



**Royal London  
Paediatric Courses**



**Dr Cheentan Singh**

**6 Weeks Check: What not to miss**

**PAEDIATRIC UPDATES FOR GPs & PRIMARY CARE**



**Dr Cheentan Singh (M.D., F.R.C.P.C.H.)**

*Consultant Paediatrician / Neonatologist  
Sp. Interest in Cardiology  
North Middlesex University Hospital*

*Honorary Paediatric Nephrologist  
Evelina Children's Hospital, St Thomas NHS*





## 6 Weeks Check

**What not to miss !!!**



# 6 Weeks Check: What not to miss

## Scope:

- Background (changes in 2021)
- Clinical issue
  - Eyes / Hips / Testes & Heart
- Referrals and follow-up on
- Missed cases / Failing to attend
- Communication with families
- Quality assurance / KPI
- Maintaining Competencies
- Public Health England's guidance / resources

# NIPE: Neonatal and Infant Physical Examination

**NIPE: 2 times (First 72 hrs and within 6-8 weeks)**

4 components of NIPE:

1. Eyes: ~ 2 or 3 / 10,000 may require treatment.
2. Heart: ~ 1 in 200 babies may have a heart problem.
3. Hips: ~ 1 or 2 in 1,000 may require treatment.
4. Testes: ~ 1 in 100 baby boys may require treatment.

- Head to toe examination
- Documentation on Smart4NIPE or GP IT system



Eyes

Hips

Testes

Heart



# Eyes: Congenital Cataracts (2-3/10000 births)

- Long term issue
  - Delay will cause Amblyopia (vision loss)
- Risk Factors:
  - Family history of congenital eye defects
  - Genetic Syndromes eg Trisomy 21
  - Local external vascular malformations
  - Congenital infections
  - Prematurity
  - Rare Neurological conditions

Check Parental concerns of visual behaviours fixing, white spots, asymmetry, any abnormalities





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Virtual Quiz !





