

**Frequently Asked Questions of  
Training Paediatricians**

**by**

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## Introduction

In medicine, as with most other professions, teaching of trainees is by specialists. Often it is assumed what trainees know and what they should know.

This book does neither. All the questions in this book were asked by doctors training.

If you are a paediatrician in training and have a question unanswered in this book then ask it at:

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## **1. Abdominal migraine - How do you manage it?**

Abdominal migraine is more common in children than classical head migraine. There is often a family history. It usually presents as non-specific central pain which can be associated with nausea.

Triggers include:- caffeine (usually fizzy drinks), cheese, chocolate, orange juice and stress. Remember that excitement and stress are very similar so birthdays and Christmas may trigger it.

Removing the triggers is often enough to stop attacks.

Attacks can be treated symptomatically (NB. Immediately at onset of pain) or, if frequent enough, with prophylaxis, usually Pizotifen but Propranolol may be used and the prognosis is better in boys.

Often abdominal migraine will progress to classical head migraine.

## **2. ADHD – What is it?**

Attention Deficit Hyperactivity Disorder. The title says it all and it is beyond bad behaviour. It mainly occurs in boys. There needs to be a history of the behaviour in more than one setting, e.g. at home, school or in the doctor's surgery.

There are scoring systems for parents and teachers to fill in. There are no tests.

## **3. ADHD – How do you treat it?**

This should jointly involve – parents, school, doctor, therapist to improve behaviour. This will often be enough. Only when these are in place and they have not worked then medications should be considered.

## **4. Anticipation – What is it?**

Anticipation is the process where a condition gets worse from one generation to the next. It stops getting worse when a generation does not get to breeding age. It usually gets a lot worse from mother to son. The three examples are Huntingtons chorea, Fragile X and Myotonic dystrophy.

## **5. Apnoea – What are the causes?**

Most common in pre-term infants but in the first few days of life a term infant they may arise related to incoordination while trying to feed.

After this age apnoeas are or are not associated with infection.

Almost any illness in a baby, but especially respiratory illnesses like bronchiolitis.

'Non-infected' causes include seizures, gastric reflux, idiopathic. Idiopathic is otherwise called apparent life threatening event (A.L.T.E.), and investigation usually reveals no positive findings. Reassuringly they rarely precede cot death, however, most parents request an apnoea alarm.

## **6. Apnoea – Do alarms work?**

There is no evidence that they prevent cot death, yet they relieve parental anxiety, especially if they have suffered a previous cot death.

## **7. Asthma - When do you use a beta 2 – agonist syrup?**

Paediatricians generally do not advise its use but rather a suitable inhaler.

## **8. Asthma and viral induced wheeze - Does viral induced wheeze lead to asthma?**

Not usually – it tends to improve each winter and resolve by 5 years. Asthma is more likely if there is a positive family history of atopy or if the child has eczema

## **9. Asthmatics – When should they have an x-ray?**

There are two main situations/considerations. Firstly when a child presents with suspected asthma as one of the differential diagnosis is lymphoma. The risk being should the 'asthma' be incorrectly treated with prednisolone then the lymphoma prognosis is worse.

Secondly, if you suspect pneumonia – e.g. local signs, pyrexia etc.

## **10. Back pain - What to do with children's back pain?**

This is a rare problem and needs to be taken very seriously. Exclusion of tumour, infection, discitis, osteomyelitis, TB.

Plain x-rays may occasionally be useful but more likely MRI or bone scan is necessary.

The younger the child the more likely a serious pathological cause.

## **11. Bilirubin - When does a baby need a bilirubin?**

There are two absolute rules : if a baby is jaundiced on day 1 it is pathological (e.g. infection, blood incompatibility, etc.) and if it is jaundiced on day 14 it needs a split bilirubin.

At other times it is relative and the recommended treatment levels keep changing, one rule of thumb is:- tenth of the birth weight in grams for phototherapy,(ten times the gestation for exchange). Bilirubin crosses the blood brain barrier and can cause kernicterus. Jaundice progresses from head to feet and a baby should be examined in natural light to avoid error. It peaks on day 3 – 5 and then fades. If there is jaundice of the eyes or thighs then it is likely to need treatment.

If after day 5 they have fading jaundice and feeding well, it does not need bloods until day 14 – then it must be a split bilirubin (if still jaundiced). Also note that breast fed babies may stay jaundiced as long as they are breast fed.

## **12. Birthmarks - What do you say to parents?**

The prognosis is very variable.

Naevi-stork marks on the neck or eyelids will fade.

Port wine stains will not fade but neither will they get bigger. They may be associated with Sturge–Weber Syndrome if in the distribution of the ophthalmic division of the trigeminal nerve.

Peripheral birthmarks are more difficult to predict as it can be difficult to tell what is in the deep tissue. As a rule one third disappear, one third stay the same and one third grow. The ones that are most likely to grow look as though they have large vessels.

Strawberry naevi are not present at birth and slowly grow until about 6 months they go by 2 – 3 years – (see ‘strawberry naevi’).

Giant pigmented naevi may turn malignant. In the first week or two of life they have a plane of cleavage and can be partially or completely removed by a dermatologist.

### **13. Blood group incompatibility - What blood groups are not compatible at birth?**

Mum	Baby Groups Not Compatible
O	A, B, AB
A	B
B	A
AB	none
Rh -ive	Rh +ive

Note:- O carries no antigen so if baby is blood group O then it is always compatible.

The Direct Coombs Test(DCT) is usually positive in Rhesus incompatibility but often not with ABO .

To have Rhesus incompatibility the mother must have been sensitised. This may not be obvious, e.g. abruption, miscarriage.

This is not true of ABO and so more likely in a first pregnancy.

Weakly positive DCT can cause a bilirubin that does not require treatment but an anaemia between 4 and 6 weeks may occur.

### **14. Breast milk fortifier – What is it?**

Breast milk is ideally designed for term babies and it is also best for premature babies, but there may be a need for supplementation. For example, the kidneys are immature so they may need sodium supplements.

Fortifiers are used as an extra source of calories but, more importantly, protein. Some units add fortifier as routine but some only if there is poor weight gain.

## **15. Bronchiolitis - When do you take a Chest X-Ray?**

There are three indications :

1-Focal signs :

2-temperature above 38.5°C

3-an increasing oxygen requirement above 40%.

