



# Neuro-Orthopaedics Division Update

Keith Baldwin, MD, MPH, MSPT



## Neuro-Orthopaedic Faculty



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David Spiegel, MD

### Comprehensive Care in a Complex Population

The Neuro Orthopedics service at Penn is a dynamic multidisciplinary service that cares for patients with complex orthopedic needs that span multiple traditional disciplines. The service is a “lifespans” service, caring for patients across the lifespan at both the Clinical Practices of the University of Pennsylvania, and the Children’s Hospital of Philadelphia. Keith Baldwin, MD, MPH, MSPT is the chief of Neuro Orthopaedics at Penn and is one of a handful of orthopaedic surgeons nationally who cares for the spectrum of neuromuscular disorders in both adults and children. Dr. Baldwin works alongside Katie Walizer, PA, Ross Lenzi PA, and Kerry Howry, PA to provide timely care to adults who have suffered a traumatic brain injury, spinal cord injury, multiple sclerosis, cerebral palsy and a variety of other conditions. This includes direct work with well-known rehabilitation services both inside and outside the system including Penn Good Shepard partners, Moss Rehabilitation, Magee Rehabilitation, and Bryn Mawr rehabilitation among others.

On the Pediatric side, Dr. Baldwin works with David A. Spiegel MD to address the musculoskeletal needs in children with a variety of disorders such as Cerebral Palsy, Spina Bifida, Charcot Marie Tooth, Spinal Muscular atrophy, and others. They are supported by Kathy Abel CRNP, Emily Stegonshek CRNP, and Jessica Staschak, who play a key role in serving this challenging population. Treating neuromuscular disorders is a team sport, and the neuro orthopedic team is large. The service partners with many other services within Penn Orthopedics to provide cutting edge and high-level care by partnering in the last year with the Adult Reconstruction service, the Hand and Upper Extremity Service, the Ortho Plastics Service, the Orthopedic Oncology Service, the Sports Medicine Service and the Trauma Service. The adult Neuro Orthopedic Service was also invited to provide clinical training to a physiatry fellow last year and provides a supportive role in the education of

Foot and Ankle Fellows. We were also lucky enough to host an international foot and ankle fellow from the United Kingdom who was interested in the surgical treatment of spasticity.

On the pediatric side last year we welcomed a new chief of Physical Medicine and Rehabilitation, Dr. Sally Evans, MD. We look forward to building the service further with Dr. Evans. Additionally, Laura Prosser PhD, PT, has spearheaded a mobile gait lab which provides innovative gait lab services which can be brought “on the go” for clinical evaluations. Outreach to outlying institutions has been highly successful. Penn has become the “go to” service for neuro orthopedic care for much of the surrounding area with referrals coming from all major rehabilitations in the area. Effort is ongoing to build a more regional and national presence on the adult and pediatric side., Using our referral network and harnessing the nurse navigator program at CHOP the neuro orthopedic service have treated patients from many states and foreign countries.

The research program in neuromuscular orthopedics has been on the rise as Drs Spiegel and Baldwin are currently exploring pelvic obliquity and its measurement reliability. We are also continuing a line of investigation assessing nutrition in patients with neuromuscular scoliosis. Additionally, a joint paper with Dr. Flynn and Dr. Baldwin using humeral growth stage to correlate with curve progression in neuromuscular scoliosis won the Jacqueline Perry award this year. Ongoing research in neuromuscular hip surgery, multicenter studies on neuromuscular foot reconstruction and neuromuscular spine surgery have increased the profile of the program and its thought leadership nationally.

David Spiegel continues his service abroad and has presented nationally and internationally on topics relating to neuromuscular care of children. The neuro orthopedic service at Penn continues to grow and provide one of a kind care that is not matched in the region.