

# MCT Oil

## RHW Newborn use only

2021

<b>Alert</b>	
<b>Indication</b>	Fat supplementation for neonates unable to digest or absorb conventional fats.
<b>Action</b>	Contains medium chain triglyceride (MCT) oil. MCTs are absorbed directly into the portal circulation and do not require bile salts for emulsification.
<b>Drug type</b>	Medium Chain triglyceride (MCT) oil. Source of Oil: coconut and/or palm kernel oil
<b>Trade name</b>	MCT Oil
<b>Presentation</b>	MCT Oil (Nutricia) – 500 mL. Contains 0.95 g MCT/mL, giving 8.6 kcal/mL.
<b>Dose</b>	1–2 g/kg/day (1–2 mL/kg/day) in 3-4 divided doses.
<b>Dose adjustment</b>	
<b>Maximum dose</b>	4 g/kg/day
<b>Total cumulative dose</b>	
<b>Route</b>	Oral
<b>Preparation</b>	
<b>Administration</b>	Oral
<b>Monitoring</b>	
<b>Contraindications</b>	Acute intestinal obstruction Acute necrotising enterocolitis
<b>Precautions</b>	MCT oil can adhere to feeding tubes resulting in loss of nutrient.(3) Large intakes may cause vomiting or diarrhoea.(5)
<b>Drug interactions</b>	
<b>Adverse reactions</b>	Lipid aspiration pneumonia.(4)
<b>Compatibility</b>	
<b>Incompatibility</b>	
<b>Stability</b>	
<b>Storage</b>	Store in room temperature. Once opened, use within one month.(5)
<b>Excipients</b>	
<b>Special comments</b>	
<b>Evidence</b>	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)
<b>Practice points</b>	
<b>References</b>	<ol style="list-style-type: none"> <li>1. Koletzko B, Poindexter B, Uauy R (eds). Nutritional care of preterm infants: Scientific basis and practical guidelines. <i>World Rev Nutr Diet</i>. Baeel, Karger, 2014, vol 110, pp 82-98.</li> <li>2. Vaidya UV, Hegde VM, Bhave SA, Pandit AN. Vegetable oil fortified feeds in the nutrition of very low birthweight babies. <i>Indian pediatrics</i>. 1992 Dec 1;29(12):1519-27.</li> <li>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. <i>J Pediatr Gastroenterol Nutr</i>. 1991;13:267-9.</li> <li>4. Wolfson BJ, Allen JL, Panitch HB, Karmazin N. Lipid aspiration pneumonia due to gastroesophageal reflux. <i>Pediatric radiology</i>. 1989 Sep 1;19(8):545-7.</li> <li>5. MCT Oil. Nutricia Advanced Medical Nutrition. Product information accessed on 28 June 2018.</li> </ol>

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### Authors Contribution

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