



WEBSITE

1211 GENEVA 27 SWITZERLAND - TELEPHONE: (41) 22.791.21.11 - FAX: (41) 22.791.31.11 - E-MAIL: inf@who.int

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## **WHO/CDC EXPERT CONSULTATION AGREES ON BEST INDICATORS TO ASSESS IRON DEFICIENCY, A MAJOR CAUSE OF ANAEMIA**

**Geneva** - A World Health Organization (WHO) and United States Centers for Disease Control and Prevention (CDC) expert consultation has reached a consensus on the best indicators to assess iron deficiency. This is an important step towards better control and prevention of anaemia. WHO estimates that some two billion people in the world are anaemic, and that in about a half of all cases, a lack of iron is the major cause. This makes anaemia one of the most common nutritional deficiencies in the world today, said WHO, announcing the results of the consultation, which took place in Geneva in April.

An iron deficiency, with or out without anaemia, can have important effects on people of all ages in both developed and developing countries: anaemic women and their infants are at greater risk of dying during or soon after childbirth; children's mental and physical development is delayed or impaired by iron deficiency; and the physical work capacity and productivity of manual workers may be reduced.

Despite many efforts to treat and prevent anaemia and iron deficiency over the last two decades, they remain both common and widespread. One reason for the failure to reduce the prevalence of anaemia is that most programmes have been based on addressing iron deficiency as the primary cause. This has meant that the role of other factors, such as infectious diseases or deficiencies of other micronutrients, have been underestimated when trying to control anaemia. In addition, iron deficiency without anaemia has not been addressed as a major and common health problem in its own right.

"The ability to separate iron deficiency from anaemia, and iron deficiency anaemia from anaemia due to other causes, would help in the fight to treat and prevent all these conditions," said Dr Bruno de Benoist, WHO Acting Director, Nutrition for Health and Development. "This will enable the right interventions to be chosen in the first place and then, once programmes are in place, to ensure we have the right indicators to monitor their impact."

Because there has been no international agreement on how to assess the iron status of populations, the prevalence of iron deficiency has often been determined from the prevalence of anaemia using measurements of blood haemoglobin concentration.

The WHO/CDC expert consultation assessed the best indicators of iron status for two purposes. First, to assess the iron status of populations so that the extent of the problem can be clearly known, and second, to measure changes in iron status during programmes, so that the effect of interventions can be clearly measured. The meeting discussed the value and use of

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measurements of haemoglobin and other indicators of iron status, as well as the problems that arise with measuring them in different circumstances.

The meeting recommended that haemoglobin and ferritin, a protein that is strongly correlated with iron stores in healthy people, are the most useful indicators of the impact of programmes to control iron deficiency. The main problem with ferritin lies in the fact that it is affected by inflammation due to infection and chronic disease, so it is less useful to assess the prevalence of iron deficiency than to estimate a change brought about by a programme. Because of this, the consultation recommended that to assess iron deficiency, the transferrin receptor, in addition to haemoglobin and ferritin, should be measured in places where infection is common.

WHO will coordinate a working group to evaluate the usefulness of these indicators in the field, and also address the extent to which infection interferes with these indicators. It will then reconvene another meeting in three years to review these developments. This work is expected to improve the effectiveness of global anaemia prevention and control programmes.

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For further information please contact Dr Bruno de Benoist, Nutrition for Health and Development (NDH) , Tel: +41 22 791 3412, email: [debenoistb@who.int](mailto:debenoistb@who.int). All WHO Press Releases, Fact Sheets and Features as well as other information on this subject can be obtained on Internet on the WHO home page: <http://www.who.int/>.