

# AMOXICILLIN/CLAVULANATE (AUGMENTIN®) DOSING GUIDE

Amoxicillin/clavulanate is a beta-lactam/beta-lactamase inhibitor combination antibiotic. This combination of antibiotics covers the following organisms: MSSA, Streptococci, *H. flu*, *M. catarrhalis*, anaerobes, and many enteric gram negative bacilli. It does NOT cover MRSA or some of the more resistant gram negative bacilli.

When prescribing amox/clav, the first decision is whether the amoxicillin should be dosed at standard dose (30–50 mg/kg/day) or high dose (80–90 mg/kg/day). High dose amoxicillin should be used for any infection where *Streptococcus pneumoniae* coverage is needed (e.g. AOM, CAP, sinusitis). Standard dose amoxicillin should be used when *S. pneumoniae* coverage is not needed (e.g. bite wounds, cellulitis, UTI).

The clavulanate extends the activity spectrum of amoxicillin by inhibiting beta-lactamases produced by some bacteria. The main side effect of clavulanate is a dose-dependent diarrhea. Clavulanate that is dosed too low, however, may not inhibit the beta-lactamase enzyme appropriately which can contribute to treatment failure. Therefore, it is important to optimize the clavulanate component by selecting the correct formulation of amox/clavulanate for the appropriate dosing regimen.

## Available Formulations

	Amoxicillin (mg)	Clavulanate (mg)	In each
Suspension	125	31.25	5 mL
	200	28.5	5 mL
	250	62.5	5 mL
	400	57	5 mL
	600	42.9	5 mL
Tablets (chewable)	200	28.5	--
	400	57	--
Tablets	250	125	--
	500	125	--
	875	125	--
Tablet, extended release	1000	62.5	--

**Highlighted:** Cardinal Glennon Inpatient formulary products  
Non-highlighted formulation may be less available at community pharmacies.

Typical pediatric regimens for children < 40 kg contain less than 10 mg/kg/day of clavulanate. For children > 40 kg, the max clavulanate dose is 250 mg/day).

Disease	Age	Weight	Severity	Dose	Frequency	Formulation
CAP/AOM/sinusitis <sup>4,7</sup>	≤ 3 mo		All	30 mg/kg/day	div. BID	125-31.25/5 mL 250-62.5/5 mL
	> 3 mo to adol.	< 40 kg	All	80-90 mg/kg/day <sup>5,8</sup>	div. BID	600-42.9/5 mL
	Adol to adults	> 40 kg	Mild-mod	875/125 mg <sup>3</sup>	Q12H	875/125 mg tabs
	Adol to adults	> 40 kg	High	2 grams amox/125mg clav <sup>1,2</sup>	Q12H	1000/62.5 mg tabs (Augmentin XR) <sup>1</sup>
SSTI/UTI/bite wounds	≤ 3 mo		All	30 mg/kg/day	div. BID	125-31.25/5 mL 250-62.5/5 mL
	> 3 mo to adol.	< 40 kg	All	30-50 mg/kg/day <sup>5</sup>	div. BID	400/57/5mL
	Adol to adults	> 40 kg	All	875/125 mg <sup>3</sup>	Q12H	875/125 mg tabs
Appendicitis <sup>6</sup>	> 3 mo to adol.	< 40 kg	All	50 mg/kg/day <sup>5</sup>	div. TID	400/57/5mL
	Adol to adults	> 40 kg	All	875/125 mg <sup>3</sup>	Q12H	875/125 mg tabs

<sup>1</sup> The Augmentin XR tabs (1000/62.5) are expensive and not widely available in pharmacies. A less expensive and more convenient way to approximate this regimen is by prescribing the following: One amox/clav (875/125) tab PLUS two 500 mg amoxicillin tabs to be taken twice daily. This is the equivalent to using Augmentin XR dosing by providing 1875 mg amox/125 clav PO BID.

<sup>2</sup> If liquid required, use 600–42.9/5mL formulation

<sup>3</sup> If liquid required, use 400–57/5 mL formulation

<sup>4</sup> This guideline is not meant to support the use of amox-clav over amoxicillin alone for CAP/AOM/sinusitis. See AAP and IDSA guidelines for more information

<sup>5</sup> For max doses of amox-clav, refer to adult dosing

<sup>6</sup> Three times daily dosing in the context of appendicitis is based on published studies in the surgical literature (PMID: 26547287)

<sup>7</sup> Severe sinusitis is defined as fever >39C and threat of suppurative complications; guidelines do not define severity in regards to which children would benefit from 2000 mg of the amox. component using XR tablets BID for AOM and CAP

<sup>8</sup> If patient is 25–40kg and cannot take liquid, can use 875/125 tablets (1 tab BID)