Endocrine System

What is the Endocrine System?

The endocrine system releases chemical messengers called hormones into the blood to act on distant target cells - Hormones only act on the cells with a

specific receptor

The endocrine system works at the same time with the nervous system to maintain balance - Hormones initiate slower responses (proger

- Hormones inicio durations)

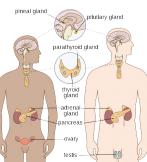
Nervous System vs Endocrine System

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Comparison	Nervous system	Endocrine system
Speed of the action	Very rapid	Can be slow
Nature of the message	Electrical impulses, travelling along nerves	Chemical messages, travelling in the bloodstream
Duration of the response	Usually completed within seconds	May take years before completed
Area of response	Often confined to one area of the body - response is localised	Usually noticed in many organs - response is widespread
Examples of processes controlled	Reflexes such as blinking; movement of the limbs	Growth; development of reproductive system

The endocrine system contains 9 major glands ¢ organs that produce, store ¢ secrete hormones

I Hypothalamus Maintains the body's balance & regulates body temperature, heart rate and blood pressure



2 Pituitary Gland Exitatory Composed of 2 lobes the anterior which secretes hormones involved in the body's growth & development, and the posterior, which secretes hormones that incres (2) the reabsorphon of wold for the Kidneys altimate bormones that control atter plaines 3 Pince Gran

It Checkes a hormone called melatonin

that causes you to feel sleepy

4 Thyroid

Produces hormones that regulate the body's metabolism (how the body uses energy) 4 Parathyroid glands Regulate the absorption of calcium

5 Thymus

Controls the production of white blood cells \$ plays a role in the body's ability to fight diseases

6 Adrenal Gland Control metabolism, blood pressure,

sexual development and response to stress

Pancreas

It makes a hormone called insulin that controls the level of sugar in the blood