Antibiotic options and doses for treatment of typhoid fever

	Adults	Children	Duration
Ciprofloxacin	Oral: 500 mg twice daily	Oral: 30 mg/kg per day in two divided doses (maximum 1000 mg per day)*	7 to 10 days
	IV: 400 mg twice daily	IV: 20 mg/kg per day in two divided doses (maximum 800 mg per day)*	
Ofloxacin¶	400 mg orally or IV twice daily	15 to 30 mg/kg per day orally in two divided doses (maximum 800 mg per day)*¶ based upon limited experience; optimal pediatric dose is not known	7 to 10 days
Ceftriaxone	2 g IV once or twice daily	50 to 100 mg/kg IV in one or two divided doses (maximum 4 g per day)	10 to 14 days
Cefotaxime	1 to 2 g IV every six or eight hours	150 to 200 mg/kg IV per day in three to four divided doses (maximum 8 g per day)	10 to 14 days
Cefixime	200 mg orally twice daily	20 mg/kg orally in two divided doses (maximum 400 mg per day)	10 to 14 days
Azithromycin	1 g orally once then 500 mg orally daily OR 1 g orally once daily	10 to 20 mg/kg orally once per day (maximum 1000 mg per day)	5 to 7 days
MeropenemΔ	1 to 2 g IV every eight hours	20 to 40 mg/kg every eight hours (maximum 6000 mg per day)	10 to 14 days
Agents of limited usefulness due to the high prevalence of multidrug resistance			

Chloramphenicol◇	Oral: 500 to 750 mg four times per day IV: 50 to 100 mg/kg per day in four divided doses (maximum 3 g per day)	50 to 100 mg/kg per day orally or IV in four divided doses (maximum 3 g per day)	14 to 21 days
Amoxicillin	1 g orally three times daily	100 mg/kg per day orally in three divided doses (maximum 3 g per day)	10 to 14 days
TMP-SMX	1 double-strength tablet (160/800 mg) orally twice daily	8 mg/kg TMP and 40 mg/kg SMX orally in two or four divided doses (maximum 320 mg TMP/1600 mg SMX per day)	10 to 14 days

Antibiotic selection depends upon the severity of illness, local resistance patterns, whether oral medications are feasible, the clinical setting, and available resources. Refer to the topic on treatment of typhoid fever for detailed discussion. The doses listed above are intended for patients with normal renal function; the doses of some of these agents must be adjusted in patients with renal insufficiency.

IV: intravenous; TMP-SMX: trimethoprim-sulfamethoxazole (co-trimoxazole).

* Although fluoroquinolones are not routinely used as first-line therapy for children <18 years old, their use in children is justified in severe infections, such as typhoid fever, when alternatives are not appropriate or available.

¶ IV ofloxacin formulation is not available in North America but may be available elsewhere.

Δ Carbapenems should be reserved for patients who have severe or complicated infection with a suspected extensively drug-resistant strain. These include patients with infection acquired in Pakistan. Imipenem and ertapenem are other carbapenems that can be used instead of meropenem. The optimal doses of carbapenems for typhoid fever have not been established.

◇ Chloramphenicol use is restricted in many countries due to a low risk of fatal aplastic anemia. Oral chloramphenicol formulation is not available in North America but may be available elsewhere.

References:

1. *Bhutta ZA. Current concepts in the diagnosis and treatment of typhoid fever. BMJ 2006; 333:78.*
2. *Harris JB and Brooks WA. Typhoid and paratyphoid fever. In: Hunter's Tropical Medicine and Emerging Infectious Disease, 9th edition, Magill AJ, Ryan ET, Hill DR, and Solomon T (Eds), Saunders Elsevier, 2013.*
3. *Levine M, Tapia MD, and Zaidi AKM. Typhoid and paratyphoid (enteric) fever. In: Tropical Infectious Diseases: Principles, Pathogens and Practice, 3rd edition, Guerrant RL, Walker DH, and Weller PF (Eds), Saunders Elsevier, 2011.*
4. *World Health Organization Department of Vaccines and Biologicals. Background document: the diagnosis, prevention and treatment of typhoid fever. Geneva, 2003; 1:19.*

Graphic 109995 Version 4.0