# Virtual Quiz 1: Which side is the problem?

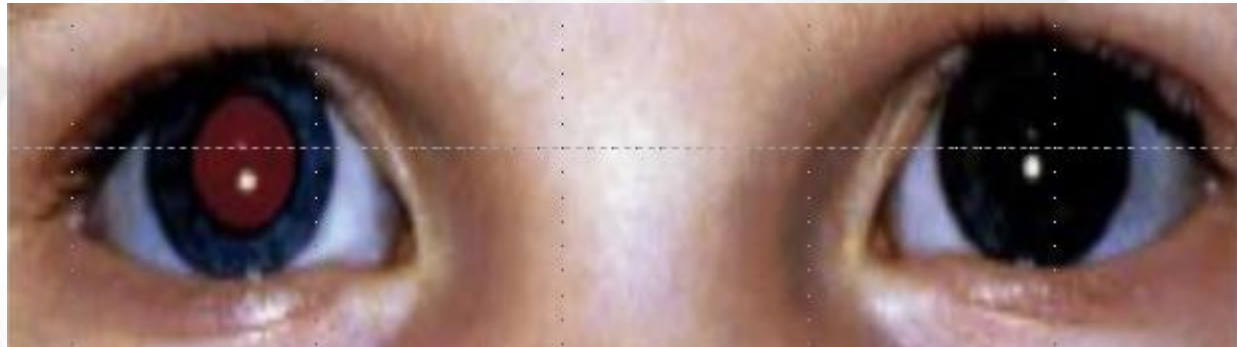
- Image 1





# Virtual Quiz 1: Which side is the problem?

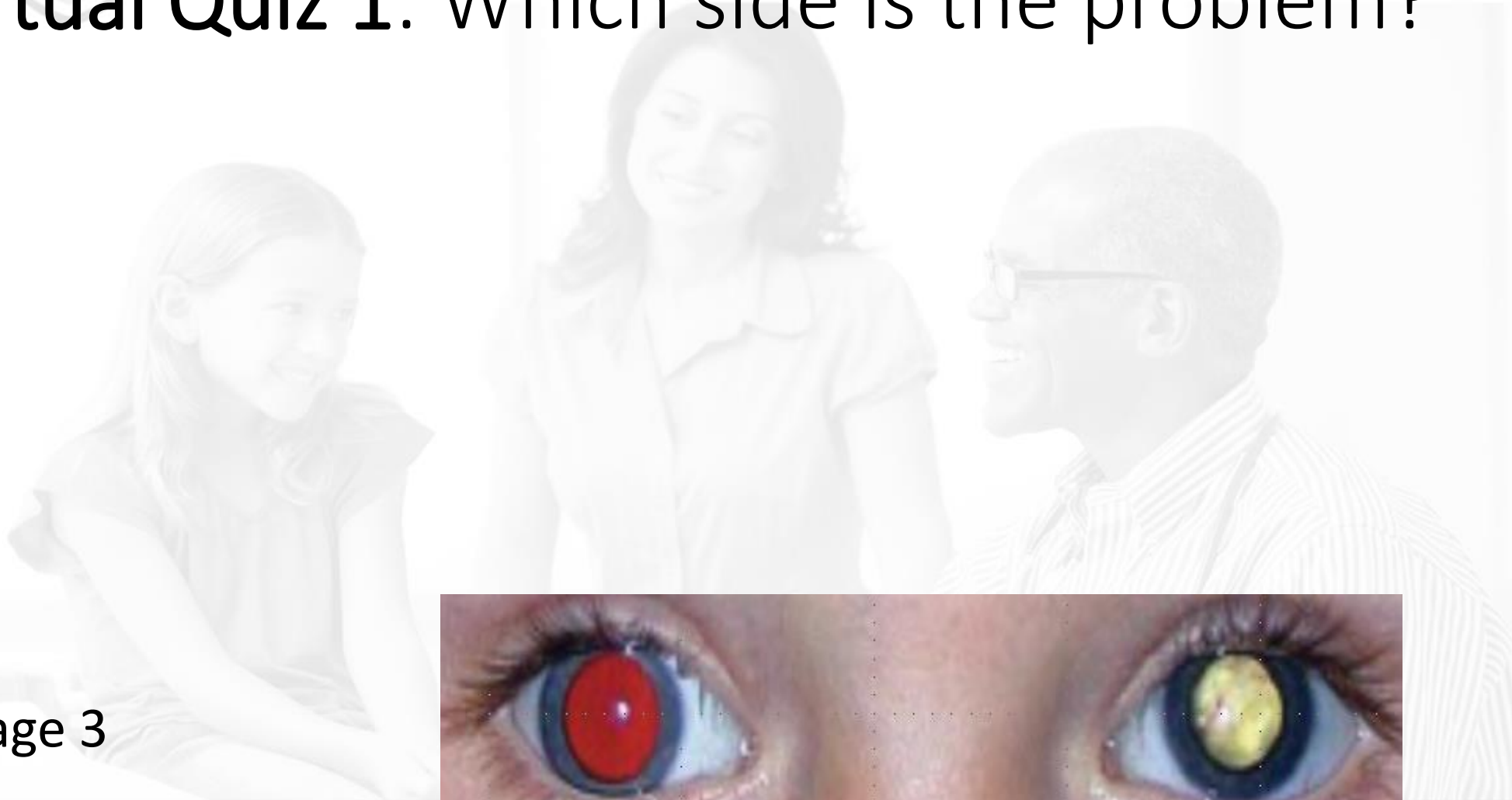
- Image 2





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# Virtual Quiz 1: Which side is the problem?



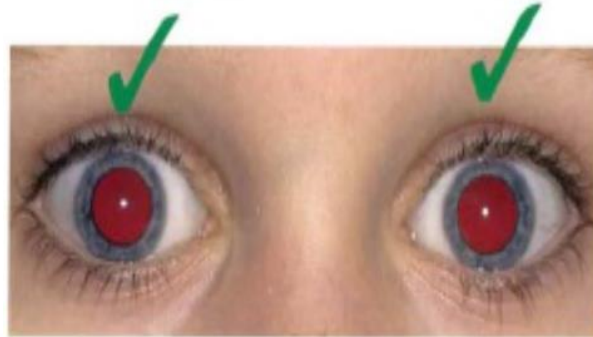
- Image 3





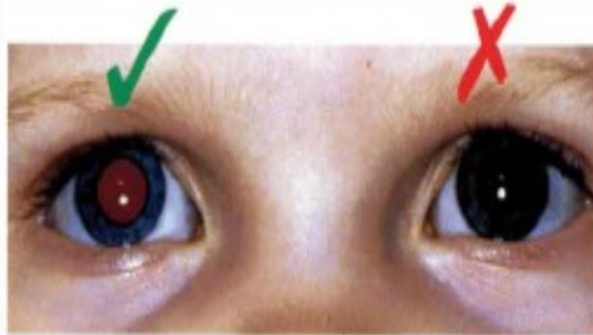
# Virtual Quiz 1: Which side is the problem?

