

# Iron Deficiency Anemia (IDA) in Pregnancy - A Porcupine

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*Journal of Obstetric and Gynaecological Practices POGS (2023): 10.5005/jogyp-11012-0011*

## Dear Editor,

A 41% prevalence rate makes anemia in pregnancy a concern for world health. Iron deficiency is the most prevalent nutritional deficient disorder reaching widespread levels in India. The total iron requirement during pregnancy daily is significantly higher than in non-pregnant women, despite the short-term relief from iron losses incurred due to amenorrhea. Iron requirements increase a great level during pregnancy to meet the rising demands of the fetus, placenta, and the mother herself. Therefore, it intensifies the risk of iron deficiency anemia (IDA), and up to 62% of pregnant women in India are affected. With such high prevalence in a major subgroup of our population, it raises the question in our mind, are we aiming to prevent the IDA anemia or treat the IDA.<sup>1-3</sup>

One of the major reasons for IDA is a lack of iron in the cells as a result of the body's decreased iron reserves. Its main reasons include inadequate reserves at the beginning of pregnancy, poor dietary habits, an iron-poor diet, an increased need for iron throughout pregnancy, multiple pregnancies, and iron loss from infestations (malaria, hookworms). This is further aggravated by the use of antacids during pregnancy, and incorrect medication advice about the use of supplements.<sup>3-6</sup>

Iron deficiency anemia has disastrous impacts on the health of the going to be mother and the fetus/newborn. Thus, it has an impact on the present and future of our country. Iron deficiency anemia has been linked to low birthweight, bigger placentas, and a higher frequency of preterm births, all of which may result in a decrease in intellectual and productive capacity as well as an increase in infection susceptibility. Infants of women with IDA have 50% of normal iron reserves, which results in childhood anemia in the new-born stage and a higher risk of maternal and perinatal mortality.<sup>4-8</sup>

Iron deficiency anemia in the pregnant lady leads to the risk of a decrease in blood reserves during birth (increased risk of Postpartum Hemorrhage), and the requirements for transfusion in cases of blood loss, cardiac strain, longer hospital stay, poor wound healing, and decreased breast milk production.<sup>4,5</sup>

The "Anaemia Mukh Bharat programme" aims to reduce the prevalence of anemia in children, adolescents, and women of reproductive age by 3% annually. By 2025, it also hopes to contribute to a 50% decrease in anemia among fertile women. The technical discussion between the World Health Organisation (WHO) and the Centres for Disease Control and Prevention (CDC) concluded that hemoglobin (Hb) and ferritin are an especially effective pair of indicators to monitor iron status during pregnancy. When a woman's Hb level is less than 11 gm%, anemia during pregnancy is identified.<sup>1</sup> In the third trimester, 30 mg/day of iron is the recommended dietary allowance. The average iron absorption from an Indian diet during pregnancy is 10%, while the average iron proportion in an Indian

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**How to cite this article:** Chawla S. A Porcupine's Guide to Iron Deficiency Anemia (IDA) During Pregnancy. *J Obstet Gynaecol Pract POGS* 2023;1(1):1-2.

**Source of support:** Nil

**Conflict of interest:** None

diet is 8 mg/1000 Kcal. However, given Indian food customs, the majority of pregnant women need additional iron.<sup>7,8</sup> The degree of anemia, length of pregnancy, and obstetric risks all affect how iron levels in IDA are replenished during pregnancy. Since 1959, international bodies have advised pregnant women in areas with a high prevalence of IDA to take iron and folic acid supplements in a variety of doses and practice regimens. Starting as early as possible and continuing throughout the remainder of the pregnancy and postpartum, a typical daily dose of 30/60 mg of elemental iron and 400 gm of folic acid should be taken. A daily intake of 60 mg of elemental iron is preferred in our nation, where IDA in pregnancy is a public health issue. Additionally, until her Hb returns to normal, a woman with anemia or clinical symptoms needs to take 120 mg of elemental iron and folic acid supplements. Only 4-10% of the iron in the available oral iron preparations is absorbed, depending on the preparation type. Only up to 160 mg/day, oral iron increases in absorption as the dose is increased.

Any dosage above this results in more side effects without increasing effectiveness. Numerous authors suggest that taking iron on alternate days won't affect absorption any more than taking it once a day. When comparing different oral preparations, one does not show conclusive evidence of superiority over the other. For improved absorption, all pregnant women should be advised to take oral iron on an empty stomach or one hour after meals, ideally with a vitamin C-rich product like lime juice.

With the advent of new and safe molecules and their easy availability even under the GOI programs, the use of intramuscular compounds has become obsolete. Ganzoni's formula is used for the calculation of the total dose of iron required including stores. The common preparations used are Iron sucrose, iron carboxy maltose, and iron isomaltoside.

Women without cardiovascular compromise should consider transfusion at a threshold of Hb less than 7 gm%, while patients with cardiovascular impairment already should consider transfusion at lower 8 gm%. However, in obstetrics, the decision to transfuse

blood should be made on a case-by-case basis, considering the alternatives of oral and parenteral iron, the present and potential future risk of bleeding, comorbidities like disseminated intravascular coagulation (DIC), the rate at which Hb is dropping, and the patient's cardiovascular health. Thus, this simply avoidable and easily treatable condition is the porcupine in obstetric population across the world which needs to be tamed.

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