

BIBLIOGRAFÍA

1. de Onís M, Monteiro C, Akre J, Glugston G. The worldwide magnitude of protein-energy malnutrition: an overview from the WHO Global Database on Child Growth. *Bulletin of the World Health Organ* 1993; 71(6):703-12.
2. Fondo de las Naciones Unidas para la Infancia (UNICEF). Progreso para la infancia: un balance sobre la nutrición. New York; UNICEF: 2006.
3. Frank Y, Ashwal S. Neurologic disorders associated with gastrointestinal diseases, nutritional deficiencies, and fluid-electrolyte disorders. En: Swaiman FK, Ashwal S, Ferriero DM: *Pediatric Neurology: Principles & Practice* 4ta.ed. USA; Elsevier: 2006.1301-1343.
4. Cornelio-Nieto JO. Efectos de la desnutrición proteicocalórica en el sistema nervioso central del niño. *Rev Neurol* 2007; 44(Supl 2):S71-4
5. Ramírez-Restrepo LM. Desnutrición y cerebro. *Arch Med* 2009; 9(2):183-192.
6. Grantham-Mcgregor SM, Ani CC. Undernutrition and mental development. *Nestle Nutr Workshop Ser Clin Perform Programme* 2001; 5:1-14; Discussion 14-8.
7. Belmonte S. Importancia de la nutrición y hábitos de vida en la prevención: estrategias de educación nacional en la comunidad de Madrid. En: Arola L., Arroyo E, Baiges I, Bermejo Bermejo M, Boada J, Belmonte S, et al. *Genética: nutrición y enfermedad*. Madrid; EDIMSA SA: 2008 p. 33-49.
8. Harahap H, Jahari AB, Husaini MA, Saco-Pollitt C, Pollitt E. Effects of an energy and micronutrient supplement on iron deficiency anemia, physical activity and motor and mental development in undernourished children in Indonesia. *Eur J Clin Nutr* 2000; 54(2):S114-9.
9. De Almeida RP, Matas CG. Long latency auditory evoked potentials in malnourished children. *CoDAS* 2013; 25(5):407-12.
10. Odabas D, Caksen H, Sar S, Unal O, Tuncer O, Atas B, et al. Cranial MRI findings in children with protein energy malnutrition. *Int J Neurosci* 2005; 115(6):829-37.
11. El-Tatawy S, Badrawi N, El Bishlawy A. Cerebral atrophy in infants with protein energy malnutrition. *AJNR Am J Neuroradiol* 1983; 4(3):434-6.
12. Brown L, Pollitt E. Malnutrition, poverty and intellectual development. *Sci Am* 1996; 274(2):38-43.
13. Wang B, Zhan S, Gong T, Lee L. Iron therapy for improving psychomotor development and cognitive function in children under the age of three with iron deficiency anaemia. *Chochrane Database Syst Rev* 2013; 6.
14. Pollitt E. Developmental sequel from early nutritional deficiencies: conclusive and probability judgements. *J Nutr* 2000; 130(2S Suppl):350S-353S.
15. Gelfand DM, Teti DM. The effects of maternal depression on children. *Clin Psychol Rev* 1990; 10(3):329-353.

ABSTRACT. There are enough references in the literature regarding the importance of good nutrition during the last months of pregnancy and the first 2 years of life, because in this stage is carried out multiplication and neuronal migration. Later, the cells need to mature and make connections. If there is lack of nutrients, communication is not given, the bond between them, nor the myelination process, which allows the transmission of nerve impulses. The different manifestations of inadequate nutrition are analyzed as described in a number of neurodevelopmental disorders where protein-calorie malnutrition is present; from anatomical, functional changes and neuroimaging findings. Such alterations ranging from psychomotor retardation, language disorders, learning, and have been linked to brain atrophy. It has been shown that proper nutrition before two years can significantly decrease these demonstrations. This knowledge will allow us to recognize and monitor comprehensive neurodevelopment in childhood, which is essential for human development and building human and social capital.

Keywords: *Brain diseases, Child nutrition disorders, Developmental disabilities.*