

### MODULATOR:

Respiratory centre in medulla.

### RECEPTOR:

Central chemoreceptors  
↳ medulla oblongata

Peripheral chemoreceptors  
↳ aortic + carotid bodies

### STIMULUS:

High  $\text{CO}_2$   
(or high  $\text{H}^+$  ions/  
low pH)

VERY low  $\text{O}_2$  levels

### FEEDBACK:

Increased  $\text{CO}_2$   
+ decreased pH

### RESPONSE:

Decreased rate  
+ depth of breathing

### EFFECTOR:

Respiratory muscles  
↳ diaphragm  
↳ intercostal muscles

### RESPONSE:

Increased rate +  
depth of breathing

### FEEDBACK:

Decreased  $\text{CO}_2$  levels  
Increased  $\text{O}_2$  levels

Normal Gas concentration in blood  
↳ and pH levels of blood.

### STIMULUS:

Low  $\text{CO}_2$   
AND High pH

### RECEPTOR:

Central chemoreceptors:

↳ medulla oblongata

Peripheral chemoreceptors  
↳ aortic + carotid bodies

### EFFECTOR:

Respiratory muscles  
↳ diaphragm  
↳ intercostal muscles.

### MODULATOR:

Respiratory centre  
in medulla.