



Title	Routine Iron Supplementation for Children Under Five Years of Age
Agency	MaHTAS, Health Technology Assessment Section, Ministry of Health Malaysia Level 4, Block E1, Parcel E, Presint 1, Federal Government Administrative Center, 62590 Putrajaya, Malaysia; Tel: +603 88831229, Fax: +603 88831230; htamalaysia@moh.gov.my, www.moh.gov.my
Reference	Technology Review Report, 015/2008. http://medicaldev.moh.gov.my/uploads/15.iron.pdf

Aim

To assess the safety, effectiveness, and cost effectiveness of routine iron supplementation in children below 5 years of age.

Conclusions and results

Good evidence shows that routine iron supplementation in preschool children in a population with high rates of malaria can increase the risk of severe illness and death. Good evidence shows that iron supplementation reduced the prevalence of anemia in children with iron deficiency anemia and increased hemoglobin concentration in children, especially children with lower baseline Hb levels <11g/dL, on oral medication intake, and living in a non-malarial, non-hyperendemic region. Iron supplementation resulted in better effects on growth velocity of breast fed infants, especially those who were initially malnourished and anemic, or at least iron depleted. Supplementation of iron in preterm and low birth weight infants resulted in better iron status. No convincing evidence shows that iron treatment in young children (below 3 years of age) with iron deficiency anemia has an effect on psychomotor and mental development. Good evidence shows that iron supplementation did not have positive effects on any anthropometric variable; instead iron supplementation in iron-replete children may retard growth. No evidence supports the cost effectiveness of routine iron supplementation in children with iron deficiency anemia.

Recommendations

Based on the above review, iron supplementation should not be given routinely to children under 5 years of age. Instead, iron supplementation should be given to children who are iron deficient or have iron deficiency anemia. Iron supplementation is recommended for asymptomatic children who are at increased risk for iron deficiency, eg, premature and low birth weight infants or exclusively breast fed infants whose mothers are iron deficient or have iron deficiency anemia. Intermittent

iron supplementation can be used instead of daily iron supplementation in children with iron deficiency anemia.

Methods

Databases searched included: PubMed, Ovid full text, ProQuest, EBSCOhost, MEDLINE, CINAHL, Cochrane database for systematic reviews, HTA Databases, Horizon scanning databases, and the Food and Drug Administration (FDA) website. Additional articles were identified from reviewing the bibliographies of retrieved articles. The search was limited to children. Studies related to multiple micronutrient supplementations were not included. Relevant articles were appraised and evidence graded according to US/ Canadian Preventive Services Task Force.