

Table 14-3 Maintenance Medications<sup>a</sup>

MEDICATION	SIDE EFFECTS/COMMENTS
<b>INFANTS</b>	
<i>Oral Medications/Other</i>	
Juices containing sorbitol	Pear, prune, apple
Lactulose or sorbitol: 1–3 mL/kg/day ÷ doses bid	See below
Corn syrup (light or dark): 1–3 mL/kg/day ÷ doses bid <i>Per Rectum</i>	Not considered risk for <i>Clostridium botulinum</i> spores
Glycerin suppository	No side effects
<b>CHILDREN</b>	
<i>Oral Medications</i>	
Lubricant	Softens stool and eases passage
Mineral oil: 1–3 mL/kg day as one dose or ÷ bid	Aspiration—lipoid pneumonia
	Chill or give with juice
	Adherence problems
	Leakage: dose too high or impaction
Osmotics	Retain water in stool, aiding bulk and softness
Lactulose: 10 g/15 mL, 1–3 cc/kg/day ÷ doses bid	Synthetic disaccharide: abdominal cramping, flatus
Magnesium hydroxide (milk of magnesia): 400 mg/5 mL, 1–3 mL/kg/day ÷ bid 800 mg/5 mL, 0.5 mL/kg ÷ bid	Risk of hypermagnesemia, hypophosphatemia, secondary hypocalcemia with overdose or renal insufficiency
MiraLAX (polyethylene glycol powder): 17 g/240 cc water or juice stock, 1.0 g/kg/day ÷ doses bid (approximately 15 cc/kg/day)	Titrate dose at 3-day intervals to achieve mushy stool consistency May make stock solutions to administer over 1–2 days
	Excellent adherence
Sorbitol: 1–3 mL/kg/day ÷ doses bid	Less costly than lactulose
Stimulants <sup>†</sup>	Improve effectiveness of colonic and rectal muscle contractions
Senna: syrup—8.8 g sennoside/5 mL	Idiosyncratic hepatitis, melanosis coli, hypertrophic osteoarthropathy, analgesic nephropathy; abdominal cramping
2–6 yr: 2.5–7.5 cc/day ÷ doses bid	
6–12 yr: 5–15 cc/day ÷ doses bid (Tablets and granules available)	Improvement of melanosis coli after medication stopped
Bisacodyl: 5-mg tablets, 1–3 tablets/dose 1–2 × daily	Abdominal cramping, diarrhea, hypokalemia
<i>Per Rectum</i>	
Glycerin suppository	No side effects
Bisacodyl: 10-mg suppositories, 0.5–1 suppository, 1–2 × daily	Abdominal cramping, diarrhea, hypokalemia

<sup>a</sup>Single agent may suffice to achieve daily, comfortable stools.

<sup>†</sup>Stimulants should be reserved for short-term use.

## Chapter 15

# NORMAL SLEEP AND PEDIATRIC SLEEP DISORDERS

Sleep is a universal phenomenon that is critical to child health, development, and daily functioning. This complex behavioral and physiologic process is characterized by a reversible state of partial unresponsiveness and disengagement from the environment. Sleep is broadly categorized by polysomnographic

patterns into rapid eye movement (REM) sleep and non-REM (NREM) sleep. REM sleep is characterized by an active, awake-like electroencephalography (EEG) pattern and muscle atonia. NREM sleep is further divided into three stages—from stage 1 (N1), which is the lightest sleep stage and consists of low-amplitude, high-frequency EEG activity, to stage 3 (N3), also known as *deep* or *slow-wave* sleep, characterized by low-frequency, high-amplitude delta waves. REM and NREM sleep alternate in cycles throughout the night.

Sleep architecture changes from fetal life through infancy and childhood. Sleep cycles last approximately 60 minutes in newborns and gradually lengthen to 90 minutes in children and adults. Neonates typically begin their sleep cycle in REM sleep, whereas older children and adults begin sleep in NREM