- Image 1



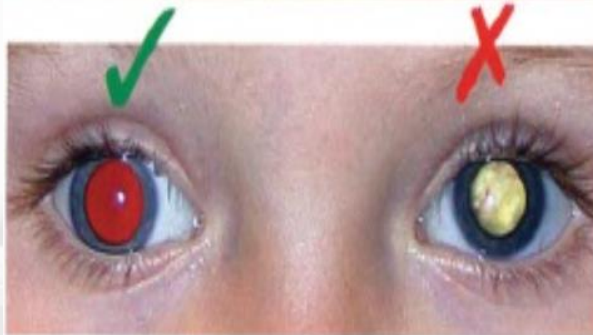
Normal

- Image 2



Left Eye

- Image 3



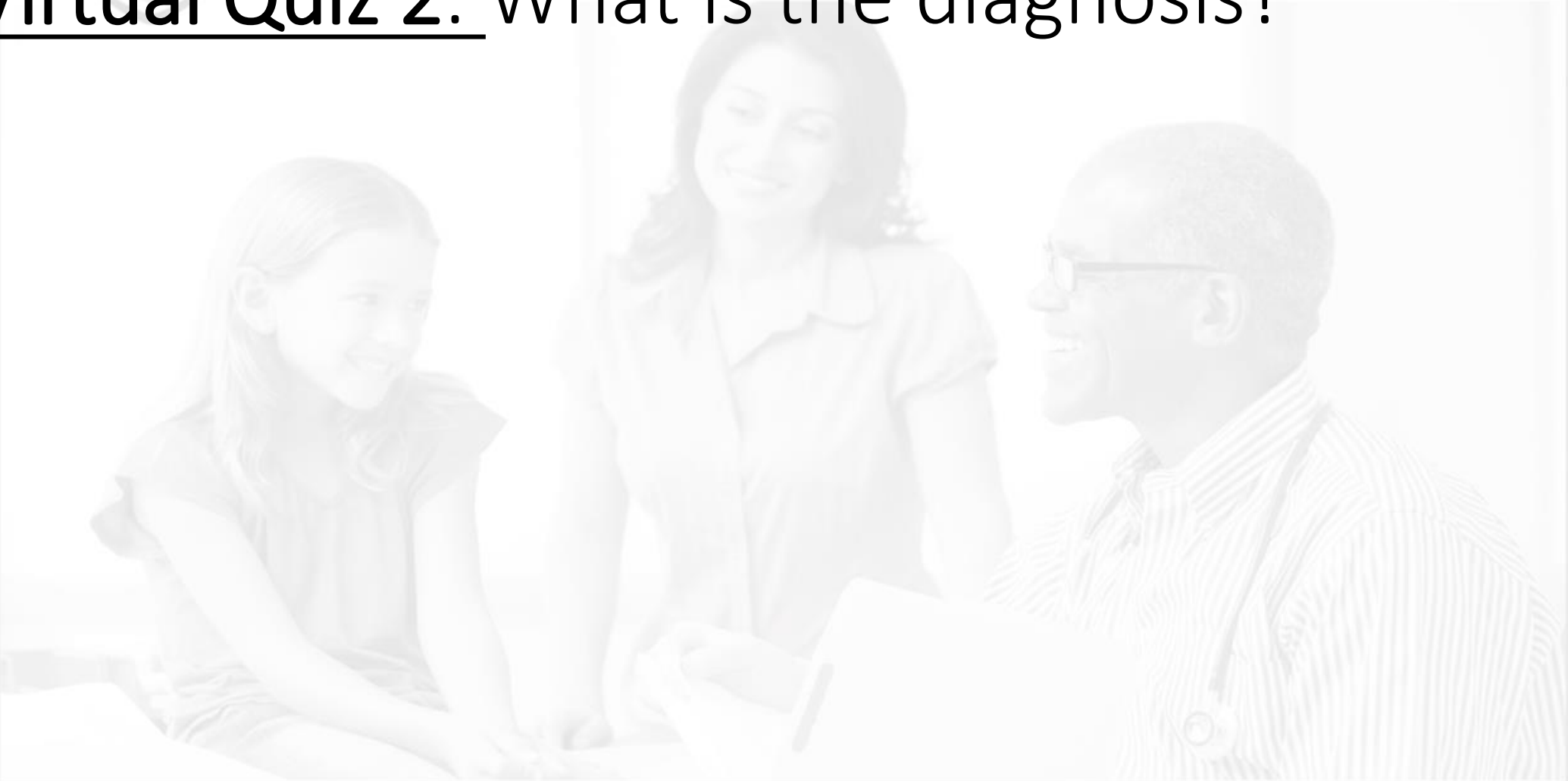
Left Eye





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# Virtual Quiz 2: What is the diagnosis?





