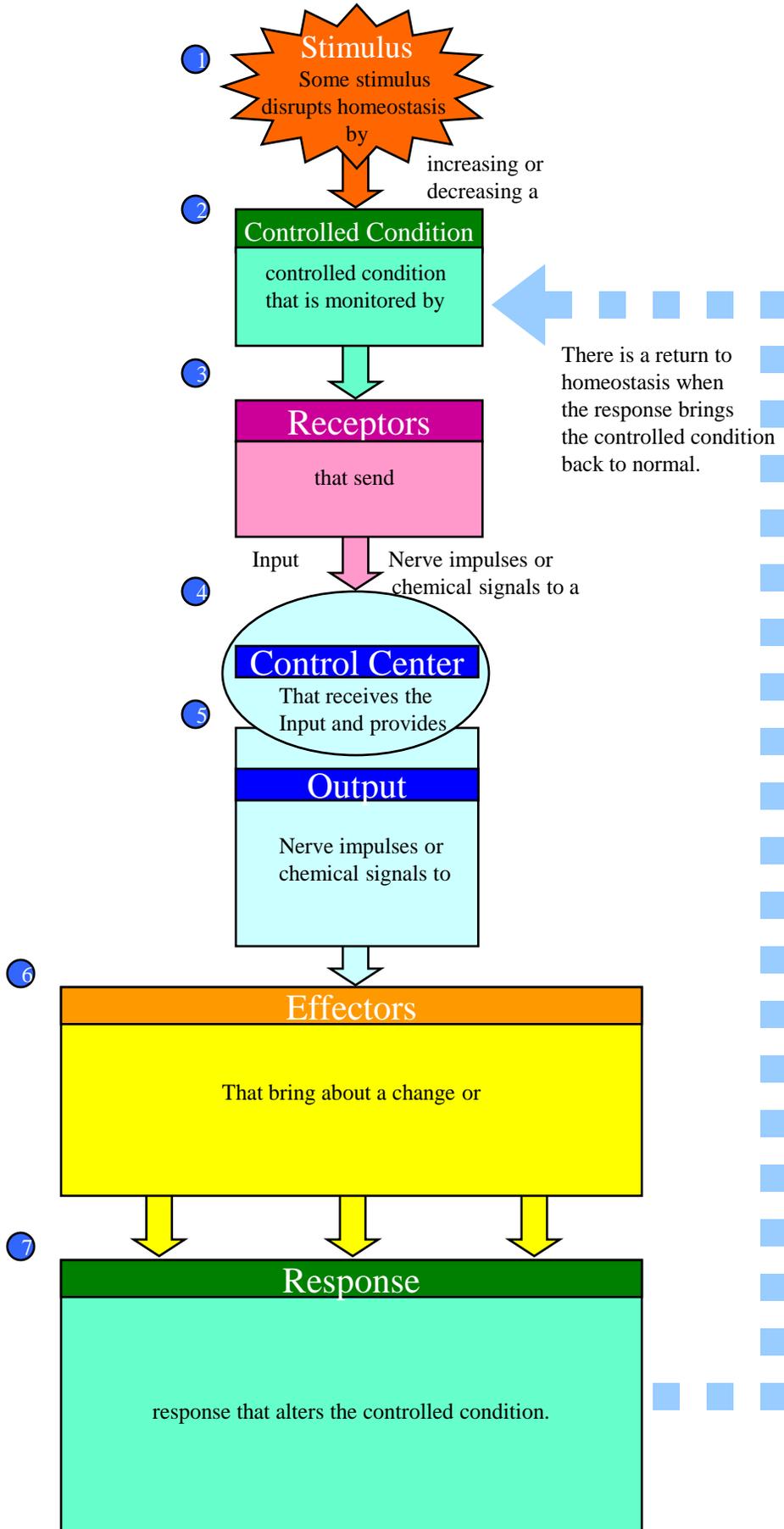
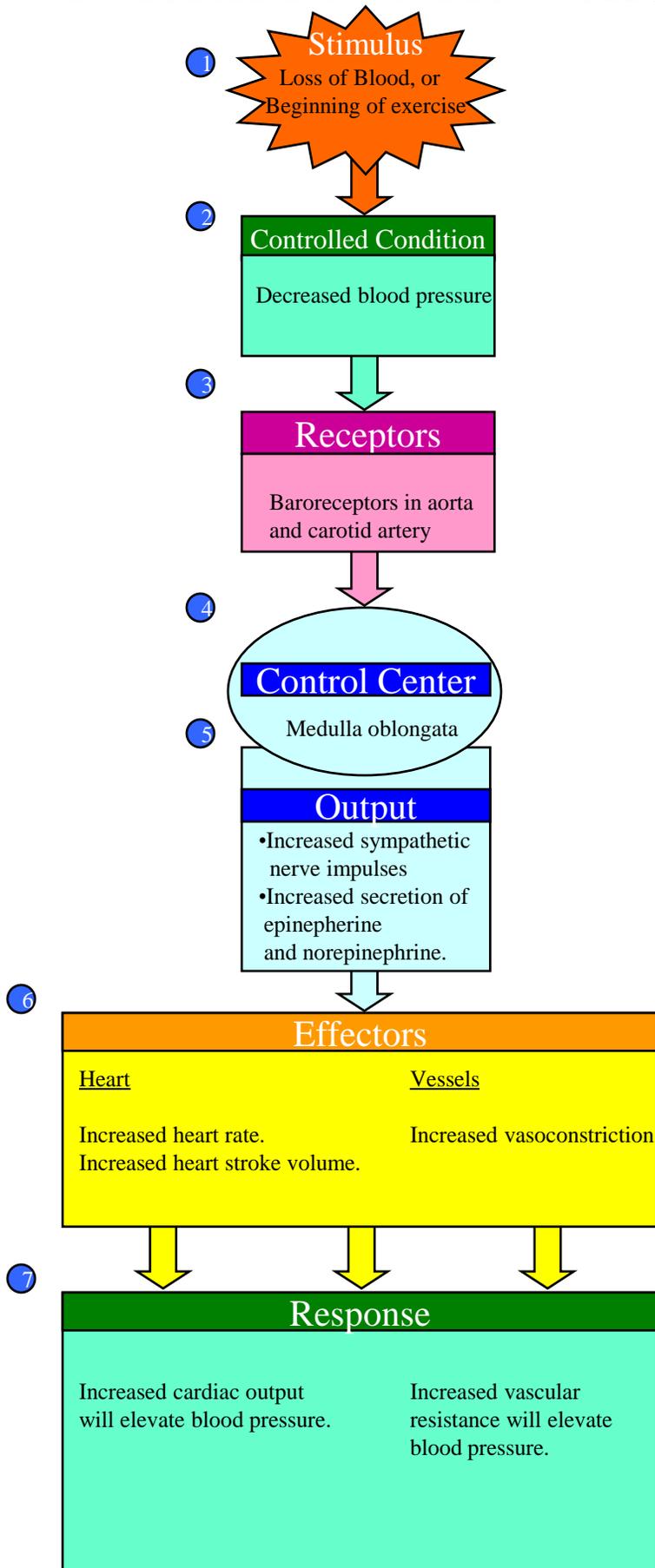


