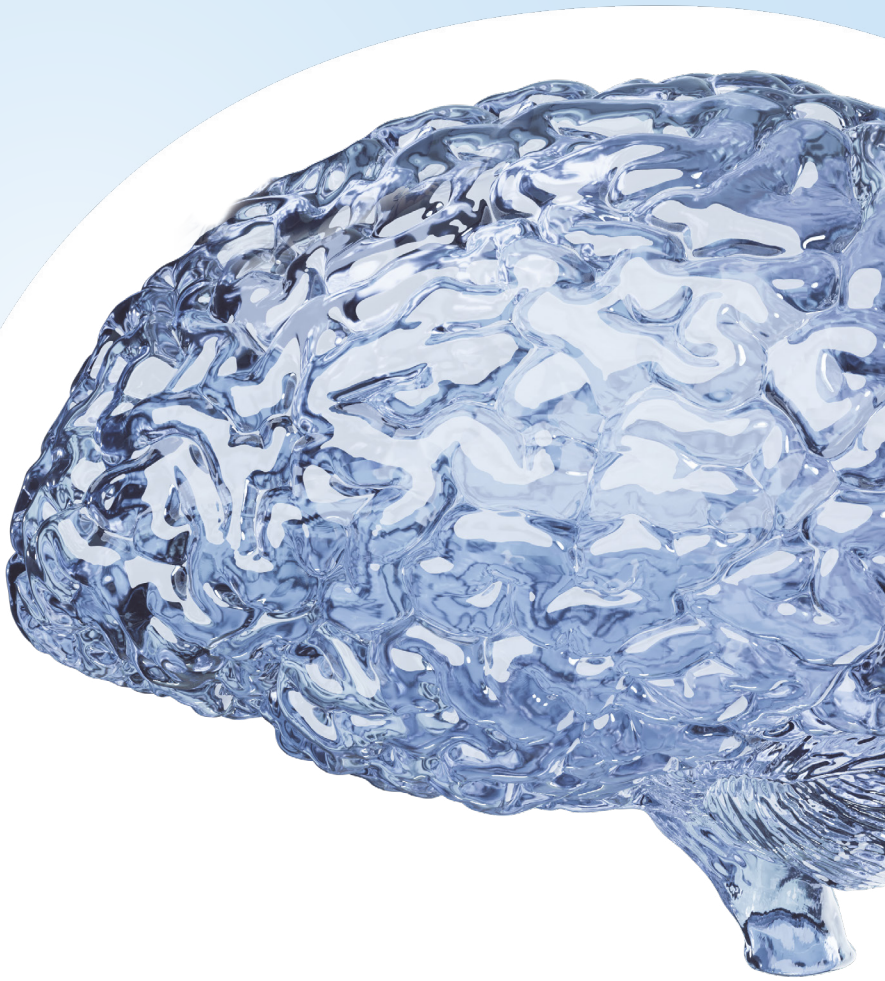
GLP-1 and the **Brain** Play a Key Role in **Appetite Control** and the **Science of Obesity**

For people with obesity trying to lose weight and maintain it, increased hunger that drives the desire to eat may be a major challenge[1-3]

WHY DO PEOPLE EAT?[4]

The **brain** is the **master regulator** of food intake[5,6]



1

Homeostatic Eating

Eating for Hunger[4,7]

Driven by hunger and satiety pathways in the brain

2

Hedonic Eating

Eating for Pleasure[4,7]

Driven by food-reward pathways in the brain

3

Executive Function

Deciding to Eat[8]

Driven by decision-making pathways in the brain

HOW DOES THE BRAIN REGULATE APPETITE?

Hormones from the body **signal** to the **brain**, **affecting food intake**[8-12]

AMY, amylin; **CCK**, cholecystokinin; **GHR**, ghrelin; **GIP**, gastric inhibitory polypeptide; **GLP-1**, glucagon-like peptide-1; **INS**, insulin; **LEP**, leptin; **OXM**, oxyntomodulin; **PYY**, peptide YY.

