**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**

a. Endocrine glands release their secretions directly into the blood. In other words they have no *ducts*.

b. Endocrine glands secrete chemicals called *hormones*.

c. Hormones are transported from the endocrine glands to all parts of the body by the *blood system.*

d. 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.*  | *Stimulates growth of the body by increase in length of the long bones*  |
| 2.*Oxytocin*  | *Stimulates milk "let down"*  |
| *3.Follicle stimulating hormone (FSH)*  | *Stimulates the development of the ovarian follicle.*  |
| *Plus: Luteinising hormone(LH)*  | *Stimulates development of the corpus luteum of the ovary*  |
| *Plus: Antidiuretic hormone (ADH)*  | *Stimulates the production of concentrated urine*  |
| *Plus some others*  |  |

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

|  |  |
| --- | --- |
| **Hormone**  | **Produced by:**  |
| Insulin  | *Pancreas*  |
| Progesterone  | *Corpus luteum*  |
| Oestrogen  | *Ovarian follicle*  |
| Growth hormone  | *(Anterior) pituitary gland*  |
| Adrenaline  | *Adrenal medulla*  |
| Antidiuretic hormone  | *(Posterior) pituitary gland*  |
| Testosterone  | *Testis*  |
| Aldosterone  | *Adrenal cortex*  |
| Melatonin  | *Pineal gland*  |
| Oxytocin  | *(Posterior) pituitary gland*  |
| Thyroxine  | *Thyroid gland*  |

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**  |
| *Follicle stimulating hormone (FSH)*  | 1. Stimulates development of the ovarian follicle.  |
| *Oxytocin*  | 2. Stimulates milk “let down”.  |
| *Insulin*  | 3. Controls blood glucose levels.  |
| *Thyroxine*  | 4. Influences the rate of growth and development of young animals.  |
| *Growth hormone*  | 5. Stimulates the growth of long bones.  |
| *Antidiuretic hormone (ADH)*  | 6. Stimulates absorption of water from the kidney tubule.  |
| *Melatonin*  | 7. Influences the development of sexual maturity.  |
| *Luteinising hormone (LH)*  | 8. Stimulates the development of the corpus luteum.  |
| *Oestrogen*  | 9. Stimulates the development of female sexual characteristics.  |
| *Testosterone*  | 10. Stimulates the development of the male sexual characteristics.  |
| *Cortisone*  | 11. Affect glucose, protein and fat metabolism.  |
| *Progesterone*  | 12. Prepares the lining of the uterus for pregnancy.  |
| *Adrenaline*  | 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.*