EXECUTIVE SUMMARY

Iron deficiency is one of the most common forms of nutritional deficiencies, particularly among vulnerable groups such as women, children and low-income populations. Iron deficiency often precedes anaemia, and anaemia during pregnancy is one of the strongest predictors of anaemia during the postpartum period, beginning just after childbirth throughout the subsequent 6 weeks. The consequences of iron deficiency and anaemia during the postpartum period can be serious and have long-term health implications for the mother and her infant.

This guideline reviews the evidence on the safety and effectiveness of iron supplementation in postpartum women.

Purpose of the guideline

This guideline aims to help Member States and their partners in their efforts to make informed decisions on the appropriate nutrition actions to achieve the Sustainable Development Goals (1), the global targets set in the Comprehensive implementation plan on maternal, infant and young child nutrition (2) and the Global strategy for women’s, children’s and adolescents’ health (2016–2030) (3).

The recommendation in this guideline is intended for a wide audience, including policy-makers, their expert advisers, economists, and technical and programme staff at organizations involved in the design, implementation and scaling-up of programmes for the prevention of anaemia, and in nutrition actions for public health.

The recommendation supersedes the previous WHO recommendation on iron supplementation in postpartum women (4).

Guideline development methodology

WHO developed the present evidence-informed recommendation using the procedures outlined in the WHO handbook for guideline development (5). The steps in this process included: (i) identification of priority questions and outcomes; (ii) retrieval of the evidence; (iii) assessment and synthesis of the evidence; (iv) formulation of recommendations, including research priorities; and planning for (v) dissemination; (vi) implementation, equity and ethical considerations; and (vii) impact evaluation and updating of the guideline. The Grading of Recommendations Assessment, Development and Evaluation (GRADE) methodology was followed (6), to prepare evidence profiles related to preselected topics, based on up-to-date systematic reviews.

The guideline development group consisted of content experts, methodologists, and representatives of potential stakeholders and beneficiaries. This expert group participated in a WHO technical consultation concerning this guideline held on 18–21 February 2013 in Geneva, Switzerland. Four experts served as technical peer-reviewers of the draft guideline.

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1 This publication is a World Health Organization (WHO) guideline. A WHO guideline is any document, whatever its title, containing WHO recommendations about health interventions, whether they be clinical, public health or policy interventions. A standard guideline is produced in response to a request for guidance in relation to a change in practice, or controversy in a single clinical or policy area, and is not expected to cover the full scope of the condition or public health problem. A recommendation provides information about what policy-makers, health-care providers or patients should do. It implies a choice between different interventions that have an impact on health and that have ramifications for the use of resources. All publications containing WHO recommendations are approved by the WHO Guidelines Review Committee.
Available evidence

The available evidence comprised a Cochrane systematic review that followed the procedures of the Cochrane handbook for systematic reviews of interventions (7) and assessed whether supplements with iron alone or in combination with folic acid and/or other vitamins and minerals, given to postpartum women, could safely improve maternal outcomes. The maternal outcomes considered critical for decision-making by the WHO guideline development group were anaemia, iron deficiency, iron deficiency anaemia and morbidity, particularly malaria incidence and severity. The guideline development group did not consider any infant outcomes to be critical for decision-making for this intervention. There were few studies with small sample sizes, which led to limited evidence of a positive effect of postpartum iron supplementation on maternal anaemia and iron deficiency, but no evidence of an effect on maternal iron deficiency anaemia in women receiving iron supplementation compared with women not receiving iron supplementation. Only one trial reported on side-effects during the intervention period, indicating no differences between women receiving iron supplementation alone compared to women receiving a placebo. As there is limited evidence to directly assess the benefits of iron supplementation in postpartum women, and because there are current recommendations on iron supplementation in women before and after the postpartum period (e.g. pregnant women and menstruating women), indirect evidence from these population groups was felt to provide additional input for discussions to inform the recommendations for women after childbirth.

The overall quality of the available direct evidence for iron supplementation alone or in combination with other vitamins and minerals in postpartum women, for the critical outcomes of maternal anaemia, iron deficiency and iron deficiency anaemia, was low to very low.

Recommendation

1. Oral iron supplementation, either alone or in combination with folic acid supplementation, may be provided to postpartum women for 6–12 weeks following delivery for reducing the risk of anaemia in settings where gestational anaemia is of public health concern2 (conditional recommendation, low quality of evidence).

Key remarks

The remarks in this section are intended to give some considerations for implementation of the recommendation, based on the discussion of the guideline development group.

- For ease of implementation and continuity of care, postpartum supplementation should begin as early as possible after delivery, and the iron-supplementation regimen (e.g. dose and whether consumed daily or weekly) should follow that used during pregnancy, or alternatively should start with that planned for menstruating women.

- In cases in which a woman is diagnosed with anaemia in a clinical setting, she should be treated in accordance with the country’s policy, or the WHO recommendation of daily iron (120 mg of elemental iron plus 400 µg folic acid) supplements, until her haemoglobin concentration rises to normal.

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1 This recommendation supersedes the previous WHO recommendation on iron supplementation in postpartum women (4).

2 WHO considers a 20% or higher population prevalence of gestational anaemia to be a moderate public health problem (4).
Research priorities

Discussions between the members of the WHO guideline development group and the external review group highlighted the limited evidence available in some knowledge areas, meriting further research on iron supplementation in postpartum women, particularly in the following areas:

- more randomized controlled trials with an adequate sample size, using comparable techniques are necessary to determine:
  - the adverse effects of iron supplementation in this period, including iron overload;
  - the optimal dose, schedule (daily, intermittent) and duration of iron supplementation to benefit both the mother and infant;
  - the effect of iron supplementation on maternal morbidity, productivity and time to return to regular activity, postpartum depression, maternal well-being, breastfeeding practices, and infant function outcomes (e.g. cognitive and motor development);

- programmatic research to explore factors related to the feasibility of linking supplementation programmes (pregnancy, menstruating women), cost-effectiveness, integration into maternal and neonatal health platforms, and minimum support needed to ensure adequate coverage of and adherence to postpartum iron-supplementation programmes.