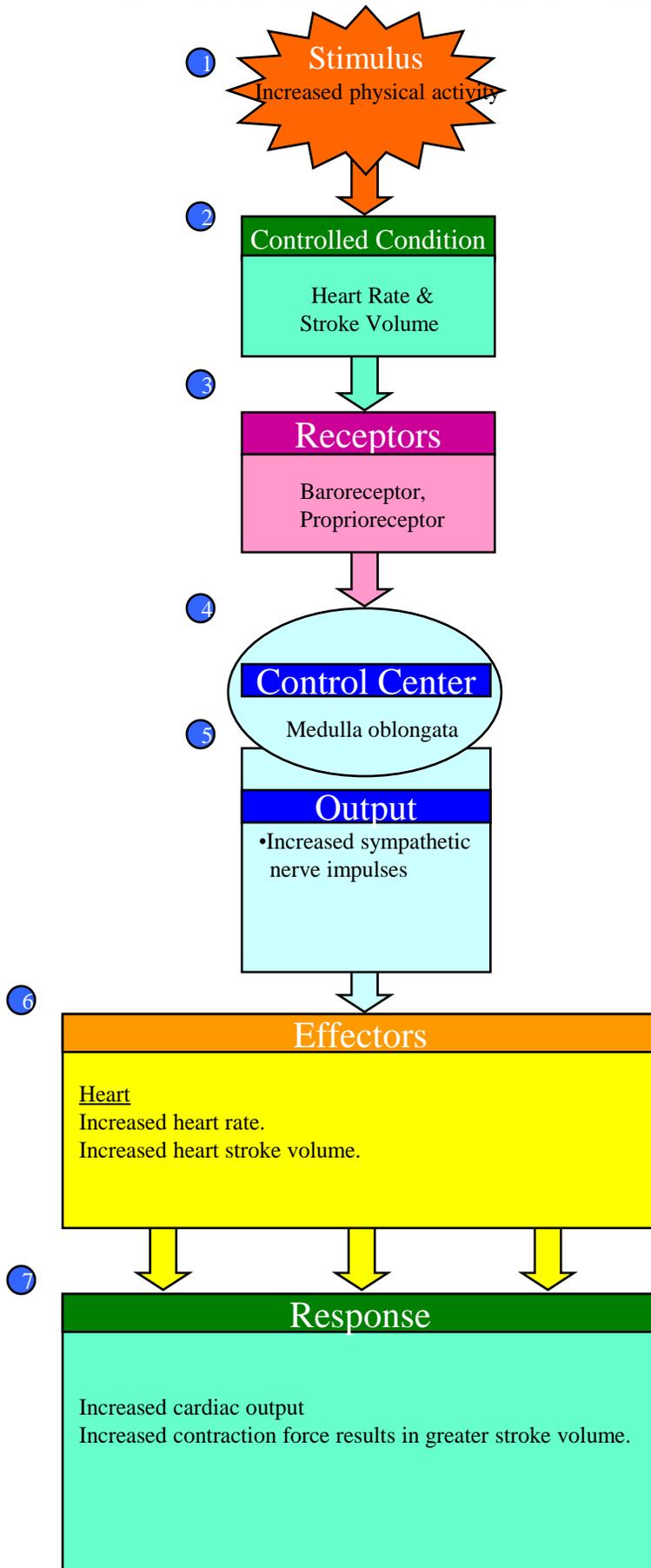
# Homeostasis



