

MCT Oil

Newborn use only

2018

Indication	Fat supplementation for neonates unable to digest or absorb conventional fats.
Action	Lipid fraction of coconut oil consisting of medium chain triglycerides with carbon chain lengths of 6-10 carbons. MCTs are more readily hydrolyzed and absorbed than long chain fats. MCTs are absorbed directly into the portal circulation and do not require bile salts for emulsification.
Drug Type	Medium Chain triglyceride (MCT) oil. Source of Oil: coconut and/or palm kernel oil
Trade Name	MCT Oil
Presentation	MCT Oil (Nutricia) – 500 mL. Approximately 1g (0.95 g)/mL fat giving 8.6 kcal/mL.
Dosage / Interval	1–2 g/kg/day (1–2 mL/kg/day) in 3-4 divided doses.
Maximum daily dose	4 g/kg/day
Route	ORAL
Administration	Oral or via intra gastric tube. DO NOT GIVE IV!
Precautions	MCT oil can adhere to feeding tubes resulting in loss of nutrient. ³ Large intakes may cause vomiting or diarrhoea. ⁵
Contraindications	Acute intestinal obstruction Acute necrotising enterocolitis
Adverse Reactions	Lipid aspiration pneumonia ⁴
Stability	
Storage	Store in room temperature. Once opened, use within one month. ⁵
Evidence summary	High concentrations of MCTs have been used in some preterm formulas to increase the coefficient of fat absorption of preterm infants. Beside their good absorption even in the presence of low luminal bile salts and pancreatic lipases, further arguments for the use of MCTs include are their carnitine-independent transport into the mitochondria and subsequent oxidation that is more rapid than for longer chain fatty acids. ¹ An RCT conducted by Vaidya et al in very low birth weight infants showed a significant weight gain in VLBW infants supplemented with MCT oil. ²
References	<ol style="list-style-type: none"> 1. Koletzko B, Poindexter B, Uauy R (eds). Nutritional care of preterm infants: Scientific basis and practical guidelines. Worl Rev Nutr Diet. Baeel, Karger, 2014, vol 110, pp 82-98. 2. Vaidya UV, Hegde VM, Bhave SA, Pandit AN. Vegetable oil fortified feeds in the nutrition of very low birthweight babies. Indian pediatrics. 1992 Dec 1;29(12):1519-27. 3. Mehta NR, Hamosh M, Bitman J, Wood DL. Adherence of medium-chain fatty acids to feeding tubes of premature infants fed formula fortified with medium-chain triglyceride. J Pediatr Gastroenterol Nutr. 1991;13:267-9. 4. Wolfson BJ, Allen JL, Panitch HB, Karmazin N. Lipid aspiration pneumonia due to gastroesophageal reflux. Pediatric radiology. 1989 Sep 1;19(8):545-7. 5. MCT Oil. Nutricia Advanced Medical Nutrition. Product information accessed on 28 June 2018.

Original version Date:	Author: Srinivas Bolisetty, Carmen Burman, Jessica Menzies
Current Version number: 2	Version Date: 26/06/2018
Risk Rating: Low	Due for Review: 26/06/2023
Approval by: As per Local Policy	Approval Date: