

# Association of complex lipids containing gangliosides with cognitive development of 6-month-old infants

Gurnida DA, Rowan AM, Idjradinata P, Muchtadi D, Sekarwana N. Early Hum Dev. 2012 Aug;88(8):595-601.

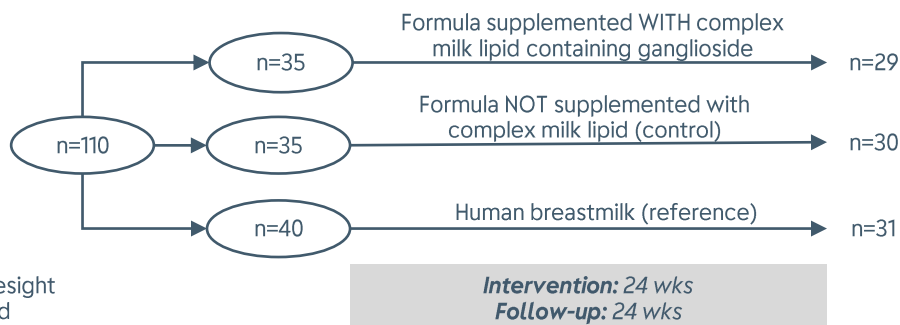
**Objective:** To assess the impact of infant formula supplemented with gangliosides from complex milk lipid on cognitive functions of normal healthy infants.

**Inclusion Criteria:**

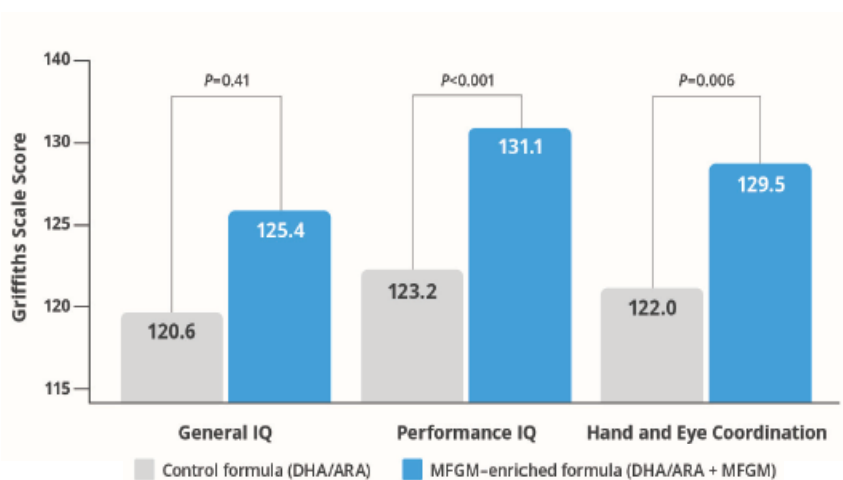
- <8 weeks old
- Healthy
- Singleton
- Birthweight ≥2.5kg
- No asphyxia

**Exclusion Criteria:**

- Congenital anomaly
- Problems with hearing and eyesight
- Not been exclusively breastfed



ENDPOINTS	FINDINGS (Supplemented formula vs control formula)
Neurodevelopment	Griffith Mental Development Scale <ul style="list-style-type: none"> <li>• Higher <b>hand and eye coordination IQ, performance IQ and general IQ</b> scores</li> <li>• No difference in <b>locomotor IQ, personal-social IQ, and hearing and speech IQ</b> scores</li> </ul>
Growth	<ul style="list-style-type: none"> <li>• No difference in <b>growth parameters</b></li> </ul>
Biochemical	<ul style="list-style-type: none"> <li>• Higher serum <b>ganglioside</b> level</li> <li>• No difference in <b>haemoglobin, ferritin and total iron binding capacity</b></li> </ul>



**Conclusion:** Supplementation of infant formula with complex milk lipid to enhance ganglioside content appears to have beneficial effects on cognitive development in healthy infants aged 0–6 months, which may be related to increased serum ganglioside levels.