## **16. Bronchiolitis, asthma and pneumonia – how do you differentiate between them?**

- bronchiolitis usually occurs in under one's.
- the first attack is bronchiolitis but repeated attacks are asthma.
- there are usually chest crepitations in bronchiolitis and occasionally asthma , especially the young.
- A dry chest wheeze can be induced by viral illnesses but if recurrent then asthma should be considered.
- all may cause a temperature.
- babies with pneumonia look ill, have a high temperature and usually have marked in drawing. The smaller the child the less likely to hear auscultatory signs.
- bronchiolitis has a characteristic, moist cough (has to be heard).
- Focal chest signs are more likely in pneumonia although can be heard in bronchiolitis and asthma.

## **17. Bronchiolitis - What are the acceptable saturations?**

This is unresearched but no lower than 92% is reasonable.

## **18. Bruises - Should I worry about them?**

If non accidental injury (NAI) is not considered it can easily be missed.

Bruises are common over bony areas, e.g. the shins, forearms, the spine, forehead but are uncommon on soft or protected areas, e.g. inner thighs, buttocks, inner arms, abdomen, flank, ear and mouth.

Accidental bruises are usually non-descript and circular but non accidental bruises often have a distinct pattern, e.g. finger tips or parallel lines from fingers or the shape of an object such as a belt or shoe.

Petechiae are often found in NAI.

## **19. Cerebral palsy – What is it?**

This is the result of a non progressive brain lesion that occurs before, during or soon after birth. Approximately 50% are unexplained but it may be related to prematurity, HIE, infection (eg meningitis) etc.

## **20. Chest pain - What causes it in children?**

Acute and chronic chest pain is most commonly muscular-skeletal, but other diagnosis should be kept in mind.

Cardiac 'pain/discomfort' may be caused by SVT. Pain aggravated by breathing may be pleuritic.

Children can also get shingles, reflux etc. Remember, the younger the child the less precise the description.

### **21. Chicken pox - What is its importance in the neonatal period?**

If mother has had it in the past then none, it doesn't matter.

If a mother is not immune and had contact 48hrs before rash or during active vesicles then the baby is at risk if under 1 month old. The window of the incubation period allows the mothers' immunity to be established. If the mother is not immune the baby needs zoster specific immunoglobulin +/- acyclovir. If the infectious contact has been in a bay of mothers, all mothers must be asked.

If the mother displays infection within 7 days either side of birth then the baby should be given zoster specific immunoglobulin and acyclovir.

### **22. Colic - What is it?**

Colic is abdominal pain, caused by bowel contractions in a well baby. It starts at 4 – 6 weeks and classically occurs at the same time every day and ceases when the baby is weaned.

Preparatory medicines are available yet there is no evidence that they are of benefit.

Parents should be advised if no benefit is apparent after one week's use it should be stopped.

In severe cases of colic a change to a basic milks can be tried and if successful this indicates cows milk intolerance.

Anti-colic feeding bottles have been shown to work in randomised trials.

### **23. Constipation - What is it?**

Decreased frequency of motions that are hard and painful to pass.

It may be normal to only open the bowels every other day but you are probably more likely to develop constipation.

It often occurs when breast feeding stops, during toilet training or following illness (poor fluid intake).

It is a clinical diagnosis, stools may be palpated abdominally, the anus can be inspected for fissures but a rectal examination is not indicated. An abdominal x-ray is rarely useful.

Treatment often requires both softeners and propellants, usually lactulose and senna. Or more recently movicol.

They must be given regularly in an effective dose aiming to produce daily a soft, painless stool. The gastro colic reflex may help- the child should sit on the toilet for a few minutes after every meal.

Stools should be kept regular for three to six months before slowly withdrawing medication.

Other tips:-

- a. check milk intake – excessive calcium
- b. need increased fluid in warm weather
- c. drink bottled water if in hard water area

#### **24. Cot death - What is it?**

This is unexplained death in babies, most commonly at 4 – 6 months old, and rarely after the age of one year. By law a post mortem is required.

Incidence has markedly decreased since babies have been put to sleep on their backs. They should also stay with parents til 6 months

Some cot deaths are non accidental and as the total has decreased then the proportion that are non accidental has increased.

#### **25. Cradle cap - What is the best treatment?**

This condition is very common and is treated with olive oil massaged into the scalp with the finger tips then washed off.

#### **26. Croup - What is it, how do I manage it and when to worry?**

Croup is laryngitis but because of the small size of the airway it causes stridor. It is caused by viruses.

The decrease in radius of the trachea in the child results in breathing difficulties because resistance of breathing is proportional to the radius of the trachea to the power of four.

Two other diagnosis to consider are epiglottitis and tracheitis. Both are rare but epiglottitis is more rare since the haemophilus vaccination.

These diagnoses should be considered if the child is toxic and there is a short history. N.B. - always look for a history of sudden onset of coughing before the stridor – think foreign body.

Do not examine the throat or do lateral neck x-ray as both may make the condition worse. It is a clinical diagnosis.

Normally children have a short history of a cough and suddenly wake up in the early hours. Children who present in the day often deteriorate.

The natural history is to improve during the next day and then the second night become worse.

Oral or nebulised steroids can be beneficial.

A need for ventilation is often indicated by a fall in oxygen saturations below 90% and the lungs function is normal.

Nebulised epinephrine (adrenaline) can be used to relieve the swelling of the vocal cords- 4mls of 1 in 1000. However there may be a rebound deterioration so an

Anaesthetist should be informed in case intubation becomes necessary.

Most children have one episode, however a small number will suffer recurrent croup which improves with age.

### **27. CSF protein in a new born baby – Is this baby’s CSF protein high?**

In newborns and premature babies a CSF protein of greater than one can be normal.

### **28. Cyanosis - Is this baby cyanosed?**

It is a lot easier to tell if the baby is pink, if it is not pink then it must be cyanosed. This can be confirmed by saturation monitoring and arterial gas

### **29. Cystitis - What can be done?**

Increase the fluid intake so decreasing the concentration of the urine. Other measures are used to make the urine more alkali such as cranberry juice or barley water.

### **30. Direct Coombs test – what is it?**

This detects specific immunoglobulins that may have crossed the placenta to cause haemolysis and jaundice.

### **31. Downs syndrome - What is the recurrence risk?**

In Non disjunction the risk is one percent or double the age adjusted risk.

Translocation (usually chromosome 21 to 14) – is more complicated.

Carrier of Translocation	Recurrence Risk
Neither Parent	1%
Mother	10%
Father	2 – 3%

N.B. - 21 : 21 translocation gives 100% recurrence risk as either there will be a triple 21 or only one 21 which is lethal.

### **32. ECG - What is a normal ECG and what are common anomalies?**

The following should be noted –

- a) Heart rate around 150 at birth, decreasing to an adult rate by the age of 12.

