

A2 Biology Revision: Homeostasis and the Kidney

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Homeostasis: Maintenance of a constant internal environment by regulating physical and chemical processes of the body

The Norm: A set or ideal level

Deviation: Any change from the norm

Homeostatic control processes:

Deviation (there is a change)

Deviation acts as a signal to the control centre

The control centre sets off a CORRECTIVE RESPONSE

This response cancels out the change (DEVIATION) and returns the factors back to the norm

What is the internal environment?

Immediate surroundings of a cell e.g. plasma and tissue fluid

It provides the medium in which cells have to live and it MUST be KEPT CONSTANT

Factors that must be kept constant are:

- pH of the blood PLASMA
- temperature
- conc of sodium ions
- conc of GLUCOSE
- water potential

For Homeostasis to work there must be:

- A control SYSTEM
 - A sensor or receptor that monitors the factors being controlled