diseases of the musculoskeletal system. In 1950, New York Orthopaedic Hospital — which is also home to one of the nation's oldest orthopaedic training programs — joined Columbia Presbyterian Medical Center, now NewYork-Presbyterian/Columbia, in upper Manhattan.

Over the years, our surgeons have advanced the discipline through pioneering work and groundbreaking research in the diagnosis and treatment of orthopaedic conditions. Their achievements have profoundly influenced the techniques that are today helping to restore mobility and function to patients of all ages.

Affiliated with Columbia University College of Physicians and Surgeons, one of the most prestigious medical schools in the country, NewYork-Presbyterian Columbia Orthopaedics remains dedicated to providing the highest quality musculoskeletal care, pursuing innovative research, and training top orthopaedic surgeons of the future.