

Practical Orthopaedics: Common Congenital Diagnoses in the Newborn

Future of Pediatrics
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GOALS

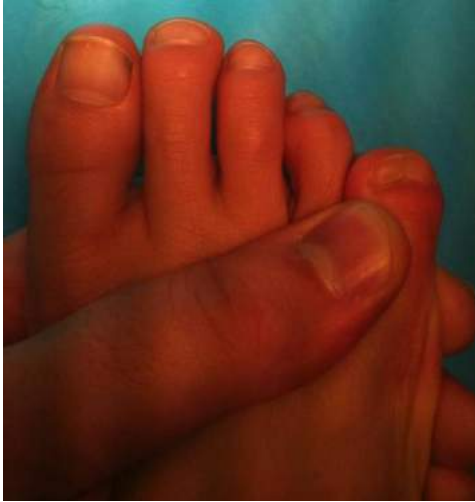
1. Identify opportunities to diagnose and treat in your office.
2. Understand diagnoses that do NOT require a work up.
3. Define clear referral guidelines for common conditions.

Polydactyly

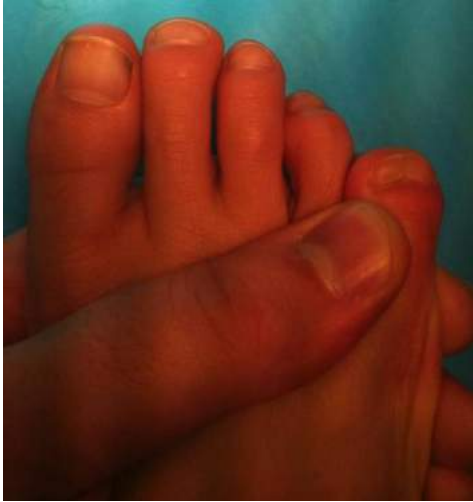


- Genetic
- Blacks > whites
- Small toe/finger most common

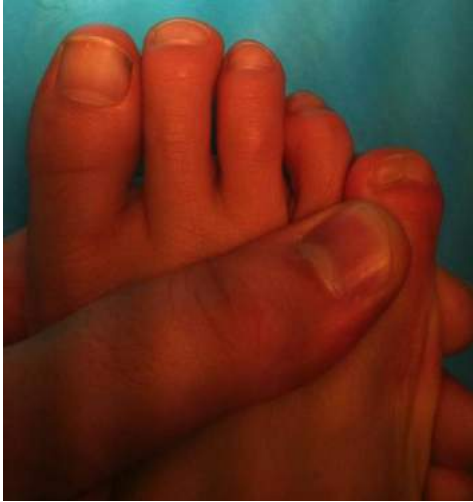
Polydactyly



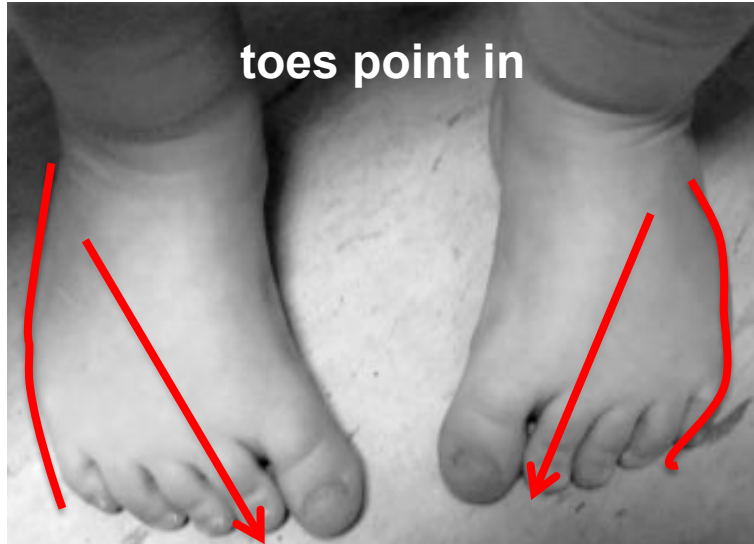
Polydactyly



Polydactyly

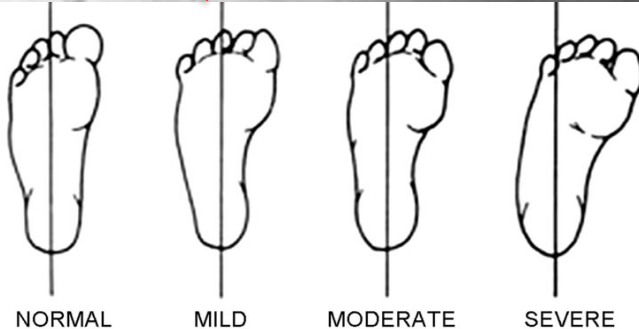