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Image 1

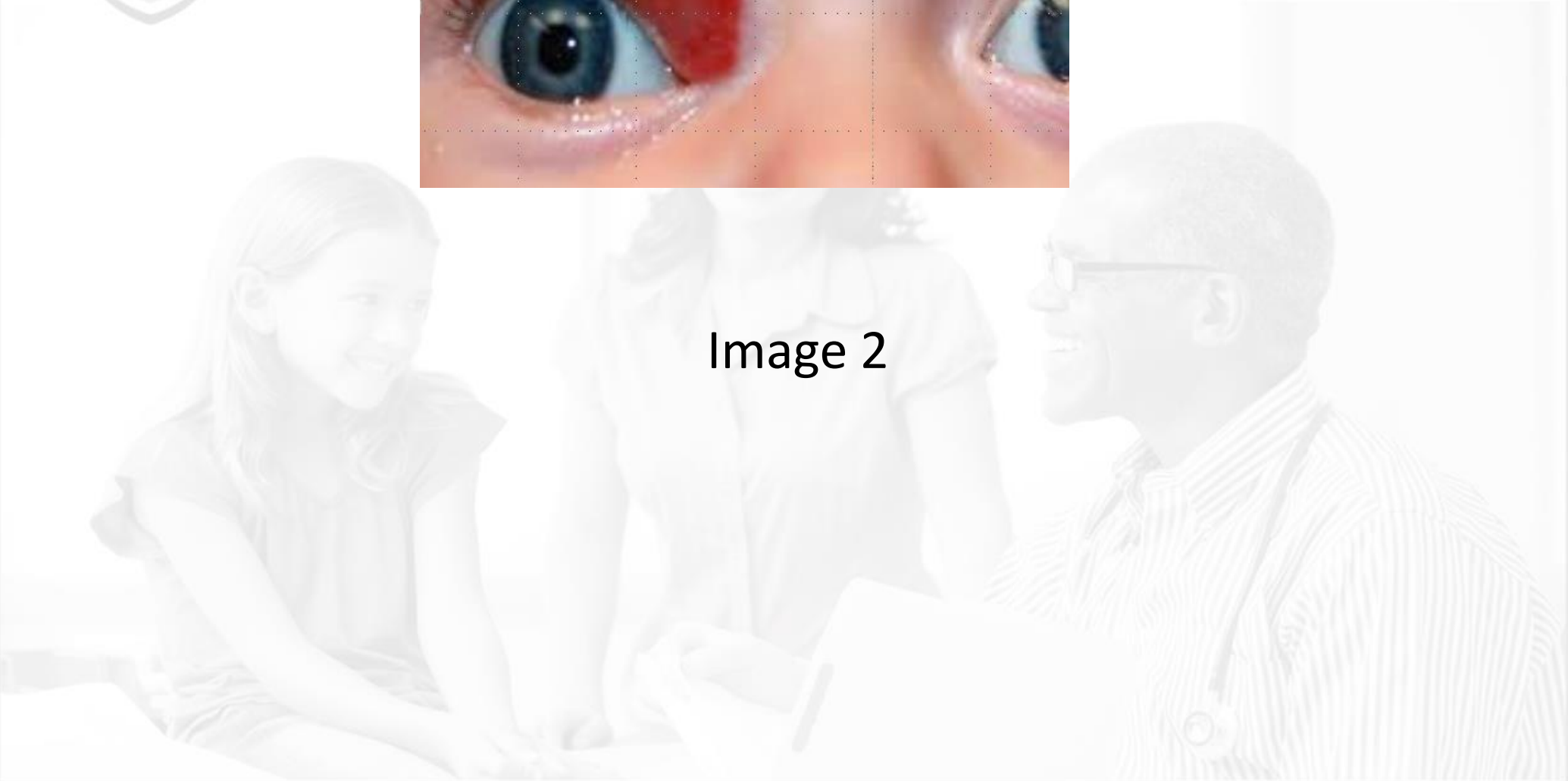




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Image 2





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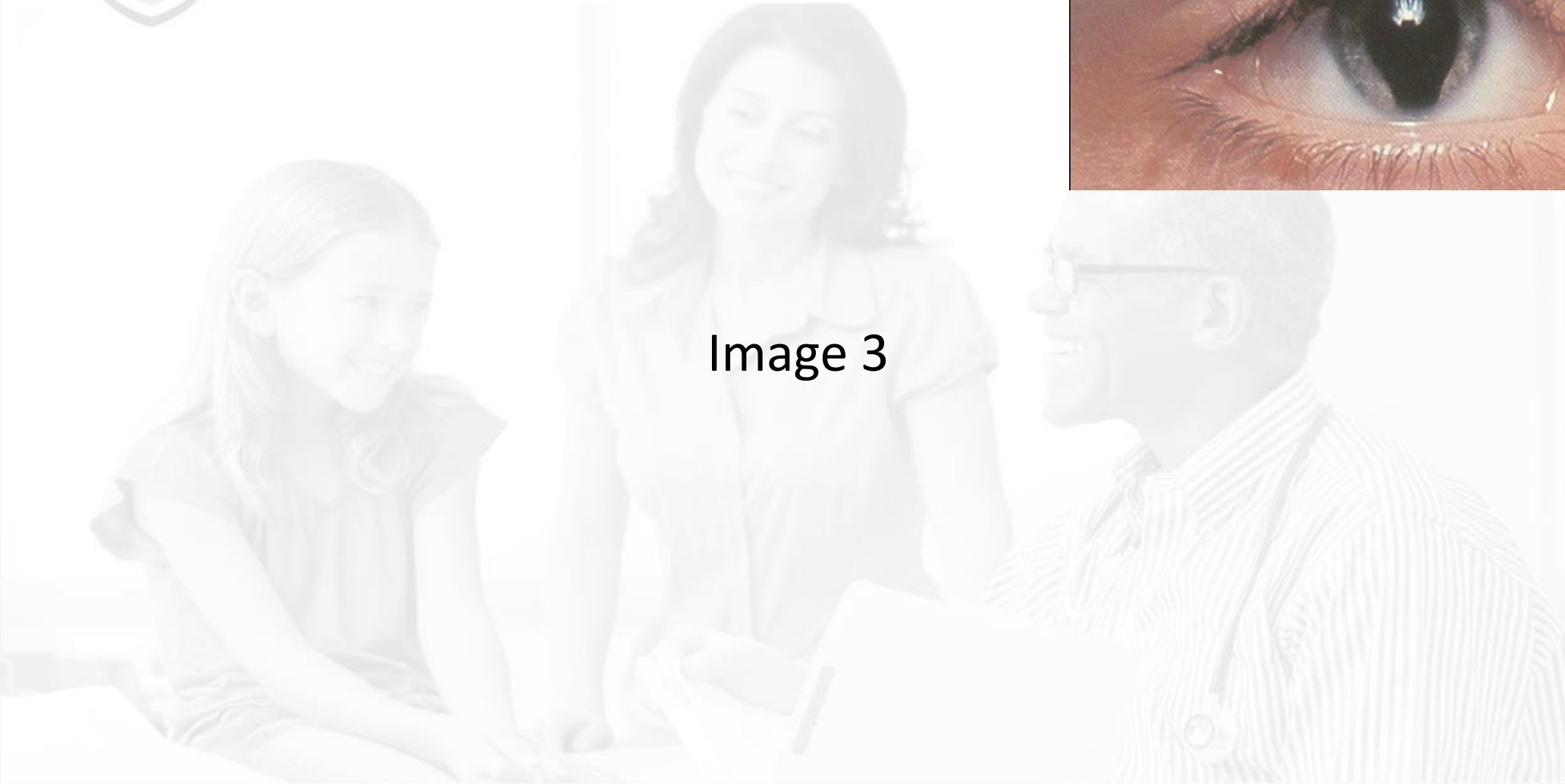


Image 3





# Royal London Paediatric Courses

Image 4







# Royal London Paediatric Courses

Image 5





# Royal London Paediatric Courses



Image 6





**Left Eye cataract**



**Eyelid Haemangioma**



**Coloboma**



**Corneal opacity**



**Conjunctivitis**



**Blocked Tear Duct**







# Red eye reflex

**Normal**



**Abnormal**





# Absent / abnormal red eye reflex

## **Screen positive following 6 to 8-week infant examination**

Infants with a positive screen at the 6 to 8-week examination require assessment by a consultant ophthalmologist or paediatric ophthalmology service by 11 weeks of age.







