

## Navigating Antipyretic Drug Shortages

### General Tips

- Consider alternate brands/generics and reassure parents that they are equally effective and safe
  - o Pediatrrix generic acetaminophen 80mg/mL is covered by ODB for eligible children (i.e. OHIP+/Ontario Works/ODSP/Trillium) with a valid prescription
- Try looking for products at smaller, less busy pharmacies which may not move children’s medications as quickly. Ibuprofen and acetaminophen liquid can also be found at stores that are not pharmacies (e.g. grocery, dollar stores)
- Can use suppositories, if appropriate for weight, see chart below. Rectal administration may lead to more erratic absorption compared to oral<sup>i</sup>
- If all pediatric formulations are unavailable, can leverage adult dosage forms, per chart below (for children ≥11 kg). Tablets can be crushed and administered by mixing with a vehicle such as applesauce, yogurt, or chocolate sauce.
- If no products are commercially available, acetaminophen or ibuprofen suspension can be compounded at compounding pharmacies<sup>c,ii,iii, iv, v</sup> but is typically not covered, more expensive, and takes time to compound.

### Acetaminophen (Store brand, Tylenol, Tempra)

#### Dosing

- Oral<sup>vi</sup>: 10–15 mg/kg Q4–6H; maximum 75 mg/kg/24 hours; not more than 4000 mg/day. Do not exceed 5 doses/day
- Rectal<sup>vii</sup>: 10–20 mg/kg Q4–6H; maximum 75 mg/kg/24 hours. Do not exceed 5 doses/day

\*Note: if possible, guide parents to more accurate dosing based on the weight-based dosing and the child’s weight, otherwise the following can be used as a more general guide

Child’s Weight	Infant Drops (80mg/mL)	Children’s Suspension (160mg/5mL)	Children’s Chewable Tablets‡ or Easy Dissolve Powder (160mg/each)	Suppository	Adult Tablets
3.0-3.9 kg (6-8.5 lbs)	0.5 mL	†		6-12 kg (Age 1-2) 120mg/dose	Refer to page 3 for parent-friendly handout
4.0-5.4 kg (8.5-11 lbs)	0.75 mL	†			
5.5-7.9 kg (12-17 lbs)	1 mL	2.5 mL	0.5 tablet	8-16kg (Age 2-4) 160mg/dose	
8.0-10.9 kg (17.5-24lbs)	1.5 mL	3.75 mL	0.75 tablet (may be difficult to quarter)		
11.0-15.9 kg (24-35 lbs)	2.0 mL	5 mL	1 tablet		
16.0-21.9 kg (36-47 lbs)	3.0 mL	7.5 mL	1.5 tablets	16.25-32.5kg (age 4-12) 320mg/dose Q4H for 4-6 yrs Q6H for 6-12 yrs	
22.0-26.9 kg (48-59 lbs)	4.0 mL	10 mL	2 tablets (2 powder packs)		
27-31.9 kg (60-71 lbs)	5.0 mL	12.5 mL	2.5 tablets		
32-43.9 kg (72-95 lbs)	6.0 mL	15 mL	3 tablets (3 powder packs)		

Dosage chart adapted from Alberta Health Services<sup>viii</sup>

† Can be used but should be calculated based on actual weight at the time 10-15 mg/kg/dose, will require a smaller syringe (1mL or 3mL) for accuracy of dosing

‡ Chewable tablets may be used so long as the child is capable of chewing and swallowing other foods

^ Tips for splitting adult tablets: Splitting tablets results in potentially inaccurate dosing, should only be done if no other alternative is available. Many ibuprofen and acetaminophen tablets are oblong and not scored. Parents should be advised to try to purchase round tablets that are scored if possible. Oblong tablets should be split with a tablet splitter widthwise (not lengthwise), can ask pharmacy for assistance with this if needed

## Ibuprofen (Store brand, Motrin, Advil)

### Dosing

- Ibuprofen Oral<sup>ix</sup>: 5–10 mg/kg Q6–8H; Maximum: 40 mg/kg/24 hours

Note: encourage adequate hydration as acute kidney injury can occur in children following administration of ibuprofen even when dosed within the normal range<sup>x</sup>

Child's Weight	Infant Drops (40 mg/mL)	Children's Suspension (100mg/5mL)	Children's Chewable Tablets‡ (100mg/each)	Adult Regular Strength Tablets (200mg/each) <sup>Δ</sup> *Do not use extended release tablets
5.5-7.9 kg (12-17 lbs)	1.25 mL	2.5 mL	0.5 tablet	
8.0-10.9 kg (17.5-24lbs)	1.875 mL	3.75 mL	0.75 tablet (may be difficult to quarter)	
11.0-15.9 kg (24-35 lbs)	2.5 mL	5 mL	1 tablet	0.5 tablet <sup>Δ</sup>
16.0-21.9 kg (36-47 lbs)	3.75 mL	7.5 mL	1.5 tablets	0.5 tablet <sup>Δ</sup>
22.0-26.9 kg (48-59 lbs)	5 mL	10 mL	2 tablets	1 tablet
27-31.9 kg (60-71 lbs)	6.25 mL	12.5 mL	2.5 tablets	1 tablet
32-43.9 kg (72-95 lbs)	7.5 mL	15 mL	3 tablets	1.5 tablets

