



*Exploring  
The*

*HYPOTHALAMUS*

# INTRODUCTION

*The hypothalamus is a small but vital part of the brain located just below the thalamus.*

*It plays a crucial role in maintaining homeostasis and regulating various bodily functions.*



## **Locations**

*At the base of the brain between the pituitary gland and the thalamus.*

*Links nervous system and endocrine system.*

## **Structure**

*Small cone-shaped structure.*

*About the size of an almond.*

# *REGIONS OF HYPOTHALAMUS*



*Anterior Region  
(Supraoptic Region)  
Front Part*



*Middle Region  
(Tuberal Region)  
Middle Part*



*Posterior Region  
(Mammarial Region)  
Back Part*

# FUNCTION

## *Anterior Region*

*It is also known as the supraoptic region  
And also secretes some essential hypothalamus  
hormones.*

# Some Hormones:

## ***Thyrotropin-releasing hormone (TRH):***

*Signals the pituitary gland to secrete thyroid-stimulating hormone or TSH.*

## ***Corticotropin-releasing hormone (CRH)***

*Stimulates the pituitary gland to secrete the adrenocorticotrophic hormones or the ACTH.*

## ***Gonadotropin-releasing hormone (GnRH)***

*Causes the pituitary gland to secrete reproductive hormones.*

## ***Somatostatin***

*Stops the pituitary gland from secreting some specific hormones.*

## ***Vasopressin***

*Known as the antidiuretic hormone or ADH, which modulates the levels of water in the body.*

## ***Oxytocin***

*Regulates several emotional responses and behaviour and also controls some of the parts of the reproductive system.*

# *Middle Region*

*Known as Tuberal Region.*

*Major nuclei are the arcuate nucleus and ventromedial nucleus.*

*Part of the paraventricular nucleus is also located.*

*The arcuate nucleus is involved in appetite and releasing Growth Hormone-Releasing Hormone(GHRH).*

*The ventromedial nucleus helps to regulate appetite and growth.*

# *Posterior Region*

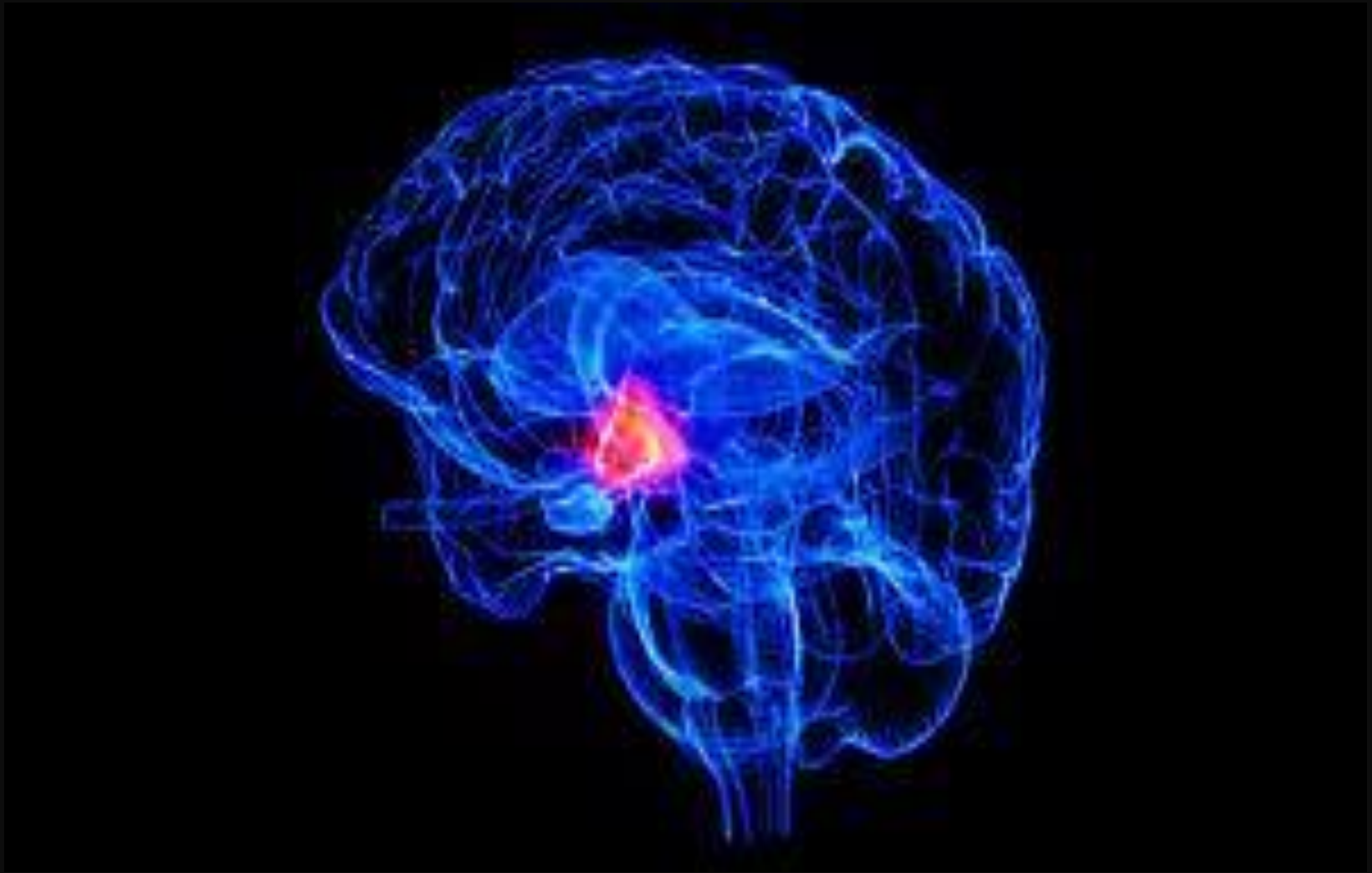
*Known as Mammillary Region.*

*Main nuclei are posterior hypothalamic nucleus  
and mammillary nucleus.*

*Helps to control and stabilize the temperature in  
the body.*

*Plays a vital role in the effective formation of  
memory and cognition.*





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***THANK*** *you*