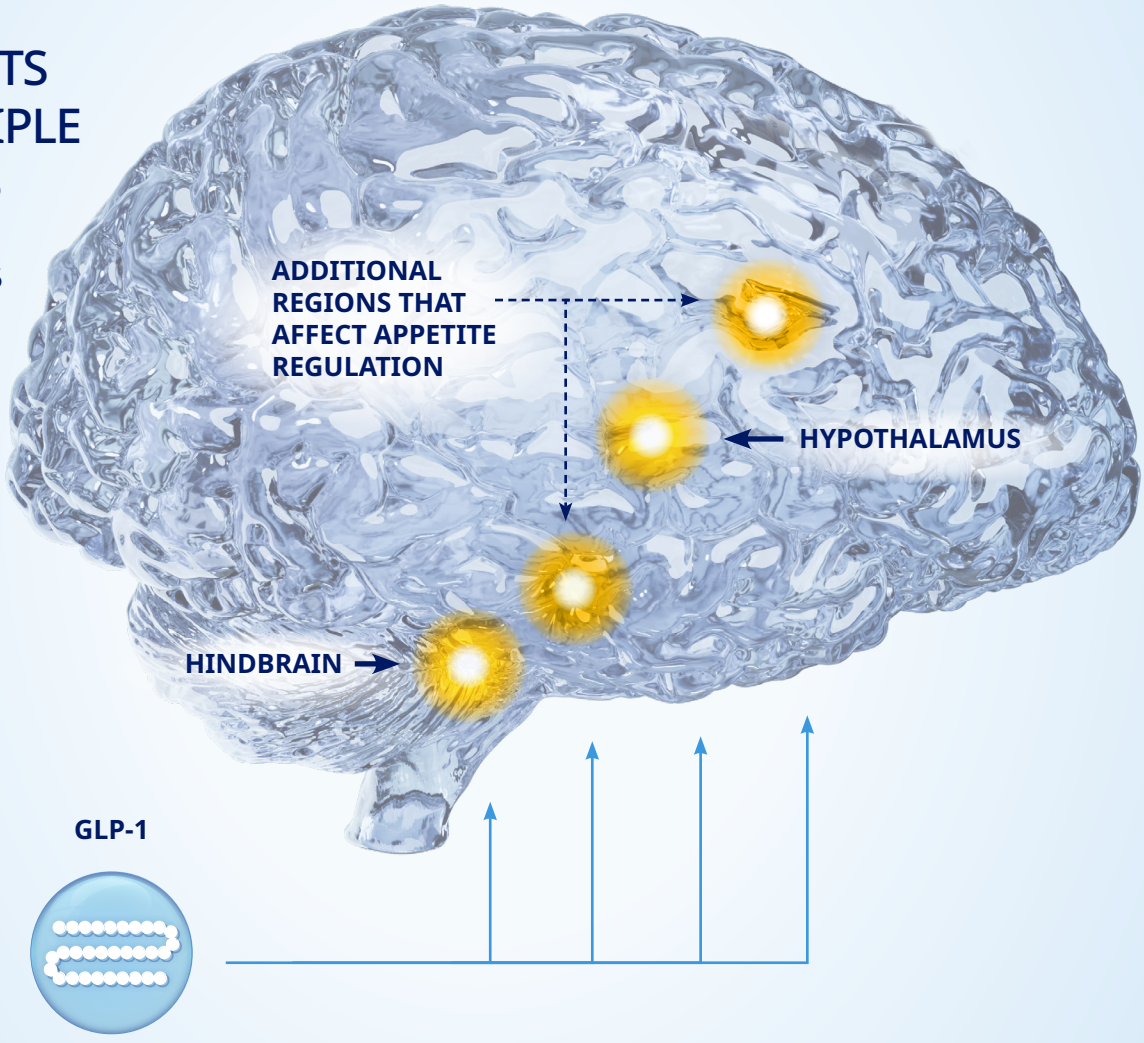
HOW DOES GLP-1 WORK IN THE BRAIN TO REGULATE APPETITE?

Native GLP-1 affects appetite in 2 different ways—by **acting as a hormone** and **a neurotransmitter**[13]

As a hormone[13]
Secreted by intestinal cells in response to meals, GLP-1 affects the brain

As a neurotransmitter[13,14]
GLP-1–expressing neurons project to multiple brain regions involved in appetite regulation and food reward

GLP-1 ACTS IN MULTIPLE REGIONS OF THE BRAIN[13-15]



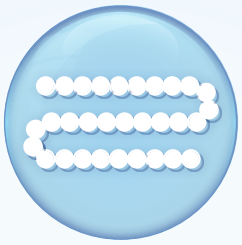
GLP-1 may play an integral role in appetite regulation[11,13]

DECREASES HUNGER

INCREASES SATIETY

DECREASES FOOD REWARD

CONTINUED EDUCATION



To learn more about GLP-1 and the science of weight loss, visit

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and discover the scientific approach to treating obesity.

References

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