*too slow – heart block, hypothermia, pre-terminal hypotension*

*too fast – Supraventricular tachycardia (SVT), sepsis, anxiety.*

- b) Rhythm regular or sinus arrhythmia.

*irregular – Atrial Fibrillation, complete heart block*

- c) p waves – every QRS should have a p wave.

*too many p waves – heart block, atrial flutter/fibrillation*

- d) Axis – the axis should be between 0 and 120.

*R axis – right ventricular hypertrophy.*

*L axis – ostium primum.*

*superior axis - tricuspid atresia*

- e) PR interval – approximately 3 small squares.

*short PR interval – Wolffe Parkinson White – ( look for delta wave).*

*long PR interval – heart block.*

- f) QRS complex should be narrow.

*wide – complete heart block, ventricular ectopics.*

- g) QRS should be specifically viewed in leads V<sub>1</sub> and V<sub>6</sub> and should not resemble an M or a W

*M in V<sub>1</sub> and W in V<sub>6</sub> – Right bundle branch block*

*W in V<sub>1</sub> and M in V<sub>6</sub> – Left bundle branch block*

- h) The total height of the R wave V<sub>1</sub> should be 15 little squares or less.

*large R wave V<sub>1</sub> – Right ventricular hypertrophy*

*large R wave V<sub>6</sub> – Left ventricular hypertrophy*

- a) T wave in V<sub>1</sub> → V<sub>6</sub> inverts at 1 – 7 days of age and stays inverted until the teenage years. They start to turn upright from lead V<sub>6</sub> backwards.

*upright T wave – Right ventricular strain.*  $\frac{QT}{\sqrt{60/rate}}$

- i) The QTc time is often written on the ECG. This is the . The QT is from the start of the Q to the end of the T. The corrected value should be <0.44

*Prolonged QT – increased risk of sudden death*

### 33. ECG - When do I take one?

- a) heart murmur – look for indications of overwork esp. right ventricular hypertrophy or ASD

*e.g. ostium secundum – partial RBBB with R axis deviation.*

*ostium primum – partial RBBB with L axis deviation.*

- b) unusual events - not believed to be epileptic in origin. Look for potential arrhythmias, e.g. Delta waves, prolonged QT interval.

#### **34. Eczema - What is the treatment?**

A three pronged attack: -

- a) oil for the bath. Add oil to pure hot water (holding on to child) as this makes the droplets smaller, then add the cold. Remember it can be dangerous for the next person in the bath as the oil will be lining the bottom.
- b) Many young children have dried skin (not eczema) as a result of too many baths (babies twice a week and children three times).
- c) moisturising creams – aqueous or oil based (ointments). Ointments are the most effective moisturisers but can be difficult to rub in so may not be used regularly by parents. It is best to use both reserving the ointments for the worst areas.
- d) steroids – these should never be used alone and do not cure eczema. Start with the lowest strength using the smallest amount for the shortest possible time. More potent steroids should not be used on the face.

#### **35. EEG - When should you use one?**

For all children that have had a partial seizure or if a child has had more than one generalised seizure.

#### **36. Encopresis – what is it?**

This is going to the loo in inappropriate places. They are not constipated.

#### **37. Encopresis - How do you treat it?**

Normally there is nothing needed except reassurance, but rule out constipation (abdominal exam, not a rectal) and consider abuse.

If treatment is needed it is usually psychological.

#### **38. Enuresis - What is the management of nocturnal enuresis?**

This is very common and classed as normal until the age of 5 years.

Children first have urine checked for infection. Advice is given to avoid excessive drinking in the evening especially caffeine. Lifting is sometimes helpful but not more than once a night.

A star chart can sometimes help but usually not until the age of 7 years. This converts a negative into a positive experience. The child must first win. e.g. a star is given for each morning they help change the bed and if they gain 7 stars in a week

they win. An extra star is awarded for being dry and the total needed to win each week rises.

An alarm that sounds just as the child starts to urinate and wakes them whilst his/her bladder is still full can be used. Each time the child wakes a bit earlier until they wake before the alarm. Commonly the rest of the house wakes first and the child remains asleep.

Vasopressin can be given but it does not cure enuresis, but rather the child outgrows the condition. The drug is stopped every 3 – 6 months but it can be useful if there is a lot of family stress or when staying away from home.

**39. Enuresis - What is the treatment for daytime enuresis?**

This is frequently caused by detrusor instability and associated with dry nights. Causes problems at school.

Management includes counting to ten before passing urine, thus increasing confidence to hold on.

Exclude urinary tract infection and then if necessary treat with a cholinergic drug. Children eventually grow out of the problem.

**40. Erythema neonatorum - How do you recognise it?**

This is a generalised rash that occurs in the first few days of life. It needs to be differentiated from staph aureus :

Erythema Neonatorum	Staph Aureus
Both common	
Generalised	localised, often on opposing skin creases
Both pustules	
a lot of redness	little redness around lesions
Both well babies	
cord normal	may have associated sticky cord
no treatment needed	oral Flucoxacillin

**41. 'Failure to Thrive' – What is it?**

Failure to thrive is a downward crossing of the weight centiles. This can be as important from the 97<sup>th</sup> to the 50<sup>th</sup> as dropping from the 10<sup>th</sup> to the 0.4<sup>th</sup>.

However, after birth you may cross centiles to get to your ex-utero centile.

It is affected by social interaction, diet, absorption, thyroxine, growth hormone.

**42. Failure to thrive - How do you investigate it?**

This depends partly on the age and the history. Remember at least two growth points are needed for diagnosis and in older children these should be at least three months apart.

A dietitian dietary assessment should be undertaken.

A full blood count – looking for malabsorption and urea and electrolytes to exclude renal problems.

A sweat test – especially with associated chest problems and anti-endomysial antibodies to exclude coeliac disease.

TFT's – if worried or developmental problems, hearing problems, e.g. pendred's.

GH – only comes into play at 18 months, tend to have more height than weight problems.

The stool should be examined if diarrhoea, for culture and sensitivity, ova, cysts, parasites, virology and reducing substances.

These investigations will establish a diagnosis or direct you to another test, e.g. a biopsy.

Sometimes admission to hospital is needed, especially if there are social or poor dietary intake concerns.

#### **43. Febrile convulsion - What is it?**

A seizure associated with a fever and occur between the ages of 6 months and 5 years, affecting one in thirty children.

A child can present in status. Febrile status is treated the same as non-febrile status. The infection is usually viral in origin and the seizure usually occurs in the first 24 hours of infection. The child has an increased risk of a second seizure for approximately 24 hours and is a main reason for hospitalisation.

