

The Anatomy and Physiology of Animals/Endocrine System

Worksheet/Worksheet Answers

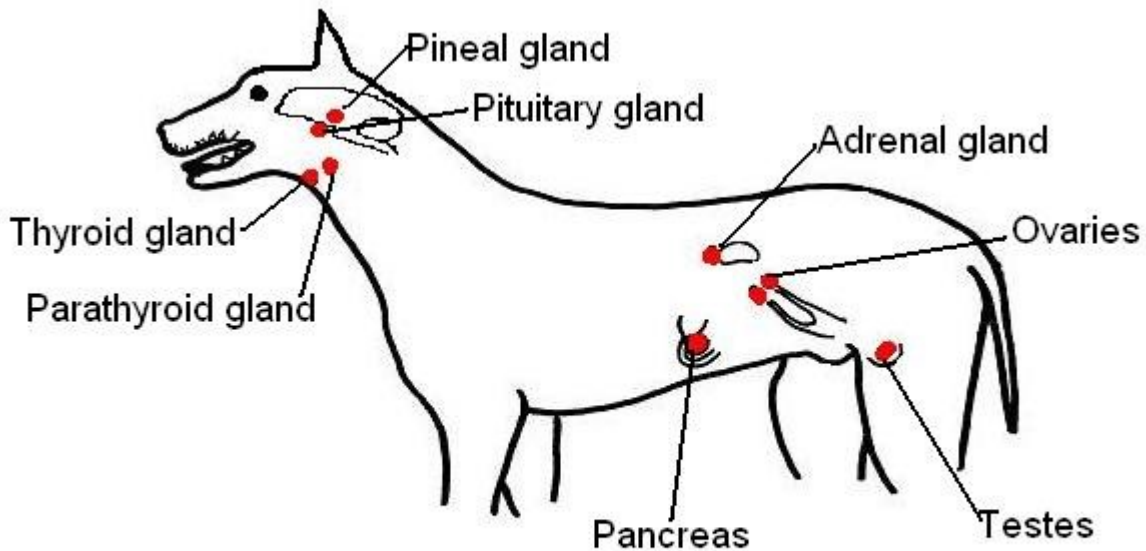
1. Fill in the gaps in the sentences below using the words in the list.

target; blood system; ducts; hormones

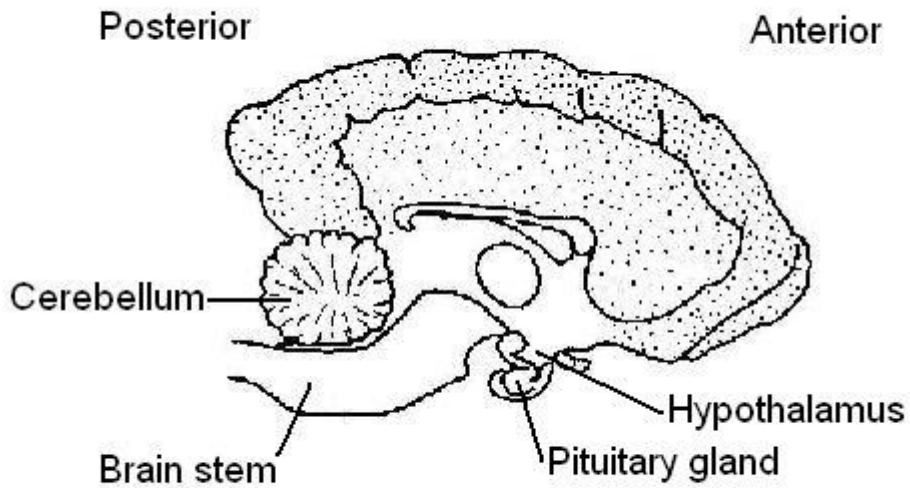
- Endocrine glands release their secretions directly into the blood. In other words they have no *ducts*.
- Endocrine glands secrete chemicals called *hormones*.
- Hormones are transported from the endocrine glands to all parts of the body by the *blood system*.
- Although hormones are carried throughout the body they only affect specific *target* organs and tissues

2. The position of endocrine organs have been indicated in red on the diagram of a composite male and female dog shown below. Add the labels in the list to the diagram.

Ovary; Pancreas; Thyroid gland; Pituitary gland; Testis; Adrenal gland; Pineal gland; Parathyroid gland



3. On the diagram of the brain below, indicate the position of the **Hypothalamus** and **Pituitary gland**.



4. In the table below, list 3 hormones produced by the **pituitary gland** and state the function of each.

Hormone	Function
1. Growth hormone.	<i>Stimulates growth of the body by increase in length of the long bones</i>
2. Oxytocin	<i>Stimulates milk "let down"</i>
3. Follicle stimulating hormone (FSH)	<i>Stimulates the development of the ovarian follicle.</i>
<i>Plus: Luteinising hormone (LH)</i>	<i>Stimulates development of the corpus luteum of the ovary</i>

<i>Plus: Antidiuretic hormone (ADH)</i>	<i>Stimulates the production of concentrated urine</i>
<i>Plus some others</i>	

5. Fill in the following table with the endocrine organ the hormones are produced by.

Hormone	Produced by:
Insulin	<i>Pancreas</i>
Progesterone	<i>Corpus luteum</i>
Oestrogen	<i>Ovarian follicle</i>
Growth hormone	<i>(Anterior) pituitary gland</i>
Adrenaline	<i>Adrenal medulla</i>
Antidiuretic hormone	<i>(Posterior) pituitary gland</i>
Testosterone	<i>Testis</i>
Aldosterone	<i>Adrenal cortex</i>
Melatonin	<i>Pineal gland</i>
Oxytocin	<i>(Posterior) pituitary gland</i>

Thyroxine	<i>Thyroid gland</i>
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6. Match the hormones in the list below with their functions.

Oxytocin; Insulin; Oestrogen; Growth hormone; Antidiuretic hormone; Testosterone; Adrenaline; Cortisone; Melatonin; Progesterone; Thyroxine; Luteinising hormone; Follicle stimulating hormone

Hormone	Function
<i>Follicle stimulating hormone (FSH)</i>	1. Stimulates development of the ovarian follicle.
<i>Oxytocin</i>	2. Stimulates milk “let down”.
<i>Insulin</i>	3. Controls blood glucose levels.
<i>Thyroxine</i>	4. Influences the rate of growth and development of young animals.
<i>Growth hormone</i>	5. Stimulates the growth of long bones.
<i>Antidiuretic hormone (ADH)</i>	6. Stimulates absorption of water from the kidney tubule.
<i>Melatonin</i>	7. Influences the development of sexual maturity.
<i>Luteinising hormone (LH)</i>	8. Stimulates the development of the corpus luteum.
<i>Oestrogen</i>	9. Stimulates the development of female sexual characteristics.

<i>Testosterone</i>	10. Stimulates the development of the male sexual characteristics.
<i>Cortisone</i>	11. Affect glucose, protein and fat metabolism.
<i>Progesterone</i>	12. Prepares the lining of the uterus for pregnancy.
<i>Adrenaline</i>	13. Prepares the body for emergency situations.

7. Circle the odd one out.

1. *melatonin*; oxytocin; growth hormone; antidiuretic hormone; follicle stimulating hormone. *Melatonin is the only hormone in the list not produced by the pituitary gland.*

2. progesterone; oestrogen; luteinising hormone; *cortisone*; follicle stimulating. *Cortisone is the only hormone in the list not involved in any major way with reproduction.*

3. adrenaline; cortisone; aldosterone, oestrogen, *insulin*. *Insulin is the only hormone in the list not produced by the adrenal gland.*