Eyes

Hips

Testes

Heart



# Hips: Development Dysplasia (2-3/1000 births)

(Changes in 2021)

- Long term issues:
  - Impaired mobility
  - Pain
  - Osteoarthritis
- Undiagnosed / delay leads to need for complex surgery
- Risk factors (Should also have Hip US scan)
  - Family history
  - Breech after 36 weeks
  - Breech at birth >28 week gestation (both twins)



# Parenteral Concerns:

- one leg cannot be moved out sideways as far as the other
- one leg seems to be longer than the other
- one leg drags when their baby starts crawling
- child walks with a limp or has a 'waddling' gait

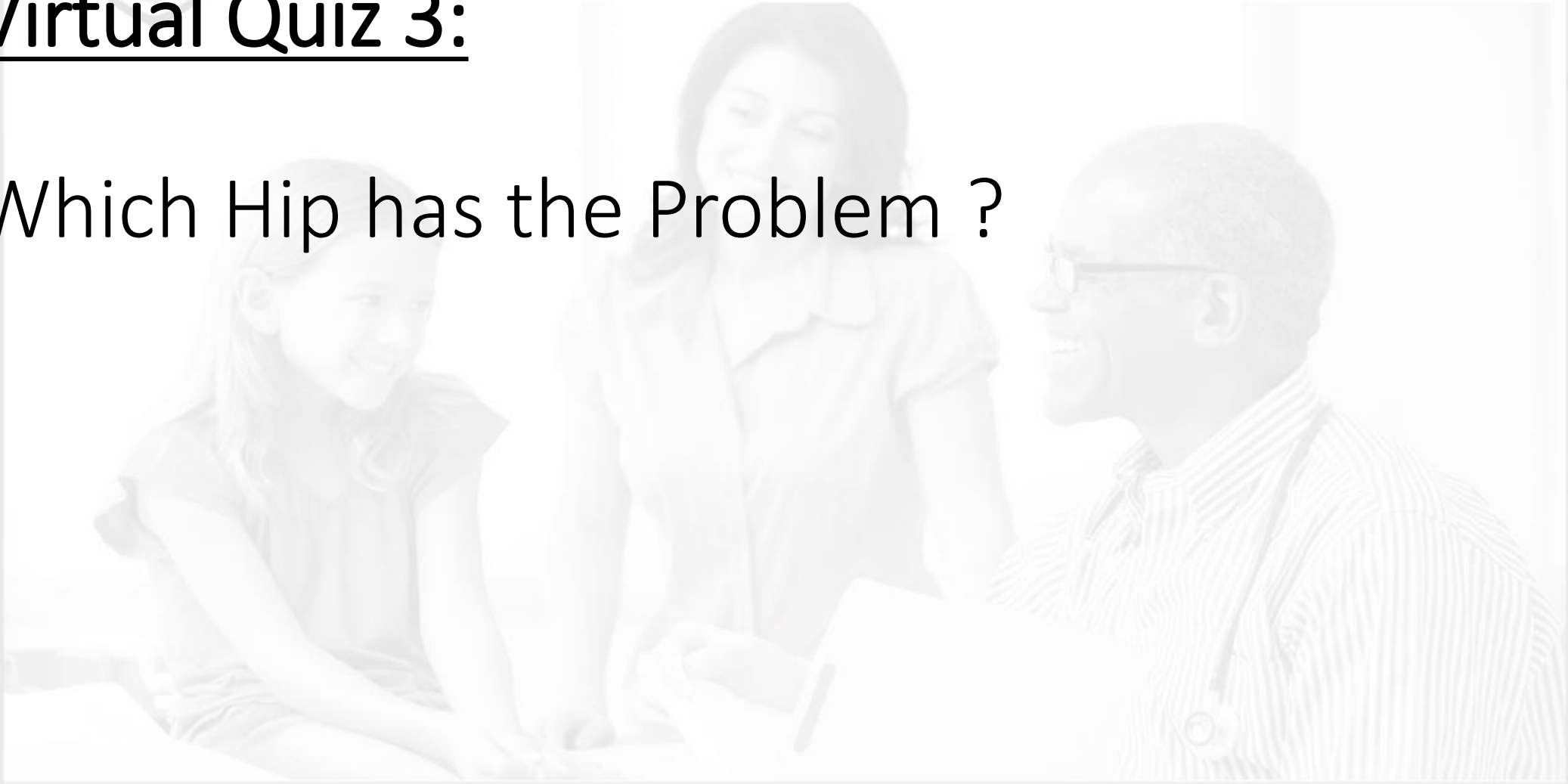