Metatarsus Adductus

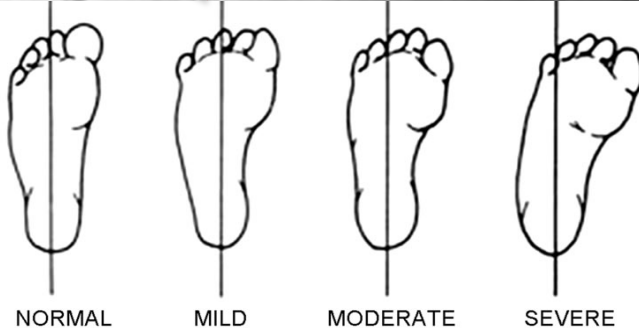
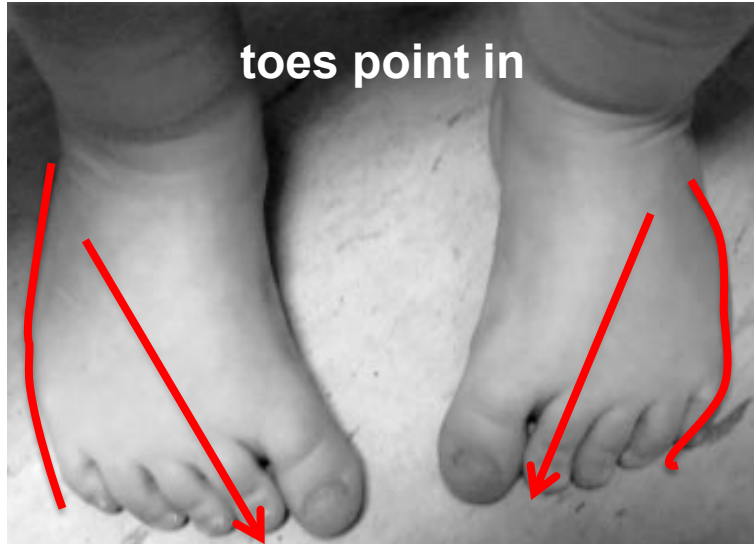


- Flexible = correctible
- Observe vs. casting

**CURVED LATERAL
BORDER**



Metatarsus Adductus



- Flexible = correctible
- Observe vs. casting

**CURVED LATERAL
BORDER**

**NOT TO BE
CONFUSED WITH...**

Clubfoot



Clubfoot talipes equinovarus



cavus



internal
rotation



varus



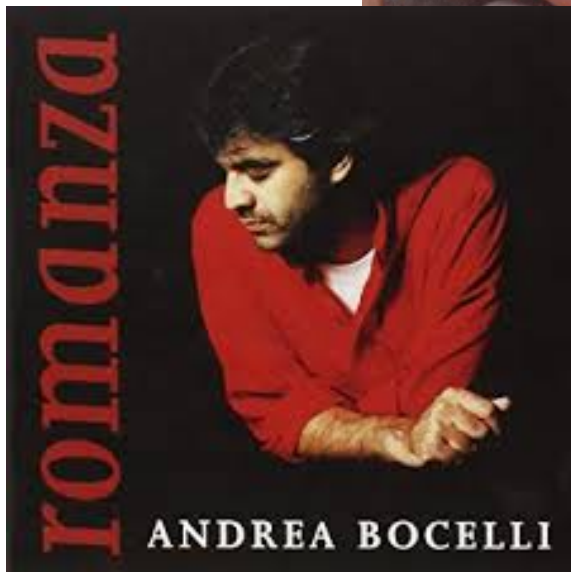
adductus



equinus

CAN'T DORSIFLEX

Cast #1



Cast #2



Cast #3



Cast #4



Cast #5 (post tenotomy)



3 weeks later...



Key to success!



You can play a big role.



1 year old.



