

DO NOT REMOVE

BSC 1086 #2 Exam

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Chapter 18 Endocrine System



Anterior Pituitary Gland

Endocrine Glands only True Glands

- 1.
- 2.
- 3.
- 4.

- *1.
- *2.
- *3.
- 4.
- 5.
- 6.

Comparison of Nervous System and Endocrine System

N.S.	E.S.
1. Message = _____	_____
2. target site = _____	_____
3. Action = _____	_____
4. Speed = _____	_____
5. Duration _____	_____

Hormone Activity

1. sex hormone chemistry = _____
2. needs help in blood _____
3. needs help to get into cell _____

hGH
Human Growth Hormone

P: I: IA

*1. hGH

*2. TSH

*3. ACTH

4. FSH

5. LH

6. Prolactin

(4)

(1)

1. thyroid
2. parathyroid
3. Adrenal Glands
4. Pituitary

(2)

N.S.

- 1. Action potential
- 2. muscle & glands
- 3. contract, squirt
- 4. fast
- 5. short

E.S.

1. hormones
2. GBC Lots!
3. release hormones etc...
4. not as fast
5. long

(3)

1. Steroids

2. lipid soluble

3. water soluble

P = (anterior/adenohypophysis pituitary gland) (5)

T = Skeletal muscle/bone

A = lipolysis - breakdown of fats

D = hypo → dwarfism, kids
hyper → gigantism, kids/acromegaly, adults

TSH
Thyroid Stimulating Hormone

(6)

(2)

ACTH
Adrenocorticotrophic
Hormone

(7)

PRH
Prolactin

FSH
Follicle Stimulating Hormone

(8)

(11)

Posterior Pituitary
Gland

LH
Luteinizing Hormone

(9)

* stored =
1. 2

Anterior

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~~erior~~ adenohypophysis pituitary gland

secretion of thyroid hormones (T3, T4)

T Thyroid gland

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(anterior) adenohypophysis pituitary gland

= adrenal cortex T-

= controls secretions of cortisol A-

P = anterior (adenohypophysis) pituitary gland

P = (anterior) adenohypophysis pituitary gland

A = stimulates hair growth

P = (anterior) adenohypophysis pituitary gland

1. O.T

2. A.O.H

~~6~~
OT
Oxytocin

12

9

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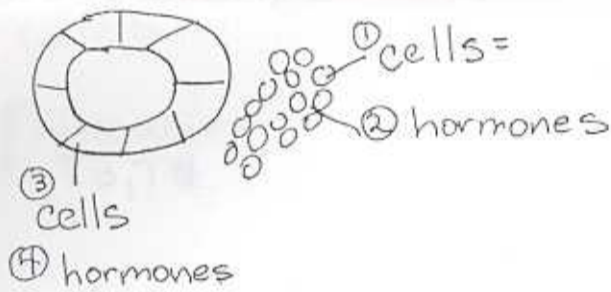
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ADH
Antidiuretic Hormone

Calcitonin

14

Thyroid Gland



17

PTH
Parathormone

15

T3 - T4
Thyroid Hormone

hypothalamus

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(12)

S = (posterior) neurohypophysis
pituitary

S = stored

P = hypothalamus

(13)

S = (posterior) neurohypophysis
pituitary

S = stored

P = thyroid, parafollicular cells
T = bone

A = INHIBITS action of osteoclasts

(14)

1. parafollicular

2. Calcitonin

3. Follicular
↓ T₃, T₄

(14)

P = thyroid, follicular cells

T = most body cells

(15)

A = stimulates BMR (Basal Metabolic Rate)

D = hypo → cretinism, kids / myxedema, adults
hyper → grave's disease, adults

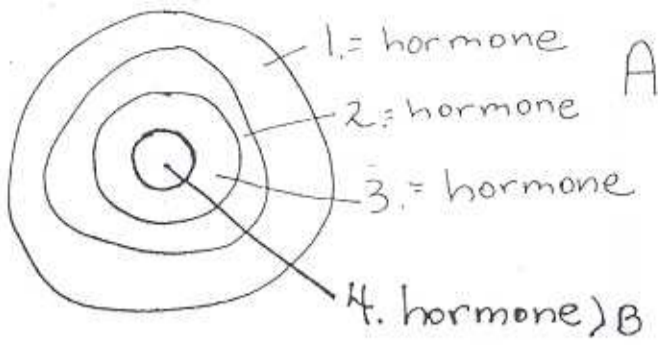
P = parathyroid

T = Bone

A = stimulates osteoclastic activity

(17)

Adrenal Gland (18)



Aldosterone (19)

Cortisol (20)

EPI
Epinephrine (21)

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NE
Norepinephrine (22)

Pancreas (23)



18

- Mineral corticoids =
- 2. glucocorticoids = mella
- 3. gonadotropins = inner

b. Adrenal Medulla
: NE/E

19

P = adrenal cortex
↓
urinary hormone

22

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P = adrenal medulla
A = arteriole vasoconstriction

20

P = adrenal cortex
T = body cells
A = hypo → Addison's disease
hyper → Cushing's Syndrome disease

23

- A: Islets of Langerhan
1. Alpha - Glucagon
 2. Beta - Insulin

21

P = adrenal medulla
T = muscle heart/smooth
A = bronchiole dilation

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Insulin

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Glucagon

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P = pancreas, beta cells/islets of langerhans

T = Liver, adipose, body cells

A = stim liver to store glucose as glycogen

D = hypo → Diabetes Mellitus

P = pancreas, alpha cells/islets of langerhans

T = liver adipose, body cells

A = stim liver to break down glycogen into glucose

3. needs help to get into cell