

# More Than a Third of Women Under 50 Are Iron-Deficient

The condition can cause fatigue and other symptoms but is rarely tested for. Here's what to know.



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Roughly 35 percent of women of reproductive age in the United States don't have sufficient amounts of iron in their bodies. And yet the nutritional deficiency, which can affect multiple functions, from immunity to cognition, often goes undiagnosed, said Dr. Malcolm Munro, professor of obstetrics and gynecology at the David Geffen School of Medicine at the University of California, Los Angeles. This oversight is partly because symptoms can be difficult to pin down but also because iron deficiency is rarely recognized as an urgent condition with short- and long-term consequences, he said.

Despite persistent calls from experts and researchers, there are no recommendations in the U.S. to regularly screen for iron deficiency among adult women and it is therefore rarely a part of blood work in annual checkups. There are recommendations only for screening pregnant and nonpregnant women for anemia, a condition that can develop when iron deficiency is left untreated.

That iron deficiency is often overlooked might come down to "the normalization of women's disorders," Dr. Munro said. The associated symptoms — like feeling faint, fatigued or irritable — are often seen as a part of life as a woman, he added.

## The risks of iron deficiency

Iron is used to manufacture hemoglobin, which is a protein in red blood cells that carries oxygen from the lungs to the rest of the body. It's also essential for other cellular functions and hormone production.

Iron that isn't used for hemoglobin or other functions is stored in the bone marrow and liver as a protein called ferritin. When the body's iron stores dip, the remaining iron is redirected to the maintenance of red blood cells at the expense of heart, brain and muscular functions, Dr. Munro said. If the body uses up its stores, iron deficiency can lead to a reduction in hemoglobin and the number of healthy red blood cells, called anemia.

So someone with normal hemoglobin levels might still have low levels of iron, Dr. Munro said. There are other forms of anemia, including inherited red blood cell disorders like sickle cell disease, but anemia caused by iron deficiency is the most common type in the U.S.

The symptoms of iron deficiency are often nonspecific and nebulous, including shortness of breath, brain fog, fatigue, lightheadedness, increased sensitivity to cold temperatures and heart palpitations — all of which could be signs of many other health conditions too, said Dr. Angela Weyand, a pediatric hematologist at University of Michigan Medical School. It is also associated with several other negative health outcomes, including anxiety, depression, sleep disturbances and even heart failure, she said.

During pregnancy, when the demand for iron in the mother, the placenta and the growing fetus increases, so too does the risk that iron deficiency turns into anemia. Iron deficiency and anemia during pregnancy have been linked to neurodevelopmental problems in the offspring and to pregnancy complications, said Dr. Michael Georgieff, a pediatrics professor and co-director of the Masonic Institute for the Developing Brain at the University of Minnesota.

Complicating matters, there is debate among medical institutions about what is considered a healthy amount of iron in the blood. Some researchers suggest that the thresholds for women should be higher than the current cutoff, which was established by the World Health Organization in 1968 with incomplete data, Dr. Weyand said.

The target ferritin level recommended by the W.H.O. for nonpregnant menstruating women is 15 micrograms per liter; for hemoglobin the recommended level is 12 grams per deciliter, but increasingly, researchers suggest that the cutoff for ferritin should be between 30 and 50 micrograms per liter and 13 grams per deciliter for hemoglobin.

## What causes iron deficiency?

Heavy menstrual bleeding is the main driver of the high rates of iron deficiency among adult nonpregnant women. A study published this year found that an estimated 17 percent of women and girls up to age 21 were iron-deficient based on the current W.H.O. threshold, Dr. Weyand, a co-author of the study, said. When the researchers analyzed the data using a higher threshold for

ferritin, of 50 micrograms per liter, 77 percent of menstruating women were deemed iron-deficient. After menopause, when women stop bleeding, their hemoglobin levels tend to equalize with those of men, Dr. Weyand said, and ferritin also typically returns to healthy levels.

By comparison, iron deficiency is rare in men, and when it occurs, it's often a symptom of an underlying health condition, like internal bleeding in the gut, Dr. Weyand said.

Other drivers of iron deficiency include a vegetarian diet, cancer and pregnancy, with each trimester associated with lower levels of iron in the blood, Dr. Munro said.

## Should you get your iron levels checked?

This year, for the first time in its history, the International Federation of Gynecology and Obstetrics issued a recommendation that all women and girls who menstruate should regularly be screened for iron deficiency, not just for anemia and not just during pregnancy.

Vegetarians and vegans, who might not consume enough iron-rich foods, should also get checked regularly, said Elaine McCarthy, a nutrition researcher at the University College Cork, in Ireland, whose work focuses on iron deficiency and anemia. It is harder for the body to absorb iron from plant-based sources, and those who don't eat meat, poultry or fish may "struggle a little bit more with getting enough iron," she said.

Screening recommendations, however, haven't trickled down to primary care providers in the U.S., where the few guidelines that doctors can turn to are often narrow in focus. Guidelines from the American College of Obstetricians and Gynecologists, for example, focus only on anemia during pregnancy. The United States Preventive Services Task Force is currently reviewing evidence for iron-deficiency screening and will also focus on pregnancy, said Dr. Michael Silverstein, vice-chair of the task force and professor of health services, policy, and practice at the Brown University School of Public Health.

In 2015, when the task force last assessed evidence, the organization found there were no studies that specifically looked into screening practices and their direct effect on health outcomes, so they didn't make a recommendation. But, Dr. Silverstein added, the lack of a recommendation overall doesn't mean that patients shouldn't get tested.

Instead, the lack of studies on iron deficiency, he said, is suggestive of the fact that the condition has been overlooked and understudied.

**Alisha Haridasani Gupta** is a reporter on the Well desk, focused on women's health, health inequities and trends in functional medicine and wellness. Previously, she wrote the In Her Words newsletter, covering politics, business, technology, health and culture through the gender lens. More about Alisha Haridasani Gupta