3 years old



7 years old





**IF CASTING FAILS = SURGERY
JUST BEFORE WALKING AGE**

Calcaneovalgus foot



- Intrauterine positioning
- Resolve 1-2 months
- Cast if not
- Look for tibial bowing

Tibial Bowing



Bowing	Diagnosis
Anterolateral	Congenital pseudarthrosis (NF1)
Posteromedial	Benign
Anterior (+/- medial)	Fibula hemimelia

Anterolateral Tibial Bowing



NF type 1

Brace to avoid
fracture

Surgery for fracture

Posteromedial Tibial Bowing



Calcaneovalgus foot and LLD

Foot deformity will improve

Leg length discrepancy will need treatment

Anterior Tibial Bowing



Fibular deficiency

Reconstruction of leg or amputation depending
on foot and length of leg

Congenital Knee Dislocations



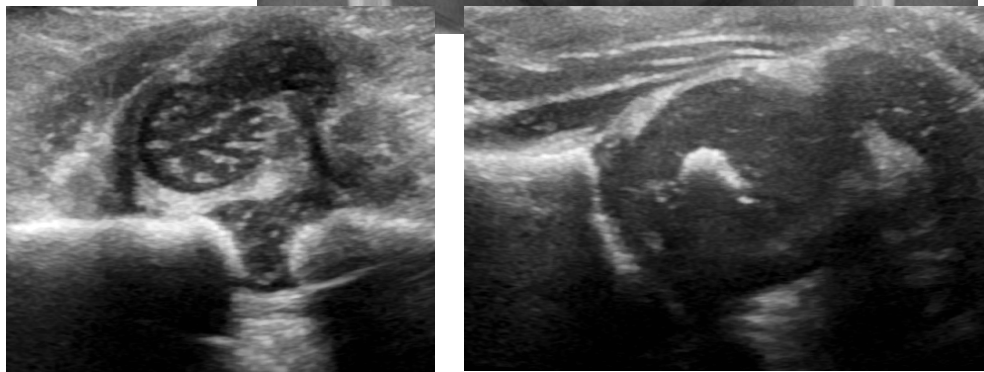
After casting/splinting...



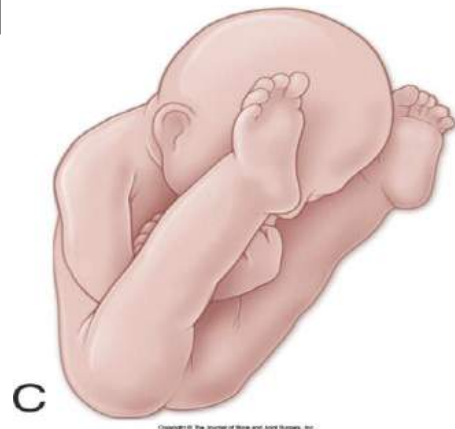
DDH



- **Spectrum of disease**
- **Common cause of OA**
 - Most <40 yo female
 - 5-10% all



U/S until 6 months old

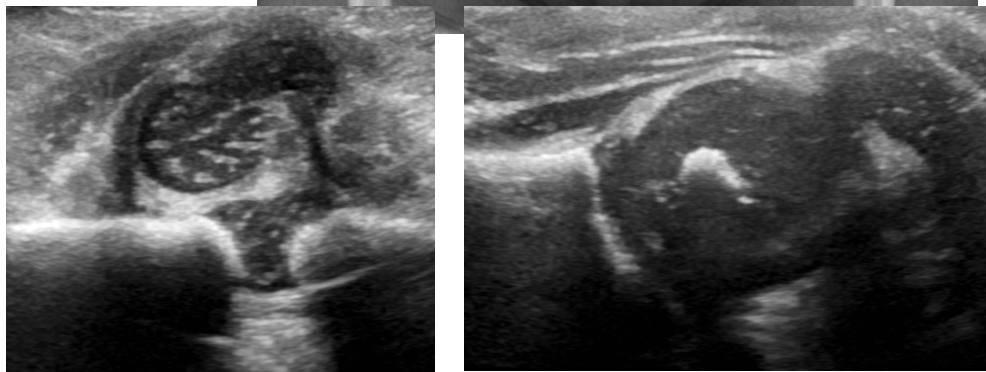


DDH

Female w/o risk factor = 75% cases



- ***Breech (2-27%)**
- ***Family history** (12x 1° relative)
- **Swaddling**
- **Female**
- **First born**
- **L>R**