Dosage chart adapted from Alberta Health Services<sup>xi</sup>

‡ Chewable tablets may be used so long as the child is capable of chewing and swallowing other foods

<sup>Δ</sup> Tips for splitting adult tablets: Splitting tablets results in potentially inaccurate dosing, should only be done if no other alternative is available. Many ibuprofen and acetaminophen tablets are oblong and not scored. Parents should be advised to try to purchase round tablets that are scored if possible. Oblong tablets should be split with a tablet splitter widthwise (not lengthwise), can ask pharmacy for assistance with this if needed§

<sup>i</sup> CPS [Internet]. Ottawa (ON): Canadian Pharmacists Association; ©2022 [updated 2016 Nov 1. cited 2022 Jul 7]. Acetaminophen [CPhA monograph]. Available from: <http://myrxtx.ca>. Also available in paper copy from the publisher.

<sup>ii</sup> [https://cdn2.hubspot.net/hubfs/471158/LAB\\_DOCS/Acetaminophen\\_suspension.pdf](https://cdn2.hubspot.net/hubfs/471158/LAB_DOCS/Acetaminophen_suspension.pdf)

<sup>iii</sup> [https://cdn2.hubspot.net/hubfs/471158/LAB\\_DOCS/Ibuprofen\\_Suspension.pdf](https://cdn2.hubspot.net/hubfs/471158/LAB_DOCS/Ibuprofen_Suspension.pdf)

<sup>iv</sup> Ibuprofen 100mg/5mL Oral Liquid [Medisca] FIN F006 170. Updated 2015 May 4. Cited 2022 Jul 7.

<sup>v</sup> Acetaminophen 100mg/mL Oral Liquid [Medisca] FIN F007 858. Updated 2018 Jul 26. Cited 2022 Jul 7.

<sup>vi</sup> CPS [Internet]. Ottawa (ON): Canadian Pharmacists Association; ©2022 [updated 2016 Nov 1. cited 2022 Jul 7]. Acetaminophen [CPhA monograph]. Available from: <http://myrxtx.ca>. Also available in paper copy from the publisher.

<sup>vii</sup> CPS [Internet]. Ottawa (ON): Canadian Pharmacists Association; ©2022 [updated 2016 Nov 1. cited 2022 Jul 7]. Acetaminophen [CPhA monograph]. Available from: <http://myrxtx.ca>. Also available in paper copy from the publisher.

<sup>viii</sup> <https://www.albertahealthservices.ca/assets/info/hp/cdc/if-hp-cdc-ipsm-fever-medication-chart.pdf>

<sup>ix</sup> CPS [Internet]. Ottawa (ON): Canadian Pharmacists Association; ©2022 [updated 2020 Dec 2. cited 2022 Jul 7]. Nonsteroidal anti-inflammatory drugs (NSAIDS) [CPhA monograph]. Available from: <http://myrxtx.ca>. Also available in paper copy from the publisher.

<sup>x</sup> J Pediatr 2013 Jan 26. doi: 10.1016/j.jpeds.2012.11.069.

<sup>xi</sup> <https://www.albertahealthservices.ca/assets/info/hp/cdc/if-hp-cdc-ipsm-fever-medication-chart.pdf>






## Pediatric Acetaminophen (Tylenol®) Dosing Using Tablets

Uncoated acetaminophen tablets may be split, then crushed, and mixed with apple sauce or pudding. Use split and mixed doses immediately. These calculations use a dose of about 10-15 mg/kg. Doses can be repeated after 4 hours or longer. Do not give more than 5 doses in 24 hours.

Acetaminophen comes in 325 mg and 500 mg tablets. Please note the table below is based on **325 mg tablets**.

Acetaminophen also comes in different shapes. It is best to use **round tablets** if you need  $\frac{1}{4}$  of a pill. It is also important to make sure that the tablets are **NOT enteric coated**. The round, uncoated acetaminophen tablets are usually found behind the pharmacy counter, so you will likely have to ask your pharmacist for them. You do NOT need a prescription for this. Pharmacies also sell pill cutters and pill grinders if needed to help with the process.

Child's weight \_\_\_\_\_

Using acetaminophen (Tylenol®) 325 mg tablets		
Child's Weight	Proportion of tablet	Acetaminophen dose
5.5-9.9 kg (12-21.9 lbs)		$\frac{1}{4}$ of a 325 mg tablet (= 81 mg)
10-16.9 kg (22-23.9 lbs)		$\frac{1}{2}$ of a 325 mg tablet (= 162.5 mg)
17-21.9 kg (37-47.9 lbs)		$\frac{3}{4}$ of a 325 mg tablet (= 243.75 mg)
22 kg-32.9 kg (48-71.9 lb)		Full 325 mg tablet
33 kg (72 lbs) and above		1 and $\frac{1}{2}$ 325 mg tablet (= 487.5 mg)