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American Academy of Pediatrics-Section on Orthopaedics and the Pediatric Orthopaedic Society of North America

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

POSNA
PEDIATRIC ORTHOPAEDIC SOCIETY OF NORTH AMERICA

Five Things Physicians and Patients Should Question

1 Do not order a screening hip ultrasound to rule out developmental hip dysplasia or developmental hip dislocation if the baby has no risk factors and has a clinically stable hip examination.

Hip dysplasia/dislocation is relatively rare, with incidence of approximately 7 per 1,000 births. Studies have shown that universal screening programs for developmental hip instability using ultrasounds to assess otherwise normal appearing hips have a nearly negligible positive yield. There is a substantial false positive rate, with an associated increase in treatment rate, suggesting that babies without hip pathology are being treated. When there are no physical findings or underlying risk factors for hip dysplasia/dislocation in a newborn, a hip ultrasound is costly, time-intensive and the findings may be misleading to parents and physicians. This recommendation is in accordance with the 2016 AAP clinical report regarding the use of ultrasound in early detection of developmental dysplasia of the hip (see reference: "Evaluation and Referral for Developmental Dysplasia of the Hips in Infants").

2 Do not order radiographs or advise bracing or surgery for a child less than 8 years of age with simple in-toeing gait.

Mild in-toeing is usually a physiologic phenomenon reflecting ongoing maturation of the skeleton. Metatarsus adductus, femoral anteversion, and tibial torsion all contribute to in-toeing and tend to improve with growth. Simply monitoring gait for continued improvement at normal well child examination intervals is adequate until the age of 7–8 unless there is severe tripping and falling or asymmetry. It is not possible to alter the natural evolution using physical therapy, bracing or shoe inserts.

3 Do not order custom orthotics or shoe inserts for a child with minimally symptomatic or asymptomatic flat feet.

Flexible flat feet are normal physiologic variants commonly found in children and adults. Unlike a painful or rigid flatfoot that requires further workup, if an arch is present when standing on tiptoe, the foot can be managed with observation or over-the-counter orthotics. The use of custom orthotic devices to provide support for the foot does not aid in the development of the arch.

4 Do not order advanced imaging studies (MRI or CT) for most musculoskeletal conditions in a child until all appropriate clinical, laboratory and plain radiographic examinations have been completed.

History, physical examination, and appropriate radiographs remain the primary diagnostic modalities in pediatric orthopaedics, as they are both diagnostic and prognostic for the great majority of pediatric musculoskeletal conditions. Examples of such conditions would include, but not be limited to, the work up of injury or pain (spine, knees and ankles), possible infection, and deformity. MRI examinations and other advanced imaging studies are costly, frequently require sedation in the young child (5 years old or less), and may not result in appropriate interpretation if clinical correlations cannot be made. Many conditions require specific MRI sequences or protocols best ordered by the specialist who will be treating the patient. Inappropriately obtained MRIs may need to be repeated in those circumstances. Additionally, a significant dose of radiation is delivered to the patient during a CT scan, so their utility in a specific case would be best confirmed prior to ordering. Therefore, in those conditions where advanced imaging is indicated, it has greater value when it is used to answer a specific question that arises from a thorough clinical and appropriate radiographic evaluation. Additionally, if you believe findings warrant additional advanced imaging, discuss with the consulting orthopaedic surgeon to make sure the optimal studies are ordered.

5 Do not order follow-up X-rays for buckle (or torus) fractures if they are no longer tender or painful.

Buckle (torus) fractures are very common injuries in young children, especially in the distal radius. The fracture is one of compression, where the metaphyseal bone impacts on itself, and actually becomes denser. These fractures are inherently stable and do not necessarily require a formal cast, unless severe pain or fracture instability necessitates a cast for 4 weeks. Instead immobilization with a simple wrist brace or removable splint is often preferable. The mild cortical angular deformity reliably remodels over time and requires no intervention or monitoring. If the fracture is non-tender to palpation at 4 weeks post-injury, no follow-up radiograph is required, and full activities may be resumed.

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How This List Was Created

The Pediatric Orthopaedic Society of North America (POSNA) Evidence Based Medicine Committee and the Advocacy Committee worked together during 2014 and 2015 to develop five items in the practice of Pediatric Orthopaedics of tests or procedures that should not be done routinely. Approximately 20 members of these two committees participated in the process. Each surgeon, in a blinded fashion, submitted 5 items each from their practices and experience of tests or procedures that they found were commonly over-utilized. The items were tallied in order of number of times that item was listed by each surgeon. A total of 30 items were submitted. Both committees then agreed on final list of 5 items based of frequency of responses and importance of the condition. The Evidence Based Committee reviewed the appropriate literature to provide references and support for each item. The Executive Committee of the Orthopaedic Section of the American Academy of Pediatrics (AAP) reviewed the 5 listed items and provided further feedback. POSNA Board of Directors provided further feedback and voted on the final list. Various expert committees and sections of the AAP reviewed and approved the list. The AAP Executive Committee granted final approval of the list. The guidance in this list does not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

Sources

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About the AAP-Section on Orthopaedics

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The American Academy of Pediatrics is an organization of 66,000 primary care pediatricians, pediatric medical subspecialists and pediatric surgical specialists dedicated to the health, safety and well-being of infants, children, adolescents and young adults. The Section on Orthopaedics was founded over 40 years ago for the primary purpose of improving the musculoskeletal health of children through mentorship, education, research, advocacy, and service. The Section includes over 150 pediatric orthopaedic surgeons and sports medicine physicians who often collaborate with members of international societies such as the Pediatric Orthopaedic Society of North America.

About the Pediatric Orthopaedic Society of North America

POSNA
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The Pediatric Orthopaedic Society of North America (POSNA) is a not-for-profit professional organization of over 1,400 surgeons, physicians, and allied health members passionately dedicated to advancing musculoskeletal care for children and adolescents through education, research, quality, safety and value initiatives, advocacy, and global outreach to children in underserved areas.

For more information or to see other lists of Things Providers and Patients Should Question, visit www.choosingwisely.org.