Algorithm for Formula-Fed Infants*



- * Concerns are not exhaustive; each baby is unique. Use clinical judgment when selecting a formula and when determining need for referral to a specialist. † ~1/5 of the lactose of a full-lactose, routine, milk-based formula.

Cause of concerns should be assessed before switching formulas to evaluate whether other strategies may help alleviate concerns. For breastfed infants, please visit: https://www.hamiltonhealthsciences.ca/wp-content/uploads/2019/08/CowMilkProteinAllergyWhatToEatBreastfeeding-trh.pdf

Signs and Symptoms Related to CMPA

	Infants and Toddlers	Older Children	Immediate Reaction (within 1 minute to 2 hours after ingesting CMP)
Digestive	 Dysphagia Frequent regurgitation Colic, abdominal pain Vomiting Anorexia, refusal to feed Diarrhea ± intestinal protein or blood loss Constipation ± perianal rash Failure to thrive Occult blood loss Iron-deficiency anemia 	 Dysphagia Food impaction Regurgitation Dyspepsia Nausea, vomiting Anorexia, early satiety Diarrhea ± intestinal protein or blood loss Constipation Abdominal pain Occult blood loss Iron-deficiency anemia 	• Vomiting
Respiratory	Runny noseWheezingChronic coughing (all unrelated to infections)	Runny noseWheezingChronic coughing (all unrelated to infections)	Wheezing or stridor Breathing difficulties
Skin	 Urticaria (unrelated to infections, drug intake, or other causes) Atopic eczema Angioedema (swelling of lips or eyelids) 	 Urticaria (unrelated to infections, drug intake, or other causes) Atopic eczema Angioedema (swelling of lips or eyelids) 	Urticaria Angioedema
General	 Anaphylaxis Shock-like symptoms with severe metabolic acidosis, vomiting, and diarrhea (FPIES) 	• Anaphylaxis	Anaphylaxis FPIES

CMPA=cow's milk protein allergy

FPIES=food protein-induced enterocolitis syndrome.

Adapted from Koletzko S et al. Diagnostic Approach and Management of Cow's-Milk Protein Allergy in Infants and Children: ESPGHAN GI Committee Practical Guidelines. JPGN. 2012;55:2.

References:

1. Vanderhoof et al. *Clin Pediatr*. 2003;42:483-495.
2. Lightdale JR et al. Gastroesophageal Reflux: Management Guidance for the Pediatrician. *Pediatrics*. 2013;131:e1684–e1695.

