WOMEN'S HEALTH

Openventio PUBLISHERS

ISSN 2380-3940 Open Journal http://dx.doi.org/10.17140/WHOJ-3-e008

Editorial

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Volume 3 : Issue 3
Article Ref. #: 1000WHOJ3e008

Article History
Received: June 14th, 2017
Accepted: July 5th, 2017
Published: July 5th, 2017

Citation
Laura RS. Iron deficiency in women. *Women Health Open J*. 2017; 3(3): e3-e5. doi: 10.17140/WHOJ-3-e008

Iron Deficiency in Women

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It is a well known fact that anaemia can give rise to a range of problems for people who suffer from it.[1] In what follows, I will be concentrating on elaborating some of the subtle health issues surrounding anaemia. Anaemia refers to a condition negatively affecting blood, wherein there is insufficient iron for the production of haemoglobin. On the other hand, when the body is healthy, the red blood cells (RBC) transport the haemoglobin which is the carrier of oxygenated iron to virtually every part of the body. If the iron levels contained in the RBC are deficient, one of the most conspicuous symptoms is acute fatigue. It is the richness of iron in the haemoglobin that makes the RBC look a deep shade of red. The deeper the shade of red, the easier it is to oxygenate blood taken from the lungs and transport it to every cellular receptor site in the body.[2]

Iron absorption takes place in the intestines from the food and fluid intake.[3] From the intestines the iron is transported by a protein called transferrin through your blood to the bone marrow sites, the cellular alter where blood cells are manufactured. Haemoglobin is produced by the assimilation of iron and proteins. Miraculously, the human body has a facility for recycling whatever iron remains from worn out RBC into revitalised ionised protein compounds. Should there be a deficiency of iron in your body, RBC will still be produced, but they will be smaller than usual and deprived of haemoglobin. Although, these petite RBC are still transported to your internal organs and the tissues surrounding them, there is insufficient iron to produce a functional haemoglobin transfer of oxygen.

Here are a Few General Facts about Iron Deficiency

Iron deficiency is one of the most common nutritional disorders, affecting between three to five billion people, which is between half and two-thirds of the world population, now estimated to be more than seven billion people and still growing.[4]

It is estimated that in developed countries such as the USA and Australia one out of every ten women is burdened by heavy menstrual bleeding, leading to iron deficiency. Symptoms of heavy bleeding include: passing large blood clots, having to wear double the usual sanitary protection, or blood flow which leaks through clothing, thereby requiring a change of sanitary pads every two hours.[5]

Even during normal patterns of menstruation women often require twice the amount of iron in their diet as do men.[5]

Iron Deficiency, Women, and Pregnancy

Women are most vulnerable to iron deficiency during and immediately after pregnancy. The iron requirements during pregnancy can change dramatically with each trimester. For example, babies need to store 80% of iron in the first two trimesters. In the final trimester, the baby needs to store another 80% of iron to help it survive the first six months of its life. One approach to solve this problem is to include manufactured folate (otherwise known as folic acid) supplements in the pregnant women's diet if they fail to get enough iron otherwise. However, it is advisable to be cautious regarding the use of folic acid, as studies have shown that it can contribute not only to low birth weight babies, but also lead to spinal bifida, associated with neural tube abnormalities.

ISSN 2380-3940 http://dx.doi.org/10.17140/WHOJ-3-e008

Iron deficiency can also occur due to various forms of bleeding during pregnancy. During the first twelve weeks of pregnancy it is estimated that 20% of women will experience various forms of bleeding, some more serious than others. Miscarriage during this period is commonly associated with bleeding, and any form of persistent bleeding needs to be carefully monitored medically. Since considerable amount of blood can also be lost while giving birth, the iron levels need to be monitored.

In a recent issue of JAMA Paediatrics, a study by Uppsala University it was revealed that when a baby is born, if the clamping of the umbilical cord is delayed for 3 minutes, the incidence and prevalence of iron deficiency can be prevented for up to six months.[6] The reason for this fascinating occurrence is that when a baby is born, the placenta still retains approximately one third of the child's blood.[6] If the umbilical cord is clamped immediately, the blood will remain in the placenta and go to waste, although some hospitals prefer to store placenta blood in stem cell banks. What has only recently become clear is that by delaying the clamping of the umbilical cord for as little as three minutes, the majority of the placenta blood can be transfused back to the baby. The amount of returned blood amounts to only half a cup, but given the child's small size, the placental transfusion is tantamount to a transfusion of what would be approximately two litres for an adult.[6] From this perspective, the amount of blood available to the child is comparable to a complete transfusion.[6]

There are many symptoms which indicate that pregnant women may be deficient in iron, and included amongst this list are the following:

1. Fatigue - the feeling of having lost your vitality and vigour[7]
2. Your skin has lost its vibrant colour and is often pale and greyish[8]
3. Heart palpitations - a condition of irregular cardiac rhythm and accelerated heartbeat[9]
4. The feeling or condition of breathlessness even when the exercise demands you place on yourself are minimal[10]
5. Hear ringing in your ears, otherwise medically called "tinnitus"[11]
6. The edges of your mouth feel dry and torn[12]
7. Your sense of taste seems to have been modified[13]
8. Your nails become brittle and misshapen[14]
9. Disruptive concentration - inability to focus on something for a protracted period[15]
10. Soreness at the edges of your mouth[16]
11. Inflammatory bowel disease (IBD)[17]

Other Aspects of Iron Deficiency Worth Knowing

1. According to the World Health Organization (WHO), iron deficiency is particularly common during the older age and is more common amongst elderly individuals with diseases such as chronic kidney disease (CKD), congestive heart failure or IBD.[18]

2. Research undertaken by the University of Eastern Finland has established that too much iron in the body can also have adverse health consequences.[19] Their research study revealed that even mildly elevated levels of body iron can initiate an increase in the prevalence and incidence of type 2 diabetes.[20]

3. Iatrogenic Illness: Hospital-acquired anemia is becoming more common. It is now estimated that one in three patients hospitalized for medical problems experienced a drop in their RBC count due to simply being in the hospital[21]; a more general concept was identified by Ivan Illich decades ago as an "iatrogenic illness", in his book titled, Medical Nemesis.[22] This specific form of iatrogenic illness is called "Hospital-acquired anemia", and is defined as having a normal blood count on admission but rapidly developing anemia during the course of hospitalization.[23]

"The most severe form of hospital-acquired anemia was independently associated with a 39% increase in the odds of being re-admitted or dying within 30 days after hospital discharge, compared with not developing hospital-acquired anemia. The most severe form was defined as a hematocrit of 27% or less at the time of discharge, occurring in 1.4% of all hospitalizations in the study".[23]

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