There is no evidence that simple febrile convulsions lead to permanent damage. Parents are told to give paracetamol or ibuprofen for future fevers, but there is no evidence that this prevents seizures. Note: a convulsion in a child  $<^6/_{12}$  needs urgent senior input even if apyrexial.

#### **44. Feeding - 'Fore' and 'hind' milk – What is the difference?**

Hind milk has a higher fat content than fore milk and less lactulose.

Fore milk is important for hydration and water soluble. However, if the hind milk is not obtained then baby will get hungry quicker and the stomach empties too fast causing gaseous distension and frothy stools (caused by excess lactulose).

#### **45. Feeding requirements - How much fluid should a baby/child drink?**

Babies slowly increase their intake to 150 mls/kg and this should allow them to gain 20 – 30g weight per day.

Fluids requirement can be calculated:

1<sup>st</sup> 10kg - 100mls / kg / day

+

2<sup>nd</sup> 10kg - 50mls / kg / day

+

Then 20mls / kg / day

e.g. 25Kg = (10 x 100) + (10 x 50) + (5 x 20) = 1.6 litres

#### **46. Feet – are in/out turning feet important in a toddler?**

No, it usually resolves with age.

#### **47. First day murmur - What do you do with it?**

This is difficult, some argue that they should all be echoed, however this is not practicable.

Babies that need cardiac opinion are those with – a widespread loud murmur, those that radiate to the back, absent femorals or any associated symptoms, e.g. breathlessness (with feeding) or cyanosis.

If the murmur is quiet then practise varies but usually it is listened to again towards the end of the first week and the child should be followed up until it has gone.

It may also be worth considering measuring saturations .If they are less than 94% referral should be sooner

#### **48. Fundoplication – What is it?**

Fundoplication is the main anti-reflux surgery undertaken for children. It requires the antrum of the stomach to be mobilised and then wrapped around the lower oesophagus.

A significant complication is that the child traps wind which may lead to pain.

#### **49. Gastro oesophageal reflux – What is it?**

This is the free movement of gastric contents from the stomach into the oesophagus. It is more common in babies, in particular preterm and children with cerebral palsy. It is primarily a clinical diagnosis but can be confirmed by barium swallow and pH studies.

It usually presents with possets or vomits, but also with cough, asthma, aspiration, apnoea, failure to thrive, pain or it may even mimic seizures (Sandifer's syndrome).

Barium swallow is better for anatomical structure, but may miss reflux.

A pH probe is placed at T<sub>9</sub> or T<sub>10</sub> (on x-ray) and left for 24 hours with the infant at home feeding normally. Reflux is indicated by episodes when the pH drops below 4,

and an event recorder establishes whether clinical episodes are linked to reflux or not.

Diagnosing reflux is particularly important in cerebral palsy for if a gastrostomy is required, it may change from endoscopic to open operation with a Fundoplication.

### **50. Gastro oesophageal reflux – How do you treat it?**

A thriving baby is rarely treated.

First line treatments are either an antacid or an artificial thickener. If they are near weaning this can be baby rice.

After this an H<sub>2</sub> antagonist and then a proton pump inhibitor can be used, decreasing inflammation and helping gastric emptying.

Surgery is a last resort.

Two things lead to a natural improvement. The first is weaning so less volume is taken and the second is walking

### **51. Green stools in babies – What is the significance of this?**

It may suggest poor milk flow in breast fed babies. The opposite is much more important - pale to white stools = biliary atresia until proven otherwise.

Do not ask the mum if the stools are normal because if it is her first baby any colour is normal – LOOK!!!

### **52. Growing pains – What are they?**

Question could also be 'Do they exist?' These pains are often experienced at night in well children.

Examination finds no pathology which causes pain in the legs at times of rapid growth.

Consider other causes such as tumour, infection or trauma, before making this diagnosis

### **53. Guthrie Test - What is it?**

It is a screening test at 7 – 10 days of life (on a full milk feed).

It screens for hypothyroidism 2° to a thyroid agenesis by measuring TSH levels (this means it can miss central problems) – 1 in 4000.

The Guthrie also tests for phenylketonuria => need to be on milk – 1 in 10,000.

Some regions also look for CF by measuring immuno- reactive trypsin.

Other conditions that may be worth picking up are galactosaemia, homocystinuria and maple syrup urine disease, although much rarer.

#### **54. Guthrie Test - When should you repeat it?**

When a baby was not on full milk feeds at the time the first test was taken. Usually sick/preterm infants.

#### **55. Habitual drinking – What is it?**

You either have polyuria because you drink a lot, or you have polydipsia because you pee a lot. The first is habitual and the second is pathological and may indicate diabetes.

In the history look for excessive drinking and getting up at night.

The first test is a morning urine and if this is concentrated this confirms it is habitual drinking. If it dilute then a water deprivation test may be needed.

#### **56. Hand dominance – When should it occur?**

Around 18 months but should it occur before then the other arm should be examined for weakness/stiffness.

Beware benign plagiocephaly (more common since the 'back to sleep' campaign) which may cause apparent early hand dominance

#### **57. Hay fever – Do babies get it?**

This is unlikely, exposure to a pollen allergen is necessary and are present for a short period each year.

#### **58. Head size - Why does this baby have a big head?**

The commonest cause of a big head is familial. Serial measurements of head circumference will follow a high centile (there is a centile chart for head growth up to 18 years and the parents head size should be plotted).

The other main causes are more sinister and include acute or chronic hydrocephalus which may be secondary to a space occupying lesion. If sutures are present they may be widespread and fontanelle bulging while if it is chronic then the fontanelle may not be full. The head circumference will cross centiles. The child displays non specific neurological signs such as slow to walk, clumsy, or have lost previously acquired skills.

An early presentation may show head lag due to head weight as opposed to weakness.

If the sutures are closed then morning headaches, nausea, fits are a feature.

#### **59. Heaf and Mantoux - What is the difference?**

These are both to look for TB. : Heaf is used as a screening tool and is made of purified protein derivative in a concentration of 100,000 u/ml. Six needles go to a depth of 2mm. Administers the antigen. It is read at 7 days.

- 0 - no induration.
- 1 - discrete induration of 4 or more pricks.
- 2 - induration merge, clear centre.
- 3 - induration merge, filled centre up to 5 – 10mm.
- 4 - ulcer or >10mm across.

2-4 no previous BCG positive and refer to specialist.

3-4 with previous BCG refer to specialist.

