

Functional Hypothalamic Amenorrhoea

Changes in menstrual function are common in females who are recovering from an eating disorder. There are 3 patterns of menstrual function: Eumenorrhea refers to having regular menstrual cycles. Oligomenorrhoea refers to having irregular menstruation, and amenorrhoea refers to not menstruating for 3 or more months. There are many different causes of amenorrhoea, including Functional Hypothalamic Amenorrhoea (FHA).

FHA can be difficult to talk about. This handout can provide you with information about FHA and how your dietitian can support you throughout recovery.

What is FHA?

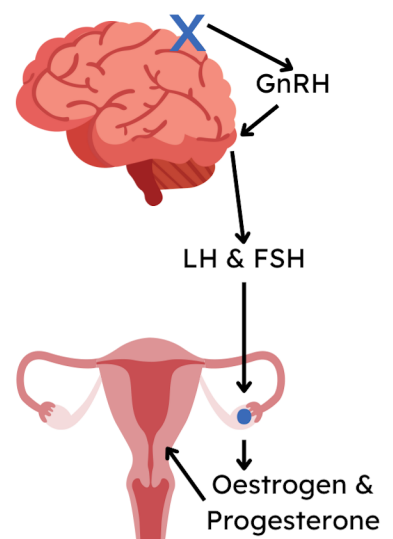
FHA occurs when a female's body responds to under-fuelling or stress by decreasing its production of sex hormones needed for menstruation. This allows the body to save energy for vital functions.

How Does FHA Occur?

FHA affects a region of the brain called the hypothalamus. In a female without FHA, the hypothalamus produces a hormone called Gonadotropin-Releasing Hormone (GnRH). GnRH then stimulates a second region in the brain called the pituitary. The pituitary then produces two more sex hormones - Luteinising Hormone (LH) and Follicle Stimulating Hormone (FSH).

An increase in blood levels of LH and FSH stimulates the ovaries to develop a follicle and ovulate. This follicle also releases the hormones oestrogen and progesterone, which thicken the lining of the uterus. This lining is shed during menstruation.

In a female with FHA, production of GnRH is suppressed. This prevents menstruation from occurring.



Other Causes of Amenorrhoea

While FHA is a common cause of amenorrhoea, there are many other conditions that can cause women to miss their periods. This includes polycystic ovarian syndrome (PCOS), endometriosis, certain medications, and many other conditions.

Before making changes to manage FHA, it is important to consult your GP and rule out any of these conditions.



What Causes FHA?

FHA most commonly occurs in females who are either restricting their food intake, doing large amounts of strenuous exercise, and/or are experiencing high levels of stress. The specific cause of FHA is not known. However, it is believed to occur when the hypothalamus is suppressed by one, or both, of the following:

1. Low energy availability

This occurs when we do not get enough energy from food to fuel our daily living and physical activity. This is also sometimes called an energy deficit. When we are in an energy deficit, our body must save energy so that it can continue to carry our vital functions, such as our heart beat. To save energy, our body often places non-vital functions on hold. This can include hormone production.

2. Stress

This includes emotional stress, stress from dieting, or physical stress from intense exercise. When our body is under stress, it believes that we are in danger. To protect our body from childbearing while in 'danger', reproductive functions are often placed on hold.

Misconceptions About FHA

“FHA only occurs to people who are underweight”

In FHA, GnRH is suppressed by the body's response to low energy availability, not by a lack of body fat. This means that FHA can develop in all body shapes and sizes.

“FHA can only occur after your first period”

There are two types of amenorrhoea. Primary amenorrhoea occurs when a female has her first period after the age of 18, while secondary amenorrhoea occurs when a female who is already menstruating loses her period. FHA can be a cause of primary amenorrhoea.

“The oral contraceptive pill can fix FHA”

The oral contraceptive pill has several purposes, including providing females with a regular menstrual bleed. The “pill” alters a females hormone levels to prevent contraception for 21 days. The female then takes a hormone-free pill for 7 days, during which she experiences a menstrual bleed. However, this bleed is caused by withdrawal from the hormones provided by the pill, not by the females menstrual cycle. This means that a woman who experiences a menstrual bleed while on the pill may still have FHA. While the pill can manage symptoms of FHA in the short-term, it is not a long-term cure.

“FHA is not a problem until a female wants to become pregnant”

Females often do not experience any short-term side effects of FHA. However, FHA can have long term ramifications both for a females reproductive health and other body systems. For example, a decrease in oestrogen production long-term can decrease bone mineral density, increasing risk of fractures.

“FHA is normal for dancers”

While FHA is common in dancers and other athletes, it is not “normal” and should be discussed with your health professionals.



Guidelines for Recovering from FHA

1. Increase energy intake

Increasing energy intake will help you achieve a positive energy balance. The amount of additional energy needed from food to resume menstruation will vary between each female. To help you increase energy intake:

- Eat regularly, including 3 meals and 2-3 snacks every 3-4 hours. This provides plenty of opportunities to eat over the day.
- If training for sport, ensure that you have a meal or snack both 2-4 hours before and immediately after exercise to fuel and recover from activity.
- Enjoy foods from all food groups, including meat and dairy. These foods are rich in both energy and micronutrients.
- Include a source of protein, grains/starch and fat at every meal.
- Decrease portions or servings of high-fibre foods, such as fruit and vegetables. These take up room in our gut and suppress appetite, making it more difficult to eat enough energy.
- Use nutritional fluids such as milkshakes and juice if your appetite is low.
- Ensure that your week includes regular 'fun foods' and social meals.
- Your dietitian may also help you build a meal plan

2. Decrease exercise

Decreasing exercise can also help you achieve a positive energy balance. High intensity exercise may also contribute to FHA by placing stress on the body. Some ways to decrease exercise include:

- Decrease the frequency, duration, or intensity of your workouts
- If decreasing frequency of workouts, try scheduling another activity when you would usually be exercising. This may help manage any initial, challenging emotions.
- If decreasing duration, try to limit distractions during exercise. Being more mindful of your body sensations may allow you to be more satisfied from lower intensity or shorter duration activity.
- To decrease intensity, try 'swapping' instead of 'swapping'. Find activities which are slower in pace but similar in structure or environment to your usual exercise. For example, swapping jogging for walking.
- Try exercise with a defined duration or intensity. This may relieve the pressure to "push" yourself during activity. Examples include group exercise classes.
- Try new sports, shifting your focus from fitness to skill development.
- Explore social sports with a more relaxed environment.



Guidelines for Recovering from FHA - cont.

3. Reduce stress

High levels of stress can also contribute to FHA. As each individual encounters different stressors in their life, this step will look different for everyone. Some examples of strategies to reduce stress can include:

- Ensure you are getting adequate sleep
- Make self-care a regular, protected time of your day
- Implement boundaries between your workload and your personal life
- Try mindfulness-based activities such as meditation or journaling
- Speak with a mental health professional for further support



Information listed here are for general advice only and should not be a replacement for individual dietetic or medical advice.