U/S until 6 months old

DDH

Galeazzi's sign
difference in knee height



look for asymmetric thigh
folds – not specific

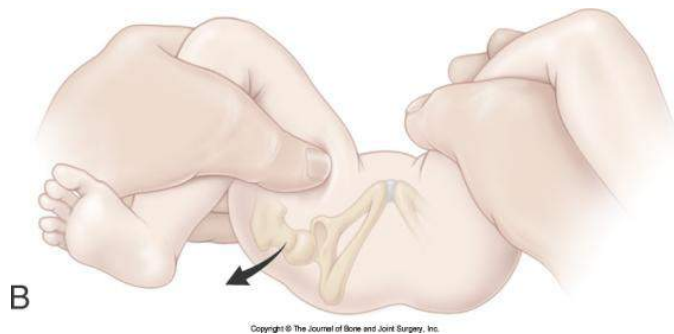
Decreased abduction



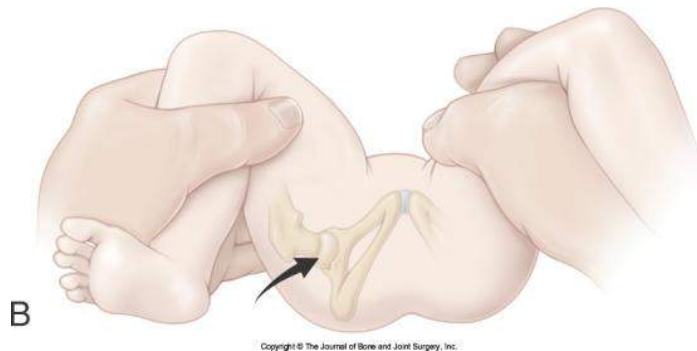
DDH

instability common at birth → most resolves

Barlow positive hip
“dislocatable”



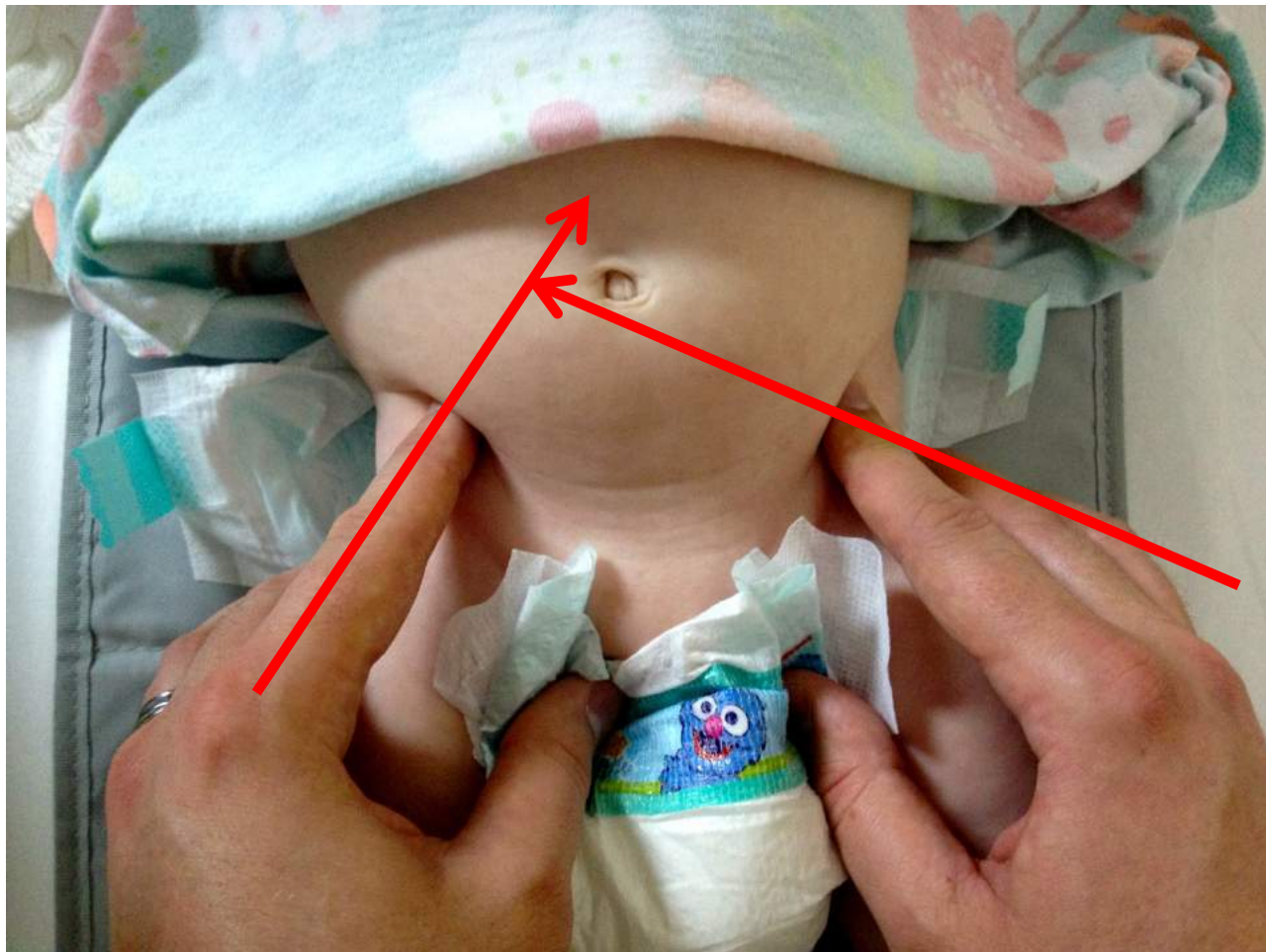
Ortolani positive hip
“relocatable”