The Mantoux test can also be used as a screen but is usually used if TB is suspected. 0.1mls of varying strength antigen is injected intradermally and is read 48 – 72 hours later.

10 units per ml. is used if TB is suspected.

100 units per ml. is used for screening. There should be no reaction.

#### **60. Hemiparesis - How do you diagnose it in the older child?**

Late presentation usually means it is a mild hemiparesis. It may not be obvious on walking or examination and the best way to demonstrate it is to get the child to run.

An MRI is the investigation of choice.

#### **61. Hepatitis B - What is the vertical transmission risk?**

Hepatitis B is transmitted around the time of delivery and without immunisation has a transmission rate of 90%.

If mother is HbAgE positive she is high risk so the baby is given passive immunisation at birth and then active immunisation, the risk is decreased to less than 10% (safe to breast feed).

#### **62. Hepatitis C - What is the vertical transmission rate?**

There is uncertainty as to when the Hepatitis C is transmitted but elective section does not appear to decrease risk.

The vertical transmission rate is 5% if mum is PCR positive (safe to breast feed).

#### **63. HIE – What is it?**

This is hypoxic ischaemic encephalopathy. It is a result of decreased oxygen to the brain. This may have occurred before labour, during labour, or soon after. There are several classifications but one commonly used is:

I – irritable

II – increased tone, jittery

III – fits causing ventilation

#### **64. HIE – What is the prognosis?**

This can be difficult to predict because hypoxic injury may be difficult to see, especially on ultrasound. An indication may be how quickly they get to full breast/bottle feeds however prognosis remains guarded because it often causes a movement disorder which may not clinically present until one year or later.

#### **65. HIE – Why do babies with HIE fit?**

This can be for two reasons. Firstly because of the brain injury but also because of the oedema that follows the insult. The second is the more common cause and this is why the fits settle after a couple of days.

#### **66. HIV - What is the vertical transmission rate?**

The vertical transmission rate is approximately 17% and seems to occur around delivery.

Giving mum anti-virals from 34 weeks to decrease viral load and then to the baby decreases the risk to 2 – 3%.

In this study the subgroup that had elective sections before labour had no vertical transmission (breast feeding increases the risk by 15%).

#### **67. H.S.P. What is it?**

Henoch Schonlein Purpura is a vasculitis of uncertain origin, thought to be secondary to infection but not contagious.

Presentation is usually a purpuric rash on the buttocks and the back of the legs, however there may be purpura on the arms and occasionally elsewhere. If seen early the rash looks urticarial.

The other symptoms are of -

- Joint swelling – usually knees and ankles.
- Abdominal pain – this can be related to haemorrhage; and
- up to 5% may get intussusception. (any age)
- Renal involvement – this usually occurs in older children and may take up to 6 weeks to appear (>6yrs).

Diagnosis : This is clinical and the haematuria may only be detectable on dipsticks.

The rash and joint swelling only need symptomatic treatment. The abdominal pain again is usually only symptomatic but may need steroids. If the haematuria persists or is associated with increased blood pressure or abnormal renal function a Physician's opinion should be sought, although renal failure is rare.

Significant abdominal pain may precede the rash, masquerading as appendicitis.

Overall the prognosis is excellent but during the recovery months the rash may get worse if there are any further infections, ie. U.R.T.I.

#### **68. Ibuprofen - On whom can you use it?**

Ibuprofen can be prescribed for any child over the age of 1 month. Standard dose is 5mg/Kg up to 4 times a day. It is as effective as paracetamol at reducing temperatures, and they can be used together. Doctors fear inducing a wheeze but is rare even in known asthmatics and is not a reason to avoid its use. May also rarely be a problem if dehydrated

#### **69. Idiopathic Thrombocytopenia Purpura (ITP) – What is it?**

Low platelet count of no known cause presenting with bruises often in unusual places, may have bleeding of mucous membranes.

Diagnosis is clinically + FBC - platelets may be as low as one.

Often present at lowest platelet count and need no treatment.

Differential diagnosis includes non-accidental injury, leukaemia.

Acute complications are very rare, increased risk of cerebral bleed if bleeding from mucous membranes.

They occasionally need immunoglobulins, tranexamic acid or prednisolone (need a bone marrow before steroids).

They usually make a full recovery but some of the older children develop a chronic picture running platelets of about 20 with dips associated with bruising. The children will usually work out what they can do but may need some restrictions, e.g. skateboarding etc.

#### **70. Immunisation - What are the contraindications?**

Vaccination should be delayed if the child has a pyrexia but a simple cold does not matter.

Pertussis is contraindicated if there is a progressive neurological disorder without a diagnosis. As cerebral palsy is a non progressive neurological illness immunisation is safe.

If a child had a severe local or systemic reaction to the same vaccine on a previous occasion. This may be uncontrolled crying for 4 hours or a large local area of inflammation.

The measles vaccine is grown on egg lining and if there is egg allergy vaccination is usually given in hospital.

Live vaccines should be deferred if patient is on systemic steroids or immunosuppressed. Flu vaccine if egg allergy

#### **71. Immunity - What types of immunity are there?**

Passive immunity – from a babies mother or vaccine, e.g. zoster specific immunoglobulin.

Active immunity – the individual either has had the illness or has been vaccinated against it.

Herd immunity – this relies on a majority being immune to an illness so that an individual who is not immune is unlikely to come into contact with it. This is why vaccine take up needs to be very high to protect those people with poor vaccine response.

#### **72. IV fluids – When do you use IV fluids on the neonatal unit?**

- Increasing oxygen requirement or very tachypnoeic.
- low BM not responding to oral feeds or too tachypnoeic to try.

#### **73. IV fluids - When do you use IV fluids on the ward?**

The smaller the baby, the lower the threshold as their circulating volume is small. I.V. infusion is required if obviously in shock or if urine output can not be maintained with oral feed.

1ml / kg / hr for > 2 years  
2ml / kg / hr for < 2 years

#### **74. Kleihauer test - What is it for?**

This test looks for foetal blood cells in maternal blood after antenatal haemorrhage.

#### **75. Lactose - What do you do when an infant appears to be allergic to it?**

Rarely an allergy but usually an intolerance, presenting with features that include diarrhoea, vomiting, colic, abdominal distension and poor weight gain. It often follows gastroenteritis (2<sup>o</sup> lactose intolerance).

The treatment is with soya milk if over one or basic milks if under one (because of phytoestrogens) and then the re-introduction of milk again some months later.

5% will also have soya intolerance and need to go onto a more elemental milk.

