

Surgery: Forearm

In 60% of people with MHE the forearm bones (radius and ulna) grow at different rates, which can cause the forearm to curve, the wrist to tilt, or part of the elbow to shift. About 20-30% of people with MHE develop a dislocated or unstable radial head at the elbow. Many adults with MHE work in careers they enjoy and participate in recreational activities, even with some forearm and wrist deformities. Routinely monitoring and intentionally timing interventions, such as guided growth or osteotomies, is essential to maximize correction potential while minimizing complications in skeletally immature patients (children who are still growing). Catching issues early can prevent dislocations, protect joint movement, and reduce the severity of deformities over time.

Definitions:

- Supination: Turning the palm up (like holding a bowl of soup).
- Pronation: Turning the palm down (like petting a dog).
- Radial Head Dislocation: When part of the radius (the bone on the thumb side of your forearm) moves out of place at the elbow.
- Ulnar Shortening: When the ulna (the bone on the pinky side for your forearm) is shorter than normal, which can cause wrist tilting and joint misalignment.
- Osteotomy: a surgical procedure in which a bone is cut, reshaped, or repositioned to correct deformities, relieve pain, or improve function.

Surgery may be indicated if:

- Ulnar bow greater than 17° indicating an increased risk of dislocation.
- Pain, weakness, and/or difficulty with movement: limiting ability to write, grip strength, rotating the forearm (turning the palm up or down), reduced range of motion at the wrist or elbow that interferes with daily activities such as eating, brushing your teeth, or driving.
- Significant concerns about appearance, particularly if they affect self-esteem or emotional well-being.

If surgery is needed, options may include guided growth (for children still growing), osteotomy, removal of osteochondromas, lengthening procedures, or correction of a dislocated radial head. Once a radial head is fully dislocated, it may not be possible to restore normal movement.

Expectations and Recovery from Surgery:

- Most people experience improvements in pain and function, though there are always risks.
- Most forearm surgery recoveries require immobilization with a cast or splint for 4-6 weeks.
- Possible risks may include nerve injury, stiffness, or recurrence of the deformity (especially in growing children)

Routine monitoring is crucial, especially for children, as new growths can lead to new challenges. Ongoing collaboration with your clinical team is important to support timely intervention and the best possible long-term outcomes.

[Feldman DS, Rand TJ, Deszczynski J, Albreuczynski T, Paley D, Huser AJ. Prediction of radial head subluxation and dislocation in patients with multiple hereditary exostoses. J Bone Joint Surg Am. 2021;103\(23\):2207-2214.](#)

[Noonan, K. J., Randolph, J. C., & Farnsworth, C. L. \(2002\). Evaluation of the Forearm in Untreated Adult Subjects with Multiple Hereditary Osteochondromatosis. The Journal of Bone and Joint Surgery, 106\(1\), 1-10.](#)