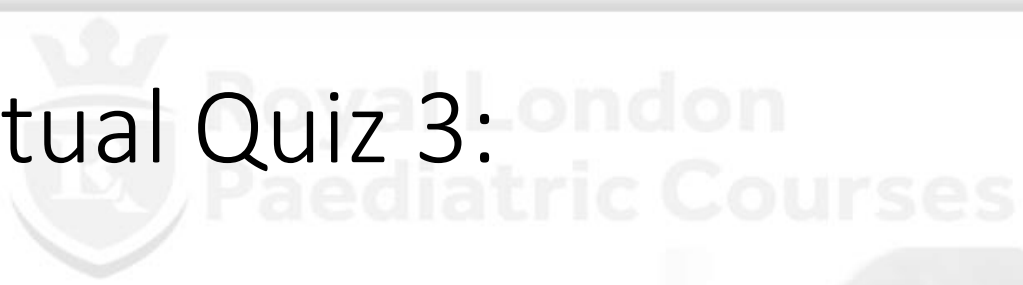
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## Virtual Quiz 3:

Which Hip has the Problem ?



# Virtual Quiz 3:



Which side is the Problem ?If DDH is suspected

Image 1





# Virtual Quiz 3: Which side is the Problem ? If DDH is suspected

Image 2



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# Virtual Quiz 3: Which side is the Problem ? If DDH is suspected

Image 3





# Hips (History and consent)

- Observation

**Leg Length is reduced**

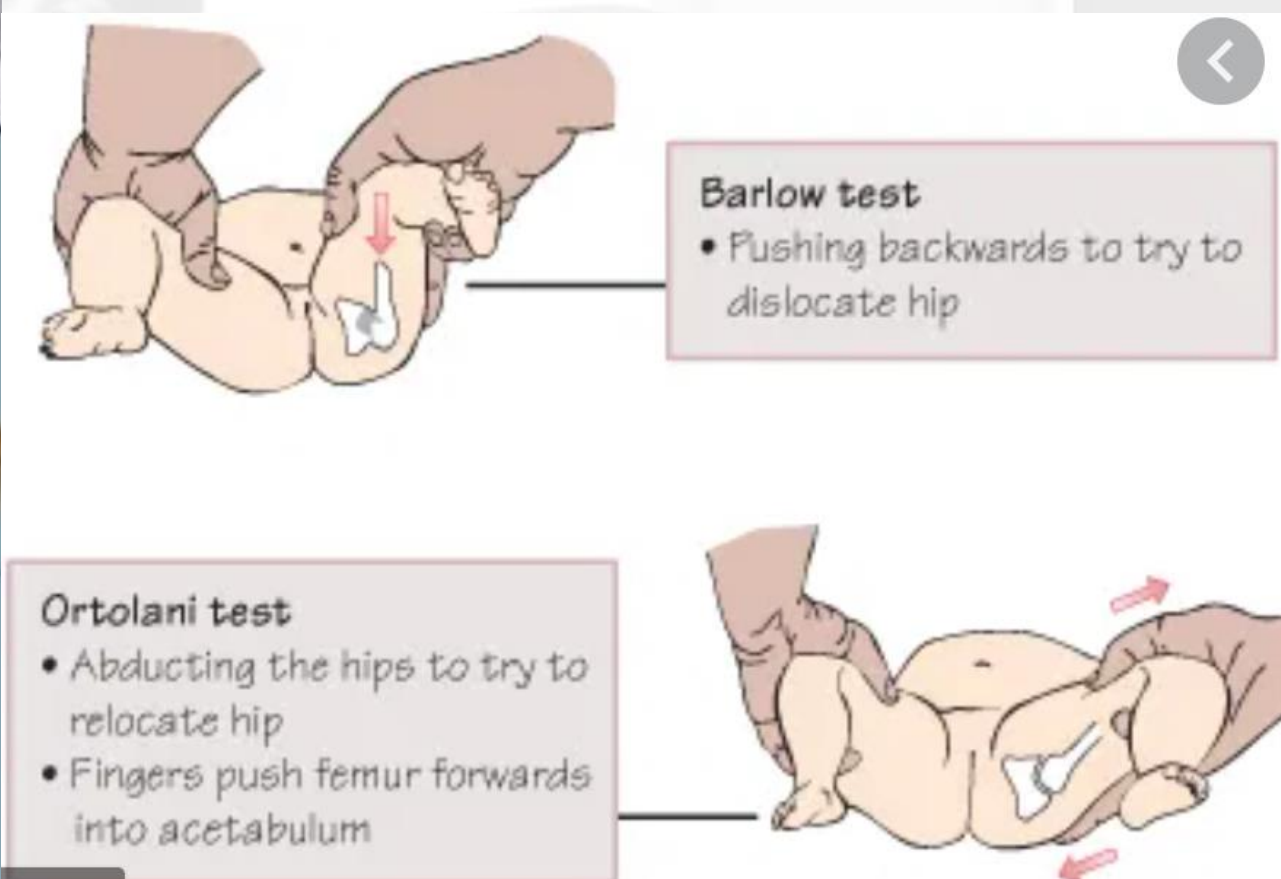
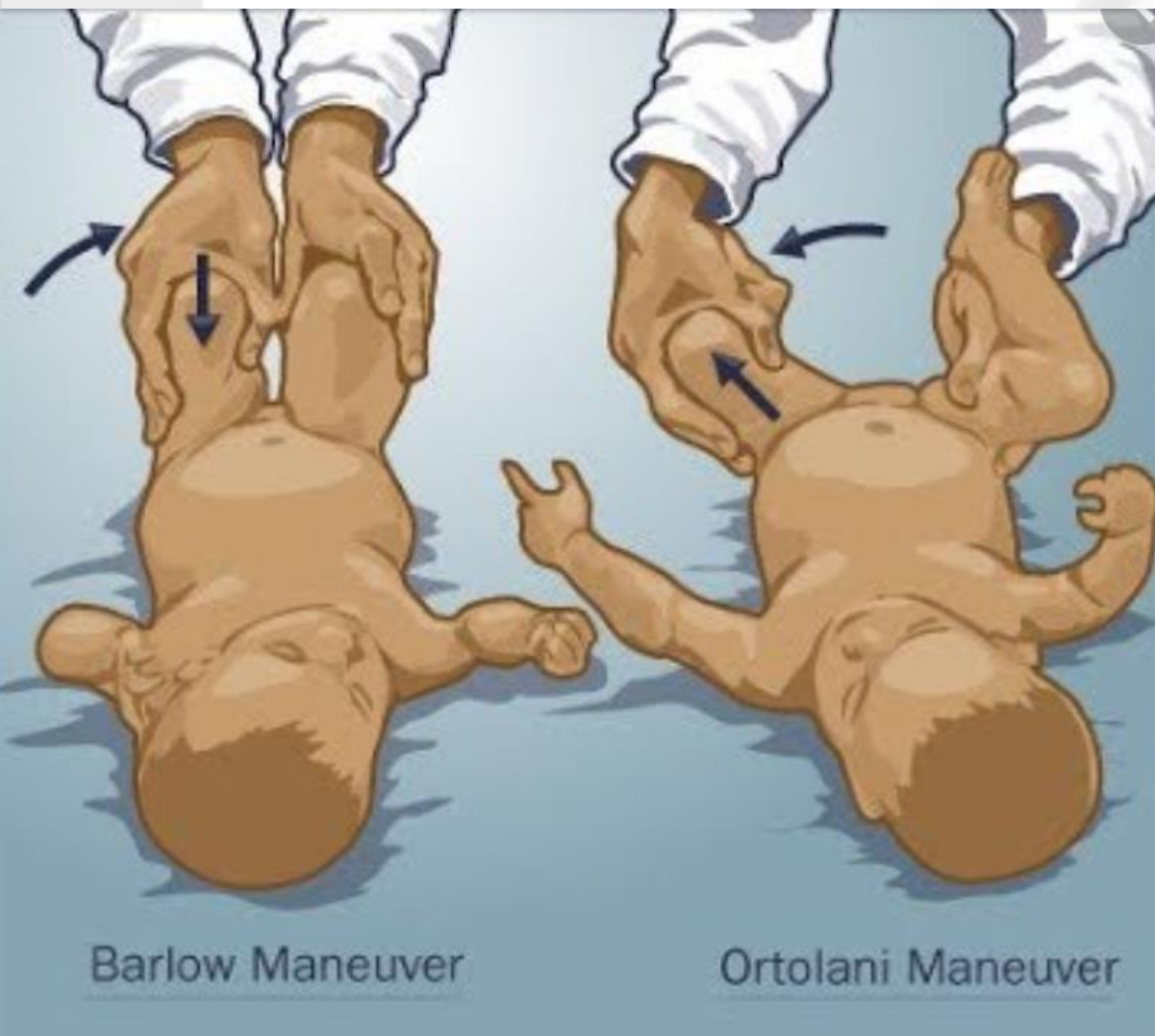
**Knee Height is reduced**