#### **76. Lactose intolerance and cow's milk protein intolerance – What is the difference?**

This is usually on clinical grounds with infants having eczema and asthma as well as bowel symptoms. The treatment is the same, milk free diet. Again they will grow out of it. Both groups will need dietary input.

## **77. Laryngomalacia – What is it?**

This is otherwise known as 'Floppy Larynx'. It is more common in premature babies and is a stridor caused by the collapsing of the larynx on breathing. They usually maintain their saturations as it is associated with normal lungs. As the baby grows it becomes intermittent and is only present when there is increased air movement, e.g. crying.

It is usually a clinical diagnosis but can be confirmed with bronchoscopy.

Further investigation is indicated if getting worse or evidence of nocturnal desaturation.

## **78. Limp - When should I worry about it?**

All limps are a worry and need investigating. The age can give a clue to the cause.

- 2 – 6years : irritable hip is the commonest (beware infection and tumour).

The most important investigations are FBC and CRP/ESR, hip x-ray is usually normal and ultrasound may show some fluid in the joint. It is often associated with a viral illness but settles with symptomatic relief.

- 6 – 12years: the commonest condition is Perthes disease.

Common in boys and is diagnosed by x-ray showing avascular necrosis of the femoral head. The treatment can take months and involves hospitalisation and traction.

- Teenagers : the commonest cause is a slipped femoral epiphysis,

Diagnosed on x-ray (special views needed). It is treated surgically to prevent asymmetrical growth and is more common in overweight boys and tall, thin girls.

## **79. Meconium aspiration - What are the problems associated with it?**

Although meconium is sterile it is very irritant, so if it gets in the lungs or stomach it will cause inflammation and oedema.

In the stomach this will cause a gastritis, however, in the lungs it may cause meconium aspiration syndrome. This may have started before birth. At birth any meconium is sucked out under direct vision.

The diagnosis is confirmed on x-ray and described as looking like woolly clouds.

The major problem with ventilation is oxygenation because of pulmonary hypertension and increased distance from alveoli to blood vessels. Meconium also inactivates surfactants.

The biggest problem is damage caused by ventilation and the oxygenation index (see relevant question) is used to assess severity. If it becomes too high then E.C.M.O. (Extra Corporeal Membrane Oxygenation) is used which allows the lungs to rest and pulmonary hypertension to settle.

Recovery is often complete but they can develop chronic lung disease.

### **80. Molluscum contagiosum – What is it?**

This is a vesicular rash caused by a pox virus and is very common in childhood occurring in small clusters of vesicles.

Lesions appear on two surfaces that come into contact with each other, e.g. inner arm and chest. It is very contagious but harmless. The vesicles are characteristically non itchy with a dimple in the centre.

They do not need treatment and, like warts, they may last several months or only a few weeks and then spontaneously disappear.

### **81. Mongolian blue spots – What are they?**

These are birth marks, usually on the lower back, that look like bruises and are more common in non-caucasian babies.

They may continue to appear after birth. These are mistaken for non-accidental injuries but if there is any doubt, they can be reviewed a week later and if bruises, they will have altered.

They usually disappear around 5 years of age, but may persist particularly in African children.

### **82. Nits - What are they?**

Pediculosis Capitis and are very common in school age children. They will usually present with itching but may be found because another child has them.

Nits or eggs may be visible or only seen after using a nit comb. This may be made easier by using conditioner.

Treatment involves targeted anti-nit shampoo. In the under-developed countries shaving the head is very effective.

### **83. Ondine's curse - What is it?**

This is nocturnal apnoea secondary to a hypothalamic defect and treatment is night time respiratory support. It usually presents in babies.

### **84. Orbital cellulitis - How do I manage it?**

This is very important because of the 'access' to the brain. They should be under paediatrics, ENT and ophthalmology.

CT may be needed if sinus or cerebral extension are thought to occur.

IV antibiotics are initially used to cover strep and staph.

The eyes should be regularly reviewed.

**85. Ounce – how much is it in mls by volume?**

This is about 30 mls by volume

**86. Oxygenation Index – What is it?**

This is an equation to assess severity of respiratory disease.

$$\frac{\text{Mean Airway Pressure} \times \text{Percentage of Oxygen}}{\text{Arterial Blood Oxygen in millimetres of mercury}}$$

It should be less than 30.

**87. Petechiae - What are the causes?**

85% of petechiae are NOT caused by meningococcus but not treating meningococcus can be fatal.

Most are caused by viral illness – clues include very localised areas of petechiae and the condition of the child.

Forceful vomiting or coughing with petechiae along the distribution of the superior vena cava, around the eyes and sometimes on the upper trunk.

They may also be caused by direct pressure such as a blood pressure cuff or holding for cannulae.

Other causes are NAI, HSP, ITP or leukaemia.

**88. Plagiocephaly – when should you worry about it?**

This condition has become a lot more common since babies are nursed on their backs. Check normal development, head growth and feel for sutures. It will improve after about 7 months when they roll over at night and start sitting.

If there are any concerns then imaging is needed.

**89. Puberty – When should it be investigated?**

normal	girls 10 – 14
	boys 12 – 15

- a) Early puberty is much more common in girls than boys but is more likely to have a pathological cause if it occurs in boys. True precocious puberty is central in origin and therefore is caused by premature FSH/LH production. This will affect all the signs of puberty.

Pseudo-precocious puberty is usually a problem with the adrenals so the testis or ovaries will be pre-pubertal.

When to investigate: girls <9, boys <10.

Possible investigations : LHRH stimulation of FSH/LH axis, U+Es, FBC, LFTs, bone age, TFT's, prolactin, baseline oestrodiol.

If it is non central then U/S the adrenals, if it is central then consider an MRI for both ultrasound uterus and ovaries.

What is not precocious puberty?

- isolated breast development - Thelarche
- isolated pubic hair - Pubarche/Adrenarche. In girls usually isolated to the labia and ultrasound confirms a pre-pubertal uterus.

M<sup>c</sup>Cune-Albright Syndrome may be associated with precocious puberty, large irregular hyperpigmented areas usually only on one side of the body and bony changes on x-ray (fibrous dysplasia).

Treatment: Precocious pubertal development can be stopped or significantly slowed down. This allows growth to continue for longer (at a slower rate) leading to a taller final height.

- b) Delayed puberty. This is much more common in boys (constitutional delay in growth and puberty) and is rarely pathological.

Often there is a family history.

Delayed puberty is usually treated because of peer pressure but, although treatment can cause a growth spurt, it may decrease final height because of early fusion of the bones.

Conditions associated with delayed puberty: Turners, Downs, hypothyroidism.

