Welcome today they will be talking about the hormones

regulated by the hypothalamus,hypophyseal portal system and

the endocrine hypothalamus.Model number 7.

Now in this topic will be discussing about the different

hormones that are regulated by the hypothalamo hypophyseal

portal system. And at the end of this video you will

be able to list the hormones regulated by the

hotel system and differentiate between

major types of hormones and mention hormones and

their target glance.

Now the two main types of hormones which are released by

the hypothalamus are known as the stimulating hormones and

inhibiting hormones. Now these are all regulating hormones

which are regulating the function of other glands, or

They are regulating the secretion of hormones from other endocrine

glands. Mostly, the target glands of the hypothalamus is the

Pituitary and it will turn on and off the function

of the pituitary and the other endocrine glands.

And the stimulating hormones are of different types. That is the

growth hormone, the thyroid,stimulating hormone and adrenal

cortico trophic hormone, follicle stimulating hormone,

and luteinizing hormone.

Now the hormones of the adenohypophysis. These are

called as Tropic hormones, note trope Refers to turning. And

What does this mean? It means that these hormones can regulate

the production of hormones from other endocrine glands. When I

say regulate, I mean that these hormones can turn on an off the

production of hormones from other endocrine glands. For

instance, we saw in the previous

session. At the thyroid stimulating hormone stimulates

the thyroid gland to produce T3 and T4 hormones, that is,

triiodothyronine and thyroxine hormones. So what it does is

that the thyroid stimulating hormone triggers the thyroid

gland to produce these two hormones. So it is turning on

the function of the thyroid

gland. So that is why they are referred to us Tropic hormones.

Now growth hormone.

We will see in the next slide here, so these are the

hypothalamo hypophyseal hormones. When I say they're

hypothalamo hypophyseal hormones. What I mean is that

These hormones are regulated through the portal system.

Which starts with the hypothalamus, and ends in adenohypophysis.

So the growth hormone, the precursor for this

is the growth hormone releasing hormone. now growth hormone

releasing hormone. It is also abbreviated as GHRH. It is

released by the hypothalamus and acts on the adenohypophysis

to produce growth hormone. Now this growth hormone has target

gland such as liver and adipose

tissue. Growth hormone. The word itself will tell us that is

required for normal growth of normal growth and development of

the body, and it mostly acts on the bones and the muscle cells.

And the second one is a thyrotropin releasing hormone. Now

this thyrotropin releasing hormone that is secreted by the

hypothalamus and it acts on the adenohypophysis through the

portal system to secrete the thyroid stimulating hormone.

This thyroid stimulating hormone acts on the thyroid gland that

is the thyroid gland is the target for this particular hormone

and it produces the T3 andT4 hormones. Now these thyroid

hormones or the triiodothyronine and thyroxine hormones are

responsible For the proper metabolism of the body.

The Next One is the corticotropin releasing hormone.

CRH, so corticotropin releasing hormone is secreted by the

hypothalamus through the portal system. It acts on the adenohypophysis

to release adrenocorticotropic hormone.

The name itself will tell you the target gland

adrenocorticotropic. It means that it is

acting on the adrenal cortex. the adrenal glands are

situated above the kidneys, so sometimes they are also referred

to as suprarenal. Because renal refers to kidneys and Supra

means above, so these adrenal glands are situated above the

kidneys and the cortex of it is the trigger, or is the target

for adrenocorticotrophic hormones? So adrenocorticotrophic,

hormone will act on the cortex of the adrenal glands to

release cortisol. And a few

Other hormones.

The Gonadotropin releasing hormones now. These are

particular hormones. There are two types of these that is the

follicle stimulating hormone and luteinizing hormone. So

gonadotropin releasing hormone acts on the adenohypophysis to

release these two hormones. That Is FSH and LH follicle

stimulating hormone and luteinizing hormone. Now these

two hormones more or less,always work in tandem with each

other. The follicle stimulating hormone acts on the ovaries as

well as the testes so it has recipient in the males as well

as females and in case of ovaries it produces the estrogen hormone and it also plays a role in the development of the ovaries in the case of testes it is responsible for the proper sperm production. The luteinizing hormone, on the other hand, is known to produce estrogen in the ovaries, in females and testosterone in the males. So these two hormones will always work together, and they are referred to as.

Gonadotropin releasing hormones because they regulate the functions of the gonads. So these are Tropic hormones which will turn on and off the function of the ovaries and the testes.

Right? The other, so there are four we have seen here, the five different Tropic hormones, that is the growth hormone, the adrenocorticotropic hormone, theThyrotropin releasing hormone or thyroid stimulating hormone, the follicle stimulating hormone and luteinizing hormone. Now these are Tropic hormones in the sense that they turn on and off the function of the target.

Endocrine glands. The next thing is, the inhibitory hormones. Now we have seen stimulating hormone stimulating hormones will trigger the release of other hormones or will stimulate the pituitary to release other hormones. Now inhibiting is opposite what it does. It Inhibits the secretion of the

pituitary gland. So the two inhibitory hormones are the prolactin inhibitory hormone,also known as dopamine and the growth hormone inhibitory hormone which is sometimes referred to as somatostatin.

Now, prolactin inhibitory hormone prolactin is the hormone which is responsible for the production of milk in the memory glance. So the inhibitory hormone will work in the opposite direction. It will inhibit the production of prolactin and thereby it will not allow the milk production to take place. Growth hormone inhibiting hormone that is a somatostatin or it is also sometimes abbreviated as GHIH.

So this particular hormone is produced by the Delta cells of the islets of langerhans. Now These islets of langerhans are present in the pancreas, so growth hormone inhibiting hormone or other somatostatin is produced by the islets of langerhans within the pancreas. The Delta cells now this particular hormone plays a role in the inhibition of the two other hormones. That is, the Glucagon and insulin. So growth hormone inhibiting hormone.

Inhibits the secretion of Glucagon and insulin, which are produced by the other cells of the pancreas that is, the Alpha

cells and beta cells of the pancreas. To summarize, there are four Tropic hormones which are released by the pituitary. That is the thyroid stimulating hormone, the adrenocorticotropic hormone. The growth hormone and gonadotropins that is the follicle stimulating hormone and luteinizing hormone, the inhibitory hormones that are which are in which released to inhibit the secretion of the pituitary, prolactin inhibitory hormone and growth hormone. And inhibiting hormone that is dopamine and somatostatin. These are my references.

Thank you.