

Paediatric Pearls

July 2017

Put together by: Dr Julia Thomson, Consultant Paediatrician, julia.thomson@bartshealth.nhs.uk

Previous editions are all available at www.paediatricpearls.co.uk

BP measurement	Classification	Action
< 90 th centile (CENTILE CHARTS HERE)	Normotensive	Ensure healthy lifestyle
90 th – 95 th centile	Prehypertension	Evaluate for other risk factors*1
Adolescents with BP > 120/80	Prehypertension	Evaluate for other risk factors*1
Consistently > 95 th centile 95th to 99th centile plus 5mmHg	Hypertensive	Repeat twice to confirm (a few weeks apart). Request ABPM.*2
> 99th centile plus 5mmHg		Refer promptly to specialist

PAEDIATRIC HYPERTENSION (HTN) continued from [April 2017](#) and [June 2017](#) newsletters (with thanks to Ms Eileen Brennan, nurse consultant in paediatric nephrology): **DIAGNOSIS** and

Life-style recommendations to reduce high BP values:

- ☑ BMI < 85th percentile: Maintain BMI
- BMI 85–95th percentile: Weight maintenance (younger children) or gradual weight loss in adolescents to reduce BMI to <85th percentile
- BMI > 95th percentile: Gradual weight loss (1–2 kg/month) to achieve value <85th percentile
- ☑ Moderate to vigorous physical aerobic activity 40 min, 3–5 days/week
- ☑ Avoid intake of excess sugar, excess soft drinks, saturated fat and salt and recommend fruits, vegetables and grain products

*1 Other risk factors: high caffeine or salt diet, use of OTC or prescribed medication, senna, amphetamines (including ADHD treatment), decongestants, smoking, poor sleep
*2 Ambulatory or 24 hour Blood Pressure Monitoring (see August 2017 newsletter for more information on ABPM and a link to new ambulatory BP centile charts)

NICE published a [Quality Standard on Bedwetting in Children and Young People](#) in 2014 based on their [2010 guideline](#). 8% of 4 year olds wet the bed more than twice a week, 1.9% of 9 year olds. It is common but can have serious effects on the child and family.

Take a look at <https://www.ncbi.nlm.nih.gov/books/NBK62729/> which describes the impact on families of bedwetting, in particular, the effect on self-image, the association with domestic violence in some cultures and the attitudes of families to nocturnal enuresis.

Self esteem is significantly lower in children with enuresis than in non-enuretics and, perhaps unsurprisingly, rises significantly once they have been dry at night for one month.



This is the colour of normal breastfed baby poo. We welcome back Dr Marylyn Emedo for a series on pooing and constipation throughout infancy. First instalment:

What is normal?

This picture comes from <http://www.breastfeedingmaterials.com> where you can download a “diaper diary” with pictures of poo of all sorts of different colours and consistencies.

In 90% of normal term babies, meconium (intestinal epithelial cells, lanugo, mucus, amniotic fluid, bile, and water) is passed within 24 hours of birth and by 48 hours in nearly all normal babies¹. Preterm infants may take longer than this to first open their bowels; one study reported only 37% of preterm infants (25 -36 weeks gestation) open their bowels in the first 24 hours, and 32% are delayed over 48 hours. The ongoing frequency of stool output, and expected colour and consistency thereafter depends largely on what the baby is being fed.

BREASTFED newborn babies stool between 7 times a day and once every 7-10 days. Stool is commonly “loose” in consistency and yellow in colour resembling “mustard seeds”. A reduction in frequency is typically seen from the 2nd month of life².
BOTTLE FED babies tend to open their bowels less times per day.

URINALYSIS – WHAT EACH COMPONENT MEANS...

- 1) SG ([Jan 2017](#)), 2) pH ([Feb '17](#)), 3) nitrites ([March '17](#)), 4) leucocytes ([April '17](#)) 5) blood ([June '17](#)), 6) **protein**
- Normal daily protein excretion ≤ 150mg/24 hours or 10mg/100mL. In nephrotic syndrome >3.5g/day is excreted. “Trace” positive results = 10 mg/100 ml or about 150 mg/24 hours (the upper limit of normal).
- Causes: transient or orthostatic (most common and benign), [click here](#) for summary of causes in children
- False Positive: Concentrated or alkaline urine (pH >7.5), trace residue of bleach, NaHCO₃, cephalosporins
- False Negative: Dilute urine or acidic urine (pH <5)
- Use spot, early morning urine testing for a protein/creatinine ratio if the urine dipstick test result is 1+ protein or more. A 24 hour collection is impractical.

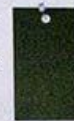
Dipstick protein reading	Protein excretion gm/24 hours	Protein excretion mg/dL
Negative	<0.1	<10
Trace	0.1-0.2	15
1+ (and above is abnormal)	0.2-0.5	30
2+	0.5-1.5	100
3+	2.0-5.0	300
4+	>5.0	>1000

Resources: <http://lifeinthefastlane.com/investigations/urinalysis/>
<http://labtestsonline.org.uk/understanding/analytes/urinalysis/ui-exams?start=1>
<http://www.aafp.org/afp/2010/0915/p645.html> (comprehensive info)

WHAT DOES A NORMAL DIAPER LOOK LIKE?

It's often news to first-time parents that baby stools come in a whole range of colors and textures. So knowing what's normal (most of it), and what isn't quite right will stop you from worrying each time you look in your baby's diaper. Here's what you can expect:

» **In the first couple of days**, your baby will pass meconium, the thick, green-black, tarlike substance that accumulated in his bowels while in the uterus.



» **From days three to five**, stools gradually change, turning from dark green through to yellow and light brown.



» **Your breast-fed baby's** stools will be a mustardlike color and may be seedy and watery. They are also surprisingly sweet smelling.



» **Your formula-fed baby's** stools tend to be more formed and a slightly darker yellow-tan color. Some formula can lend a greenish color to stools.



» **In the first few days**, your baby may poop frequently, sometimes after each feeding. After about day four, your baby will usually pass around two stools a day for the next few weeks. Breast-fed babies sometimes pass stools less often, and may occasionally go several days without a bowel movement. As long as the stools are soft and not uncomfortable for your baby to pass, this isn't a concern.

¹Newborn: First Stool and Urine. *Pediatrics in Review*. 1994; 15(8):319-320.
²Duyan Camurdan, A., Beyazova, U., Ozkan, S. & Tunc, V. T. Defecation patterns of the infants mainly breastfed from birth till the 12th month: Prospective cohort study. *Turk. J. Gastroenterol.* 25, 1–5 (2015).