

# Eating Disorders & Hormones

## How Do Eating Disorders Affect Hormones?

Eating habits and weight play an important role in our hormone levels. Disordered eating, compensatory behaviours (e.g. excessive exercise), and weight (anorexia and obesity) can disrupt hormone production. Hormones that regulate metabolism, fertility, pregnancy, and bone health are particularly affected by disordered eating.



## Fertility in Females and Males

When food is sparse the body reduces all processes that need large amounts of energy, such as pregnancy. Low levels of the hormones oestrogen, progesterone, and testosterone can result in a reduction of fertility or infertility in individuals with eating disorder.

In women, symptoms may include:

- Low libido (sexual desire);
- Absence of menstrual periods (*amenorrhoea*);
- Irregular menstrual periods

In men, symptoms may include:

- Low libido (sexual desire);
- Loss of early morning erections;
- Loss of nocturnal emissions (“wet dreams”).



Hormonal changes associated with eating disorders are reversible. With time, adequate nutrition and maintaining a healthy body weight results in a return to normal sexual desire and normal physical functioning.

\*NOTE: Even if you are experiencing signs of infertility, it is important to use contraception if you are sexually active. Ovulation and fertility may resume unexpectedly, making pregnancy possible.

## Pregnancy

When pregnancy does occur, eating disorders can impact on reproductive hormones. Women who fall pregnant while they are underweight or obese are at higher risk of complications during pregnancy. Effects may include high blood pressure, gestational diabetes (especially in binge eating disorder), anaemia, and increased risk of miscarriage or complicated delivery. There can also be complications for the foetus, such as

premature birth, low or high birth weight, feeding difficulties, and respiratory distress. Most pregnant women who have recovered from eating disorders have healthy pregnancies.



## Bone Health & Osteoporosis

Eating disorders can have a significant impact on bone health. Osteoporosis causes bones to lose strength and become brittle and vulnerable to breaking easily. The main cause of osteoporosis is malnutrition and low weight. Many hormonal changes occur when a body has insufficient reserves of fat and muscles. These include changes to sex hormones (testosterone and oestrogen) as well as high levels of cortisol, low levels of IGF-I and Leptin. Changes in these hormones can slow bone development and even cause bone loss. Although we cannot reverse damage to bone health, the only way to prevent further bone damage is by treating eating disorders early and involves reversing malnutrition and increasing weight to a healthy level. Previously it was believed that hormone replacements such as the oral contraceptive pill would assist bone health in individuals with eating disorders. However, possibly since a range of hormones is affected by malnutrition, research has found that hormone replacement is insufficient to protect bone density. The only effective treatment for osteoporosis in anorexia nervosa is weight re-gain.



## Other Hormonal Effects

- Low levels of thyroid hormones may cause constipation and dry skin;
- Overeating/obesity can cause an increase in hormone levels that encourage the build up of body fat, making it even harder to lose weight;
- Low levels of stress hormones cause sleep problems, anxiety, depression, or panic (e.g. increased heart rate)
- Eating disorders may also impact on hormones involved in appetite, puberty and growth.

## Seeking Help

If you have noticed any hormonal effects of your eating disorder, you should consult with a medical practitioner to get a medical assessment.