I live in sub-Saharan Africa. I have heard of anemia and that it particularly affects women. What is anemia, and why does it affect women?

You live in a region in which approximately 50 percent of infants and children as well as between 40 to 60 percent of women in the childbearing age are anemic. This is mainly a result of inadequate iron (iron deficiency).

“Anemia” is a term used to describe a deficiency, or shortage, of red blood cells and their very important component called hemoglobin. Hemoglobin is a specialized chemical structure that transports the oxygen from the lungs to the other organs of the body. Iron is very important in the structure and function of hemoglobin. If the diet consists of insufficient iron, the body will be unable to make adequate and efficient red blood cells. This in turn will result in a decreased supply of oxygen to the body organs and tissues, resulting in various symptoms, including tiredness, difficulty in exercising—even walking—and shortness of breath.

Anemia can also result from gradual or sudden blood loss (hemorrhage). If the development of anemia is sudden through a large and rapid loss of blood, the symptoms can be dramatic, resulting in very low blood pressure and collapse (shock). If the blood loss is slow, symptoms develop slowly, and in the early stages the patient may complain only of fatigue. When an individual is significantly anemic, he or she appears pale.

Women more readily suffer from anemia because they lose blood (and at the same time iron) during the monthly menstrual cycle. With each pregnancy a woman’s stores of iron are further depleted because of iron needed by the developing fetus; there is further blood (and iron) loss during the birthing process.

If the diet is chronically deficient in iron, iron deficiency anemia will result. Beans, peas, dark green leafy vegetables (such as spinach), as well as raisins, nuts, and seeds contain iron.

Iron absorption by the body may vary. Iron in the form of heme from meat and eggs is readily absorbed. A well-planned vegetarian diet, however, will provide very adequate amounts of iron to form healthy red blood cells.

Breast and cow’s milk alone do not contain sufficient iron for the growing infant’s needs. Infants also require iron as either a supplement or in a fortified cereal. Pregnant women should take iron supplementation throughout the pregnancy; it is cheap, safe, and generally easily available.

What are the complications of iron deficiency anemia?
If the anemia is severe and present for a long time, it places a strain on the heart. This is because the heart has to beat more rapidly to supply the body's oxygen needs. If disease, or narrowing, of the arteries of the heart muscle (coronary arteries) exists, chest pain called angina may occur. Ultimately, the heart may be unable to cope with the demands placed on it and heart failure follows. During pregnancy, severe iron deficiency anemia has been linked to premature births and babies with low birth weight. In infants and children it can lead to delayed physical growth and mental development. Iron-deficient children get infections more easily than children with normal hemoglobin and iron stores. Anemia can be diagnosed by blood tests.

Important warning: If an iron deficiency is diagnosed and an adequate nutritional supply of iron exists, as well as no obvious source of bleeding, further testing is essential. It is very important to make sure no bleeding from the stomach or bowel (intestines) is occurring. This bleeding can be slow and hidden. The stools (feces) must be tested for the presence of blood and, if required, internal examination of the stomach and bowel must be done with special X-rays, or endoscopy (using special equipment to look directly at the inside of the bowel/stomach) to exclude the presence of ulcers or cancer.

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While this column is provided as a service to our readers, Drs. Landless and Handysides unfortunately cannot enter into personal and private communication with our readers. We recommend that you consult with your personal physician on all matters of your health.