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| *Human Perspectives ATAR Units 3 & 4* |

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Worksheet 2.1 Chemical messengers

Using Chapter 2 of *Human Perspectives ATAR Units 3 & 4*, complete the following activities.

**1** Define the term ‘homeostasis’.

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**2** Which body systems are involved in maintaining homeostasis?

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**3** For each of the following different types of hormones, draw a flow chart to show how it affects cells.. Give an example of each type.

**a** Amine

**b** Protein

**c** Steroid

**4** In the table below, state the location of each gland, the hormones secreted by each, and their functions.

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| **Gland** | **Location** | **Hormones** | **Function** |
| Hypothalamus |  |  |  |
| Anterior pituitary gland |  |  |  |
| Posterior pituitary gland |  |  |  |
| Pineal |  |  |  |
| Thymus |  |  |  |
| Thyroid |  |  |  |
| Parathyroid |  |  |  |
| Adrenal glands |  |  |  |
| Pancreas |  |  |  |
| Female gonads |  |  |  |
| Male gonads |  |  |  |

**5** Why is the pituitary gland sometimes called the master gland? Give an example to illustrate your answer.

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**6** The posterior lobe of the pituitary is not a true gland. Explain this statement.

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**7** Draw a line to match each hormone with its target organs or cells.

**Hormone Target organ/cells**

Antidiuretic hormone Bones and kidneys

Thyroid stimulating hormone Kidneys

Cortisol T-lymphocytes

Parathyroid hormone Kidneys

Aldosterone Ovary

Thymosins Liver

Follicle-stimulating hormone Thyroid gland

Glucagon Most cells