



Orthoplastics Division

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Multidisciplinary care of patients has become commonplace within modern medicine. The medical and surgical knowledge required to take appropriate care of patients is too vast for any one physician to master. The combination of the principles of Orthopaedic Surgery and Plastic Surgery or Orthoplastic surgery is the epitome of the multidisciplinary approach to patient care. Orthoplastic surgery harnesses the best aspects of each specialty and applies them to the care of the patient. The care of the orthopaedic patient encompasses meticulous fracture reduction and fixation, hand surgery, well executed arthroplasty, and tumor resection. Without special attention to the soft tissue envelope, each of these endeavors may be for naught. Whether it is microvascular coverage of a IIIB tibia fracture, prophylactic soft tissue coverage to allow for revision knee arthroplasty, or reconstruction of a musculoskeletal tumor defect to allow for limb salvage, the principles are the same: achieve the most functional outcome for the patient with the least risk and morbidity.

Our reconstructive abilities have continued to improve since Orthoplastic surgery was first described in 1993 (Levin LS. The Reconstructive Ladder - An Orthoplastic Approach. *Orthopaedic Clinics of North America*, J.B. Lippincott Co., 24(3):393-409, July 1993). The idea of combining the beneficial aspects unique to each specialty in the care of the orthopaedic patient has served as the basis of Penn's Musculoskeletal Institute. Orthoplastic surgery has made great strides since it was first described. At Penn, we have contributed to the evolution of microvascular perforator flaps to minimize patient morbidity, combined ringed fixators and free tissue transfer,

used minimally invasive approaches to joint arthroplasty, and allowed for revision arthroplasty with prophylactic soft tissue augmentation. Perhaps the ultimate confluence of orthoplastic surgery has been the successful performance of 3 bilateral hand transplants. The coordination of care between orthopaedic and plastic surgery was paramount to the success of our vascularized composite allotransplantation program. Penn has remained fertile ground for the care of complex musculoskeletal patients, and orthoplastic surgery has blossomed as part of the Musculoskeletal Institute's dedication to improving care of patients.

Penn is uniquely qualified to care for patients with complex reconstructive needs of their musculoskeletal system. In addition to the trauma, joint, hand, and tumor surgeons, the Musculoskeletal Institute has plastic and microsurgons whose focus remains reconstruction of the orthopaedic surgical patient. Plastic and orthopaedic surgical principles are a powerful tool, but stronger when applied in combination. Orthoplastic surgery is not unique to a finite group of faculty as the principles permeate the practices of all the members of the Department of Orthopaedic Surgery. We are all "orthoplastic" surgeons at heart.

Our goal continues to be to deliver the finest orthoplastic care to patients and to grow our individual programs within the Musculoskeletal Institute. We will continue to work together in a coordinated fashion to attract patients regionally, nationally and internationally. As Orthoplastic surgeons, we have a unique skill set and ability to work together for the betterment of patients and physicians alike.



Multidisciplinary orthoplastics team for bilateral hand transplantation (Children's Hospital of Philadelphia).