**Abduction is restricted**





# Hips: Barlow & Ortolani





# Positive Hip screening

- Difference in leg length
- Knees at different levels when hips and knees are bilaterally flexed
- Restricted unilateral limitation of hip abduction (with a difference of 20 degrees or more between hips)
- Gross bilateral limitation of hip abduction (loss of 30 degrees abduction or more)
- Palpable 'clunk' when undertaking the Ortolani or Barlow manoeuvre

# Hip screen positive (risk/examination)

+ve Risk factors on History (normal Examination): Hip US before 6 weeks of age

Ultrasound hips (US) is for new-born positive screen / risk need to enter into pathway by 6 weeks of age

Positive screen at 6-8 weeks check:

Refer directly to paediatric orthopaedics and be seen by 10 weeks of age.

Clicks and asymmetry of skin fold are not a part of NIPE anymore



Eyes

Hips

Testes

Heart



# Testes: Cryptorchidism (2-6/100 births)

- Long term issues
  - Testicular cancer
  - Reduced fertility
  - Torsion
  - If bilateral (ambiguous genitalia genetic / endocrine problems )
- Early diagnosis reduces risk of the above
- Risk Factors
  - Family history
  - Low birth weight
  - SGA / Prematurity





# Testes: History and Consent



A



B



C



D



E



F

# Testes: Absence / abnormal position (@6-8Week)

- Bilateral Undescended testes :
  - Urgent referral: to be seen by Paediatrician in 2 weeks
- Unilateral Undescended testis :
  - Rev in 4 – 5 months
  - Refer for surgery no more than 6 months later
- Retractable vs undescended testes