## **90. Pyloric stenosis - When does it present?**

Traditionally said to be at 6 weeks or later, but with increased parental awareness now recognised at 3-4 weeks. Preterm infants often present around term.

This earlier presentation results in less pyloric hypertrophy, and therefore less typical/diagnostic projectile vomits, fewer vomits and therefore less weight loss.

Main differential diagnosis is gastric reflux.

Diagnosis is based on history and examination with test feed - done from the left side looking for peristalsis and trying to feel for the tumour (olive size).

Investigations include - abdominal ultrasound, blood gas and chloride. The bicarbonate is increased and the chloride low. Short histories increase the chance of these being normal.

Treatment is 'drip and suck', and surgery is delayed until hydrated with normal electrolytes. The operation is a Ramstedt's pyloromyotomy and can be performed via an umbilical incision. If the bowel mucosa is not damaged feeding can recommence within 24 hours.

It is more common if – first born, male or family history.

## **91. Quinsy - What is it?**

This is a peritonsillar abscess secondary to tonsillitis and is suggestive when, on examination, the tonsil is pushed anteriorly and laterally, it can compromise the airway and can make intubation difficult. It is confirmed by CT scan. Mild cases are treated with IV antibiotics but incision and drainage may be necessary.

#### **92. Red-reflex - Why hasn't this non-caucasian baby got a red reflex?**

A red reflex is just the light reflex on a pink/red retina. Non-caucasian babies have a blue/grey reflex.

#### **93. Reducing substances in stools - What is the relevance?**

These indicate undigested sugar and may suggest malabsorption. However, they indicate fast transit time and may occur in breast feeding or diarrhoea. It should normally be less than 0.25% but in breast fed babies it may be normal up to 1%.

#### **94. Reducing substances in urine - What are they?**

These are looked for as part of a metabolic screen and indicate galactosaemia and the diagnosis is confirmed with the gal-i-put test on red blood cells.

#### **95. Ringworm – What is it?**

Ringworm is a fungal infection (Tricophyton or microsporum). It is spread by direct contact or spores into abrasions. It is caught from other humans or animals (cats, dogs, cattle, horses).

Diagnosis is by Wood's Light (microsporum florescence) or scrapings. It is either treated topically or orally.

The family are Tinea Capitis (head), corporis (body), pedis (athlete's foot), unguium (nail).

#### **96. Scabies – what is it?**

Scabies is an infestation by the scabiform mite which usually burrows between the fingers. An allergy to the mite faeces causes a widespread, itchy rash that resembles little scratches. Except in the very young, this rash doesn't usually extend above the neck. In babies burrows are often found under the arms (from lifting) or the ankles (from changing nappies).

The whole family needs treating and clothes and bed linen need high temperature washing. Warn that the rash may take up to 3 weeks to resolve.

#### **97. Scalded skin – what is it?**

This is a superficial skin infection caused by strep. and staph. Systemic toxin cleaves the top layer of skin and spreads quickly. It can be very painful and lead to fluid balance problems and poor temperature control.

It is treated with IV antibiotics and importantly it doesn't usually scar.

#### **98. Scrotal swelling - How do you differentiate scrotal swelling in babies?**

The two diagnoses that are important are an inguinal hernia and a hydrocele:

<b>INGUINAL HERNIA</b>	<b>HYDROCELE</b>
originates at upper end of canal	Usually around the testis, occasionally of the cord
can not get above	can get above
usually reducible	not reducible
if not reducible may be associated with pain	Painless
doesn't transilluminate	Transilluminates
testis palpable	If around the testis then it is not palpable
urgent surgical opinion as high risk of obstruction	don't refer – will settle

### **99. Seizure - What investigation should you do for a first seizure?**

If it a generalised seizure (even status) they do not need investigation unless there is something else :- e.g. headaches, papilloedema.

A focal seizure with or without focal neurology needs an EEG and imaging.

### **100. Silver Nitrate stick – When do you use it?**

There are two main uses. Treatment of an umbilical granuloma and molluscum contagiosum. As the second condition is self-limiting it is rarely used. Umbilical granuloma should only be treated if it is of a reasonable size.

### **101. Sleep myoclonus – What is it?**

These are non-epileptic involuntary contractions of muscles that occur either on going to sleep or waking. They are normal and may occur in babies (this is benign neonatal sleep myoclonus and occur during any phase of sleep). They are in the differential of epilepsy and the diagnosis is made on the history associated with a normal examination. An EEG is not normally needed.

### **102. Squint - How do you diagnose a squint?**

There are two types of squint - non paralytic and paralytic. A paralytic squint needs urgent referral as it may represent a false localising sign for a brain tumour.

Non paralytic squints are usually convergent and are more obvious when the child is not concentrating or tired.

Otherwise it may only be visible if the eye is covered (e.g. during formal testing).

The test for a squint is to shine a light into both eyes and both light reflections should be central. If one reflection is non central then that eye may be squinting – covering the good eye will bring it straight.

If there appears to be a squint, but the reflections are central then this is a pseudo squint and is caused by an epicanthic fold.

If there is no obvious squint, cover the eye that the parent says squints and it will be seen to have turned in when uncovered.

Once diagnosed, the child's eyesight needs to be tested as there may be poor vision in the squinting eye.

Treatment is important as, untreated, the child will become cortically blind in that eye.

### **103. Stills disease – What is it?**

This is otherwise known as systemic juvenile arthritis.

The children get evening pyrexia and associated blanching rash. They are often non-specifically unwell and may have a palpable spleen.

Blood tests for inflammation may be raised e.g. CRP, ESR, platelets.

Joint problems occur later.

### **104. Strawberry naevi – What are the problems associated with these?**

They are more common in premature babies and can be multiple. They can cause several problems.

- If in a crease (e.g. under the chin – napkin area) trauma may cause haemorrhage.
- If multiple can cause Kasabach-Merritt syndrome with platelet consumption.
- If significantly impinging the visual field may lead to cortical blindness.
- Occasionally these occur in the airway and can lead to obstruction needing tracheotomy.
- However strawberry naevi usually fade, with no treatment leaving no scar, within 2 years.
- Laser occasionally used to avoid complications

### **105. Survey swabs – What are they?**

These are done by units to keep an idea on what organisms are present on babies. The advantage is that it gives clues to sensitivities of likely pathogens.

### **106. Talipes - What is it?**

There are 2 types of talipes – either positional or fixed.

With positional talipes the foot can be gently moved into a normal position. This just needs physio by the parents.

If the feet have fixed/non positional talipes they need referral to physiotherapy who, in most cases, can correct it with serial plasters.

