



# Iron deficiency possible cause of depression in teenage girls

After puberty, depression is almost twice as common in girls as in boys. Arli Zarate Ortiz studied the relationship between diet and symptoms of depression in teenage girls in Mexico. ‘Teenagers are an understudied group in health studies.’

With the onset of puberty, twice as many girls as boys suffer from depression. The start of menstruation coincides with the onset of depression symptoms, says Arli Zarate Ortiz, researcher at Human Nutrition and Health. Besides biology and social factors, nutrition can play an important role. Poor nutrition can cause not just over-

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## ‘Suicide is the second leading cause of death among adolescents in Mexico’

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weight and obesity, but also an iron deficiency. Zarate Ortiz’s questionnaires among more than 400 Mexican teenage girls showed that more than half of them scored as (very) probably depressed. Blood analyses among the group showed that girls with an iron deficiency were more likely to suffer from depression. She also found that more Mexican girls (13 per cent) than boys (7 per cent) suffered from anaemia, which may be explained by blood loss during menstria-

tion. In addition, girls who start menstruating early are more likely to be obese. The inflammation caused by obesity can also lead to iron deficiency.

### Western diet

Obesity is usually accompanied by mild inflammation that affects the absorption of iron. ‘In countries such as Mexico, the iron intake may be adequate, but the problem is absorption.’ Zarate Ortiz analysed the dietary patterns of 7380 Mexican teenagers. Teenagers on a western diet were more likely to be overweight or obese and anaemic. Even a plant-based diet increased the risk of obesity.

Zarate Ortiz hopes that her thesis will start a conversation about teenage health (including mental and sexual health). ‘I would like the taboo about it to end. Suicide is the second leading cause of death among adolescents in Mexico, but no one does anything about it.’ ss