

Prepartum anaemia: prevention and treatment.

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This review focuses on the occurrence, prevention and treatment of anaemia during pregnancy in Western societies. Iron deficiency anaemia (IDA) is the most prevalent deficiency disorder and the most frequent form of anaemia in pregnant women. Minor causes of anaemia are folate and vitamin B12 deficiency, haemoglobinopathy and haemolytic anaemia. Anaemia is defined as haemoglobin of <110 g/L in the first and third trimester and <105 g/L in the second trimester. The diagnosis relies on haemoglobin, a full blood count and plasma ferritin, which can be supported by plasma transferrin saturation and serum soluble transferrin receptor. Among fertile, non-pregnant women, approximately 40% have ferritin of ≤ 30 microg/L, i.e. small or absent iron reserves and therefore an unfavourable iron status with respect to upcoming pregnancy. The prevalence of prepartum anaemia in the third trimester ranges 14-52% in women taking placebo and 0-25% in women taking iron supplements, dependent on the doses of iron. In studies incorporating serum ferritin, the frequency of IDA in placebo-treated women ranges 12-17% and in iron-supplemented women 0-3%. Requirements for absorbed iron increase during pregnancy from 0.8 mg/day in the first trimester to 7.5 mg/day in the third trimester, on the average approximately 4.4 mg/day, and dietary measures are inadequate to reduce the frequency of prepartum IDA. However, IDA is efficiently prevented by oral iron supplements in doses of 30-40 mg ferrous iron taken between meals from early pregnancy to delivery. Treatment of IDA should aim at replenishing body iron deficits by oral and/or intravenous administration of iron. In women with slight to moderate IDA, i.e. haemoglobin of 90-105 g/L, treatment with oral ferrous iron of approximately 100 mg/day between meals is the therapeutic option in the first and second trimester; haemoglobin should be checked after 2 weeks and provided an increase of ≥ 10 g/L, oral iron therapy has proved effective and should continue. Treatment with intravenous iron is superior to oral iron with respect to the haematological response. Intravenous iron is considered safe in the second and third trimester, while there is little experience in the first trimester. Intravenous iron of 600-1,200 mg should be considered: (1) as second option if oral iron fails to increase haemoglobin within 2 weeks; (2) as first option at profound IDA, i.e. haemoglobin of <90 g/L in any trimester beyond 14 weeks gestation; and (3) as first option for IDA in third trimester. Profound IDA has serious consequences for both woman and foetus and requires prompt intervention with intravenous iron. This is especially important for the safety of women who for various reasons oppose blood transfusions.