

## Guidance for Oral Paracetamol dosing

There have been a number of changes in the recommendations to paracetamol dosing over the past several years. This document has been produced to summarise these changes and to remind prescribers of the current dosage recommendations for both adults and children.

### Adult dosing (Oral paracetamol)

500mg to 1g every 4–6 hours up to a **Maximum of 4 g per day.**

### Should the dose of oral paracetamol be reduced for patients who weigh less than 50kg?

A paper<sup>1</sup> published in 2010 documented liver damage in two patients weighing under 50kg when oral paracetamol was given at 4g total daily dose. The following information may be helpful in deciding whether or not to reduce oral paracetamol doses for your patients.

- The MHRA reviewed the literature and considered that the patients in the case reports had pre-existing risk factors for paracetamol toxicity, such as chronic malnutrition and high alcohol consumption. They concluded that a patient's weight being less than 50kg is not of itself an indication to reduce the dose of oral paracetamol.
- Whilst reduced body weight alone is not considered a marker for an increased risk of oral paracetamol toxicity, an adult patient weighing less than 50kg is more likely to have other conditions such as chronic malnutrition/anorexia or high alcohol consumption which may pre-dispose them to liver damage from paracetamol. Dehydration and hepatocellular insufficiency would also increase the risk of toxicity.
- Care should be taken when deciding on a dose of oral paracetamol for patients weighing less than 50kg. A maximum total daily dose of 2-3g may be warranted, particularly in the frail elderly population.
- It should be remembered that 50kg is not an absolute figure, and patients weighing more than this may also have conditions which mean consideration of a dose reduction would also be appropriate.
- In all patients, the lowest dose which manages the patient's pain should be used. If recommending a dose reduction in a patient, please monitor pain control and offer alternate management strategies if needed.
- This advice only applies to **oral** paracetamol dosing – see BNF and SPC for **IV dosing**.

### Paediatric oral paracetamol dosing<sup>2</sup>

Age	Dosage (maximum 4 doses in 24 hours and maximum of 60mg/kg day)	Paracetamol suspension (volume per dose)	Equivalent tablet dose (based on 500mg tablet)
<2 months	<b>UNLICENSED</b>		
3-5 months	60 mg every 4–6 hours	120mg/5ml (2.5ml)	
6-23 months	120 mg every 4–6 hours	120mg/5ml (5ml)	
2-3 years	180 mg every 4–6 hours	120mg/5ml (7.5ml)	
4-5 years	240 mg every 4–6 hours	120mg/5ml (10ml)	
6-7 years	240–250 mg every 4–6 hours	250mg/5ml (4.8-5ml)	Half 500mg tablet
8-9 years	360–375 mg every 4–6 hours	250mg/5ml (7.2-7.5ml)	
10-11 years	480–500 mg every 4–6 hours	250mg/5ml (9.6-10ml)	One 500mg tablet
12-15 years	480–750 mg every 4–6 hours	250mg/5ml (9.6-15ml)	One to One and a half 500mg tablets
16-17 years	0.5–1 g every 4–6 hours	250mg/5ml (10-20ml)	One to Two 500mg tablets

### Post Immunisation pyrexia oral paracetamol dosing in infants<sup>3</sup>

Paracetamol should not be given routinely for prophylaxis of post immunisation pyrexia (except following immunisation with Bexsero® - see below) as it may reduce the immune response and therefore reduce the effectiveness of the vaccine. For infants with post immunisation pyrexia then oral paracetamol can be given. The following doses are recommended:

- **Child aged 2–3 months:** 60 mg as a single dose, followed by a further dose of 60 mg after 4–6 hours if required. No more than **TWO** doses should be given.
- **Child from 4 months:** 60mg as a single dose, followed by 60mg every 4-6 hours if required. Up to a maximum of 4 doses per day.

**Oral paracetamol dosing for prophylaxis of post-immunisation pyrexia following immunisation with meningococcal group B vaccine (Bexsero®) given as part of the routine immunisation schedule<sup>4</sup>**

**For the following the maximum doses below should not be exceeded**

The following doses are recommended:

- **Full term infant from 2 months:** 60 mg to be given at the time of vaccination, then 60 mg after 4–6 hours, then a further 60 mg after 4–6 hours. No more than **THREE** doses should be given.
- **Full term infant currently weighing less than 4kg use weight-based dose:** 20 mg/kg for 1 dose, then 10–15 mg/kg every 6–8 hours as required, maximum daily dose to be given in divided doses; maximum 60 mg/kg per day.
- **Preterm infant born at less than 32 weeks gestation AND currently weighing less than 4kg use weight-based dose:** <sup>2</sup>

Neonate 28 weeks to 32 weeks corrected gestational age

20 mg/kg for 1 dose, then 10–15 mg/kg every 8–12 hours as required, maximum daily dose to be given in divided doses; maximum 30 mg/kg per day.

Neonate 32 weeks corrected gestational age and above

20 mg/kg for 1 dose, then 10–15 mg/kg every 6–8 hours as required, maximum daily dose to be given in divided doses; maximum 60 mg/kg per day.

## References:

1. Claridge LC et al. Acute liver failure after administration of paracetamol at the maximum recommended daily dose in adults. *BMJ* 2010;341:c6764
2. Paracetamol monograph. BNF. Available at: <https://bnf.nice.org.uk/> Accessed <02/06/21>
3. Immunisation against infectious diseases. Vaccine safety and adverse events following immunisation: the Green Book, chapter 8. March 2013. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/147868/Green-Book-Chapter-8-v4\\_0.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/147868/Green-Book-Chapter-8-v4_0.pdf) Accessed <02/06/21>
4. NHS. Using Paracetamol to prevent and treat fever after Men B vaccination. June 2018. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/717281/PHE\\_paracetamol-menB-A4-2018\\_01.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/717281/PHE_paracetamol-menB-A4-2018_01.pdf) Accessed <02/06/21>
5. Protocol for the supply or administration of paracetamol oral suspension 120mg/5mL to infants under 12 months of age receiving primary doses of MenB vaccination. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/881402/20200427PHEParacetamolProtocol\\_1\\_.pdf?UNLID=42455001920201223195821](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/881402/20200427PHEParacetamolProtocol_1_.pdf?UNLID=42455001920201223195821) Accessed <02/06/21>

This guideline was approved by Barnsley Area Prescribing Committee on 12<sup>th</sup> January 2022.