### **107. Thread worms – How do they present?**

Usually with itchiness around the anus, but in girls the vagina may be red and itchy (this can be mistaken for abuse).

The itchiness is caused by the female worms coming out at night to lay eggs

Diagnosis is, therefore, made either by seeing the worms in the faeces or by using a small piece of sellotape across the anus (overnight) so that the worms get stuck. Rarely can cause appendicitis.

### **108. Toddler diarrhoea – What is it?**

The other name for this is 'peas and carrots' and is caused by a fast gastrointestinal transit time. The child is otherwise well and thriving.

Children will grow out of it but it makes toilet training difficult.

The condition can be helped by decreasing fluid intake, especially juices. Clear apple juice being the worst culprit.

The stools are otherwise normal, e.g. easy to flush, not fatty.

### **109. Toilet training – What is normal toilet training?**

Toddlers become toilet trained during the day between 18 months and 2 years and at night at 2½ - 3 years.

It is best started when the toddler indicates a wish to start. It tends to be a lot quicker in older children.

Grandparents will often tell a parent that they were toilet trained at one. They were using the gastrocolic reflex to save on washing however this ultimately leads to a delay in training.

Up to 10% of 5 year olds are not dry at night.

### **110. TTN – What is it?**

Transient Tachypnoea of the Newborn. This is respiratory distress in the newborn period, caused by non complete absorption of liquor in the presence of normal surfactant and no infection. It is usually seen in term babies born by either rapid delivery or elective caesarean section. The babies are tachypnoeic, grunt, and often develop an oxygen requirement. Occasionally they need respiratory support. Usually recover quickly.

Chest x-ray shows wet lungs with fluid in the horizontal fissure.

Antibiotics are used because it is impossible to totally rule out infection but it settles within 24 – 48 hours.

It does not lead to chronic lung disease.

### **111. Umbilical granuloma – What is it?**

This is a fleshy overgrowth in the umbilicus left after the cord falls off, which may produce clear secretions. If small, e.g. under 2mm it can be left but larger lesions are

usually cauterised using silver nitrate with protection of the surrounding skin using Vaseline.

Beware if there is a discharge (rather than clear secretions) as a rare differential diagnosis is fistula formation from embryological remnants.

### **112. Umbilical hernias – what are they?**

These are common. They are more common in African babies, prems, CLD etc. These hernias have a large opening so rarely obstruct and do not need treatment. They take several months to disappear.

They can be associated with underlying problems eg. hypothyroidism, Beckwith's.

### **113. Unexplained death – what conditions have an increased risk of unexplained death?**

This list is not exhaustive: cerebral palsy, epilepsy, chronic lung disease pre or post op, tracheostomies.

### **114. Urine - How do you collect it?**

There are several ways to collect a urine :- bag, clean catch, midstream, catheter, supra pubic.

The area should be cleaned and then the bag applied. The nappy should not be replaced and the bag removed as soon as there is urine.

A clean catch urine can be caught in almost anything as e.coli is unlikely to be in the container.

If either way is used at home the urine can be kept in the fridge overnight.

Supra pubic sample should have no wbc and no growth of organisms.

### **115. Urachus - What is it?**

This is an embryological remnant that can link the bladder to the umbilicus, it can lead to three things.

Firstly, a cyst along its length can become infected or twist causing pain.

Secondly, they can have a blind sinus and cause umbilical discharge with what looks like a granuloma, so be aware and do not use silver nitrate.

Thirdly, and most rare, is a fistula to the bladder.

In all cases the whole track should be resected.

### **116. Vaginal bleeding in a 5 day old baby - What do you do?**

If this is true bleeding then it is caused by hormone withdrawal and is normal. In both girls and boys there may be a salmon pink colouration of the nappies, this is not blood but urates.

### **117. Viral induced wheeze – What is it?**

Parent: “every cold goes to his chest, Doctor”

This is usually seen in children under 2 years of age. The child usually goes from one cold to the next over winter. Each cold leads to a dry or wet wheeze. In between they remain asymptomatic, however asthma inhalers may help.

Tends to settle as spring appears.

### **118. Vomiting in the newborn period - When do you worry?**

The commonest reason for vomiting is mucous/maternal blood. This usually settles within 2 – 3 days.

Swallowed meconium may cause a gastritis that takes a few days to settle.

All these causes will not normally lead to bile vomits. Bile vomits are pathological until proven otherwise. There may be abdominal distension, and even in the presence of an obstruction, the bowels may have been opened.

Some of the possible diagnoses are duodenal atresia/web, malrotation, ileal atresia, lower bowel atresia.

The lower the atresia the longer it may be before vomiting starts.

Also examine the abdomen, anus and scrotum (hernia), then arrange an abdominal x-ray with nasogastric tube in situ. Often a barium study is needed.

### **119. Vomiting – coffee ground - What is the significance of coffee ground vomiting?**

In children these are most common in gastroenteritis. It is indicative of a Mallory-Weiss tear. It rarely needs treating and is not a reason to drip.

It recovers very quickly when the vomiting stops.

### **120. Walking - At what age do you worry about a child not being able to walk?**

This should always be taken in context with the rest of development. Normally children walk at 12 – 15 months.

If they are not walking by this age then an early referral to hospital is needed. It is worth looking at the lower back (spina bifida), and the creases of the bottom/thigh, as asymmetry may suggest congenital dislocatable hips..

Delayed walking up to 18+ months may occur if the child bottom shuffles. This is because they have a good field of view and so walking is not important

### **121. Whooping cough – Who gets it?**

Any one can get whooping cough but it is most dangerous in babies.

When they are very young they often don't "whoop" but have bouts of coughing ended by a gasp for breath. Whooping cough may cause apnoea (with or without cough), cyanosis, vomiting and rarely seizures – these may lead to the need for respiratory support.

Potential sequelae include bronchiectasis, cerebral damage and death.

There is no transmission of immunity from mother. Vaccination immunity may only last for 10 years as the diagnosis is very common in teenagers with chronic cough.

Herd immunity offers some protection of the very young. Treatment with erythromycin doesn't necessarily decrease the length of cough but stops others being infected.

It used to be called the cough of a hundred days.

### **122. Whooping cough - If you have it, do you need vaccination?**

The only situation in which vaccination would not be given is after confirmed culture positive pertussis.

### **123. Wood's Light – What is it?**

This is an ultraviolet light used to see the hypopigmented spots of tuberous sclerosis and also microsporum of ringworm.

### **124. swollen knee- how do you tell**

Always compare both knees. It is usually easy when significantly swollen but if subtle then look at the medial sulcus and if absent there must be swelling

