**15.1 – Homeostasis, Hormones & The Endocrine System**

First, skim pages 468-477, taking note of the major headings and bold-face words. Then, as you read each section answer questions, take notes and/or fill in the blanks on the outline below.

**Hormones** are chemicals that are produced in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and secreted directly into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

***Starting Points***: pg. 468 – (Answer to the best you can with your current knowledge)

1. Explain how hormones help the body adjust to stress.
2. Antidiuretic hormone (ADH) and aldosterone are hormones that affect the kidney. Explain why the regulatory systems for osmotic pressure of fluids and for body fluid volumes are controlled by chemicals carried by blood, rather than by nerves.
   1. **Homeostasis, Hormones and the Endocrine System** pg. 470 - 471

Define “***homeostasis***”:

List the 3 functional components of a homeostatic control system and describe their roles:

|  |  |
| --- | --- |
| **Control** | **Role** |
|  |  |
|  |  |
|  |  |

**Negative feedback** is a situation in which there is a *corrective action in the opposite direction of a deviation.* This mechanismresults in finely tuned regulatory systems both in ecosystems and in our bodies. The endocrine system provides many examples.

Give an example of negative feedback you can think of from everyday life.

**Positive feedback** systems are less common in the body. Give an example of positive feedback the move the controlled variable away from a steady state.

**Chemical Control Systems**:

The nervous system and endocrine system are the key regulatory systems in our body. They are very important in maintaining homeostasis, however, they work in slightly different ways. Complete the following chart to compare the systems:

|  |  |  |
| --- | --- | --- |
|  | **Nervous System** | **Endocrine System** |
| Nature of Message |  |  |
| Relative time to send message |  |  |
| Duration of message |  |  |
| Organs receiving message |  |  |

There are two different types of hormones that differ in chemical structure and in their mode of action. Complete the table to describe their mode of action:

|  |  |  |
| --- | --- | --- |
| **Type of Hormone** | **Mode of Action** | **Examples** |
| **Protein Hormones** |  |  |
| **Steroid Hormones** |  |  |