hip clicks = soft tissues moving over bony prominences;

NO ASSOCIATION WITH DDH





AAP Guidelines

Abnormal exam → Ortho

**Inconclusive 2 week exam →
Ortho or U/S 3-4 weeks**

**+FH (F) or breech (M+F) →
U/S 6 wks or XR 4 months**

AAP Guidelines – Surveillance concept

S

Consider imaging before 6 months of age for male or female infants with normal findings on physical examination and the following risk factors:

- 1. Breech presentation in third trimester (regardless of cesarean or vaginal delivery)
- 2. Positive family history
- 3. History of previous clinical instability
- 4. Parental concern
- 5. History of improper swaddling
- 6. Suspicious or inconclusive physical examination

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Referral

- **+Ortolani**
- **Dislocated hip**
- **Limited/asymmetry abduction > 4 weeks age**
- Relative: risk factors, questionable exam, pediatrician/parent concern

DDH



- Pavlik (<6 months)
- NO DOUBLE DIAPERS
- Closed vs. open reduction when older

Associated conditions (?):



torticollis



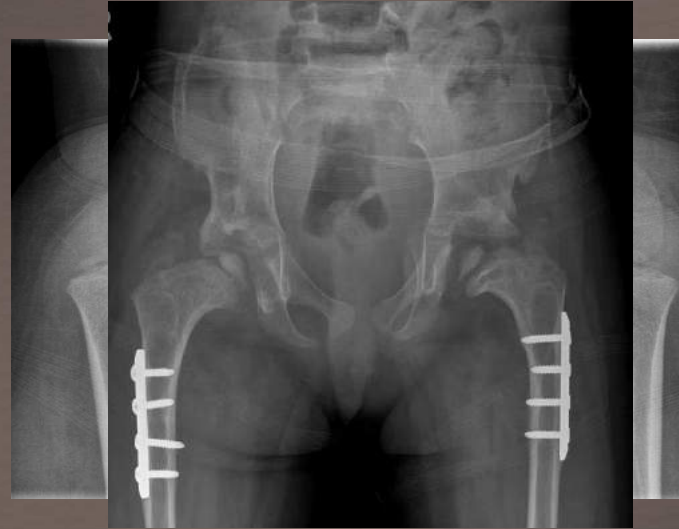
metatarsus adductus

DDH – dislocated hip



Unilateral

≠



bilateral



Children's National™

Congenital Muscular Torticollis

- “packing” problem
- infant
- +/- SCM mass



- Associated with DDH
- Different than paroxysmal torticollis



stretching program

Congenital Muscular Torticollis



Torticollis

Type	Features
Muscular torticollis (not painful)	Fetal positioning SCM mass stretching
Congenital spine anomalies (not painful)	Need x-rays
Infectious (Grisel's) (painful)	Retropharyngeal abscess After ENT surgery
Traumatic (painful)	C1-C2 subluxation
Neoplasms	Posterior fossa tumor Upper motor signs (↑DTR)
Paroxysmal	Migraine variant Lasts only for minutes recurrent

Thank you!

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