Eyes

Hips

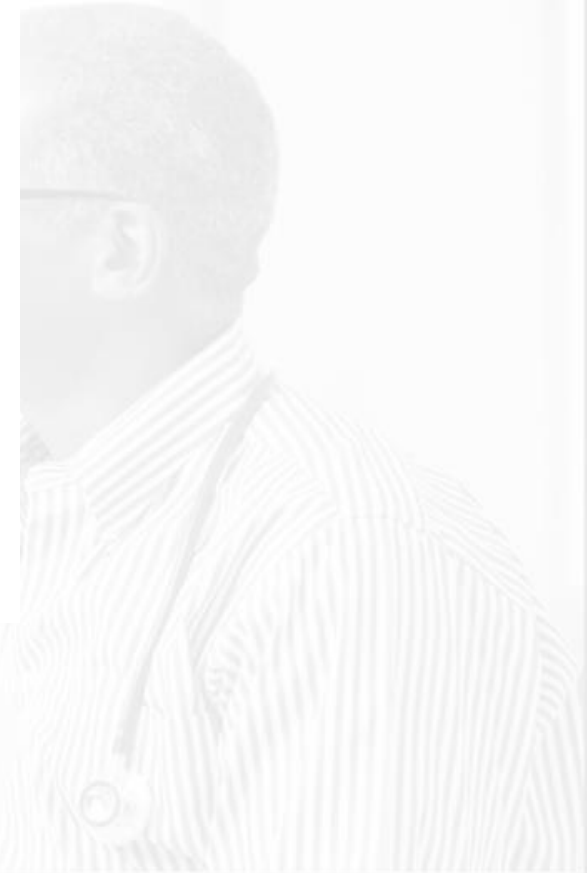
Testes

Heart

# Cardiac Defects 6 – 12/1000 live births

## Risk Factors

- Family history of CHD (first-degree relative)
- Fetal trisomy 21 or other trisomy diagnosed
- Cardiac abnormality suspected from the antenatal scan
- Maternal exposure to viruses, for example, rubella
- Maternal conditions, such as diabetes (type 1), epilepsy, systemic lupus erythematosus (SLE)
- Teratogenic drugs taken during pregnancy





# Cardiac Examination:

Observation includes reviewing the baby's:

- general tone
- central and peripheral colour
- size and shape of chest
- respiratory rate
- symmetry of chest movement, use of diaphragm and abdominal muscles
- signs of respiratory distress (recession or grunting)

Palpation involves examination of the baby's:

- femoral and brachial pulses for strength rhythm and volume
- assessment of perfusion through capillary fill time
- position of cardiac apex (to exclude dextrocardia)
- palpation of liver to exclude hepatomegaly (may be present in congestive heart failure)
- vibratory sensation felt on the skin (+/- thrill)

Auscultation includes identification of a murmur, either systolic or diastolic or loudness. It also includes the assessment of the quality of heart sounds at:

- second intercostal spaces adjacent to the sternum left (pulmonary area)
- second intercostal spaces adjacent to the sternum right (aortic area)
- lower left sternal border in the fourth intercostal space (tricuspid area)
- apex (mitral area)
- midscapulae (coarctation area)

## Signs and symptoms that suggest critical or major congenital heart abnormality

These include:

- tachypnoea at rest
- episodes of apnoea lasting longer than 20 seconds or associated with colour change
- intercostal, sub-costal, sternal or supra-sternal recession, nasal flaring
- central cyanosis
- visible pulsations over the precordium, heaves, thrills
- absent or weak femoral pulses
- presence of cardiac murmurs or extra heart sounds



Significant vs Benign Murmurs



# Missed Cases

- Not had first NIPE in 72 hrs
- Not had 6 -8 weeks check for undescended testes due to being inpatient
- Unscreened babies moved into the area

Aim to complete NIPE before 3 months of age  
after 3 months Ortolani and Barlow are not accurate



# Communication

- Families
  - Explanation of the findings
  - Managing expectations
  - Answering the queries
- Maternity / Neonatal / Paediatric teams
  - Information sharing
  - Results of assessments and imaging
  - Communication re missed cases



# Quality Assurance / Key Point indicators

- Provider's duty to meet and maintain the standards
- Regular checks
  - Monitoring if service meets or fails the standards
  - Regional QA teams makes recommendations ot commissioners and providers
  - They also offer advice on management of incidents
  - Formal QA visits and national data returns
- KPIs: Performance standard at least 95% of eligible babies
  - NIPE in 72 hr of birth
  - Hip US within 2 weeks of NIPE (positive cases)

# Maintaining Competencies

<https://www.e-lfh.org.uk/programmes/nhs-screening-programmes/>



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Sections



## Antenatal and newborn

NHS Fetal Anomaly Screening Programme (FASP)

NHS Infectious Diseases in Pregnancy Screening Programme (IDPS)

NHS Newborn and Infant Physical Examination Screening Programme (NIPE)

NHS Newborn Blood Spot Screening Programme (NBS)

NHS Newborn Hearing Screening Programme (NHSP)

NHS Sickle Cell and Thalassaemia Screening Programme (SCT)



Online resource:



Public Health  
England

Guidance

# **Newborn and infant physical examination (NIPE) screening programme handbook**

Updated 28 April 2021

<https://www.gov.uk/government/publications/newborn-and-infant-physical-examination-programme-handbook/newborn-and-infant-physical-examination-screening-programme-handbook>



Any Questions ???

