

How hormones steer our appetite and eating behaviour:

Weight loss, obesity and hormones

Can you decide when to be hungry or full after a meal? Or control wanting a chocolate bar over a green apple for a late-night snack? There is a lot you can do to make good food choices, but eating behaviour is not entirely in your conscious control and can sometimes go against your best intentions.



According to Professor Joseph Proietto of the University of Melbourne, “the need to find fuel to generate energy is a profound drive within the biology of all living organisms: we all need food to survive. So, it’s not surprising that our bodies have such a complex system to control food intake, driven by hormones.”

People are often advised to eat less or smarter to manage obesity and hormones may not be considered when it comes to weight loss or gain. Learning how hormones work is important to understand how to best treat and manage obesity.

Here, we’ll take a look at:

- How developing obesity and hormones can be related
- How weight regain with obesity and hormones are linked

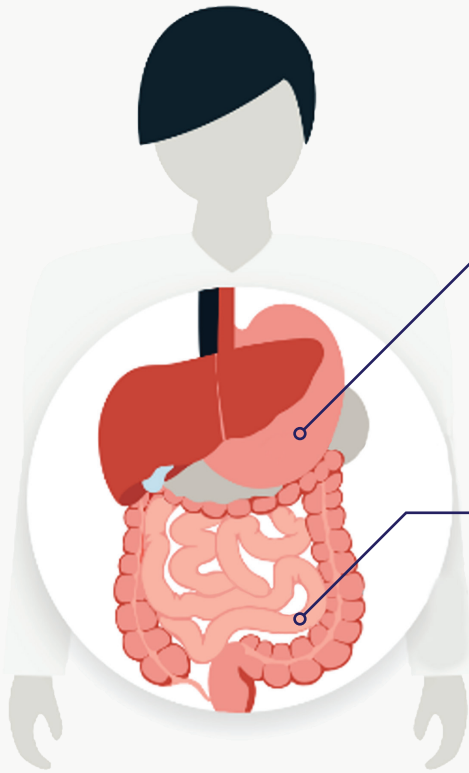
How developing obesity and hormones can be related

Hormones act as chemical messengers between the body and the brain that coordinates our eating behaviour and food choices.

Some hormones are responsible for making you feel hungry (“hunger hormones”), while others are responsible for making us feel full (“satiety hormones”). These hormones circulate in the blood and come from parts of the body that deal with energy intake and storage. These include the gut (which receives and digests food), fat tissue (which stores the energy as fat), and the pancreas (which makes hormones that are involved in energy storage, such as insulin).

How do hunger and satiety hormones work?

The dynamic interplay of messages from the hunger and satiety hormones helps your brain regulate your eating behaviour. Another set of hormones can steer your food choices and motivate you to eat, even if you're not actually hungry. Because hormones can promote overeating, they can influence developing overweight and obesity. Keep these processes in mind when finding the right intervention and strategy to manage obesity and hormones are a factor that should be acknowledged.



After a meal or when full:

The stomach reduces your desire to eat by making less of the hunger hormone and sending a message to your brain to stop eating.

*Hunger hormones:
Stomach: Ghrelin*

The gut and fat tissue make more of the satiety hormones so you feel full.

*Satiety hormones:
Gut: PYY, GLP-1.
Fat tissue: Leptin*

How weight regain with obesity and hormones are linked

In addition to changes in hormone levels after eating, it seems that hormone levels also change when you lose weight. Several studies have found that after losing weight, levels of satiety hormones decrease and levels of hunger hormones increase. These changes can make you feel more hungry, feel less full, and burn fewer calories. Such hormonal changes may last for up to three years and are probably part of the reason why 8 out of 10 people end up regaining lost weight in the long run. This can make sustained weight loss even more difficult for people with overweight and obesity and hormones are another challenge to consider.

These findings suggest that suppressing hunger after weight loss may help people to maintain their new weight.

References

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