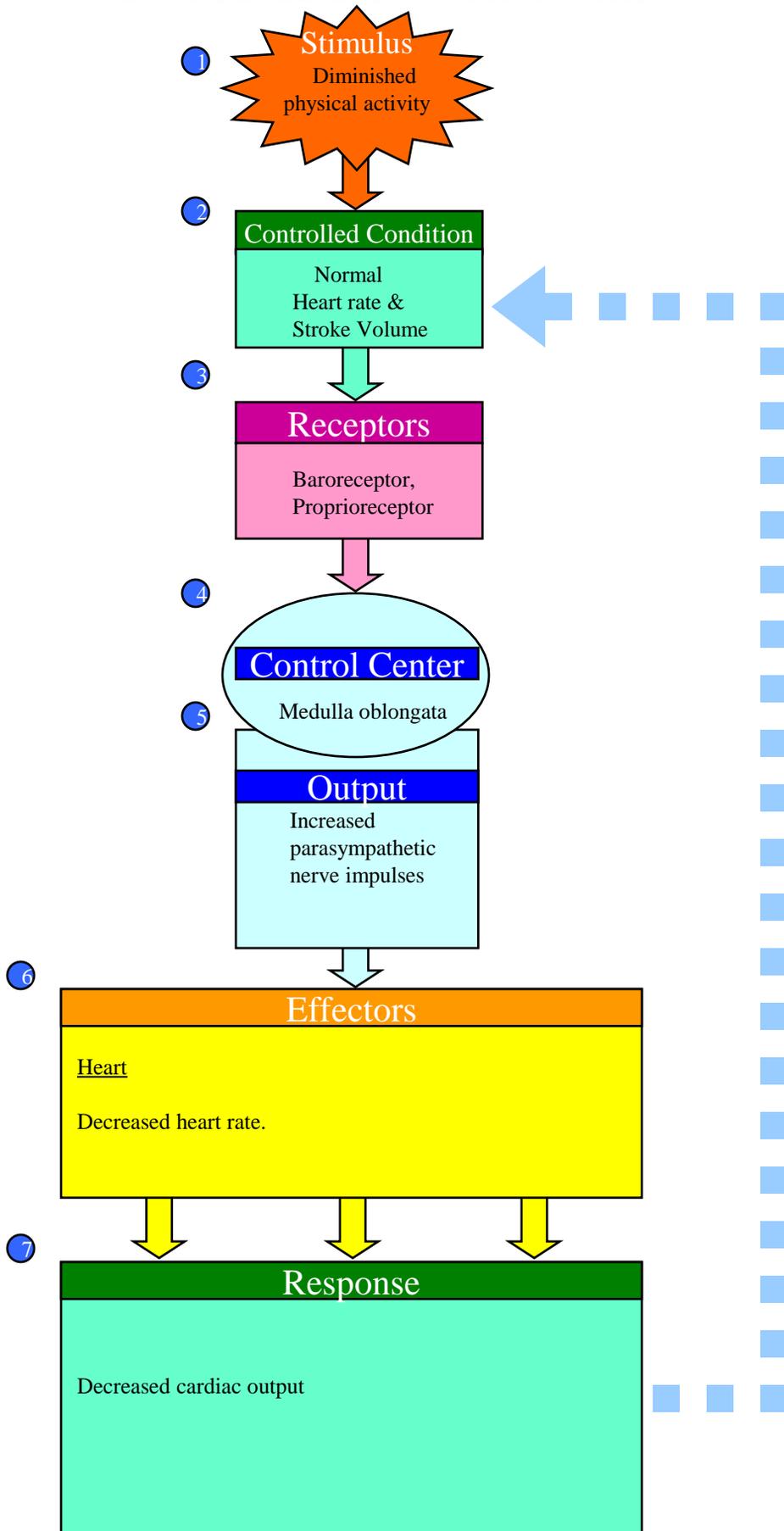
# Homeostasis of Blood Pressure



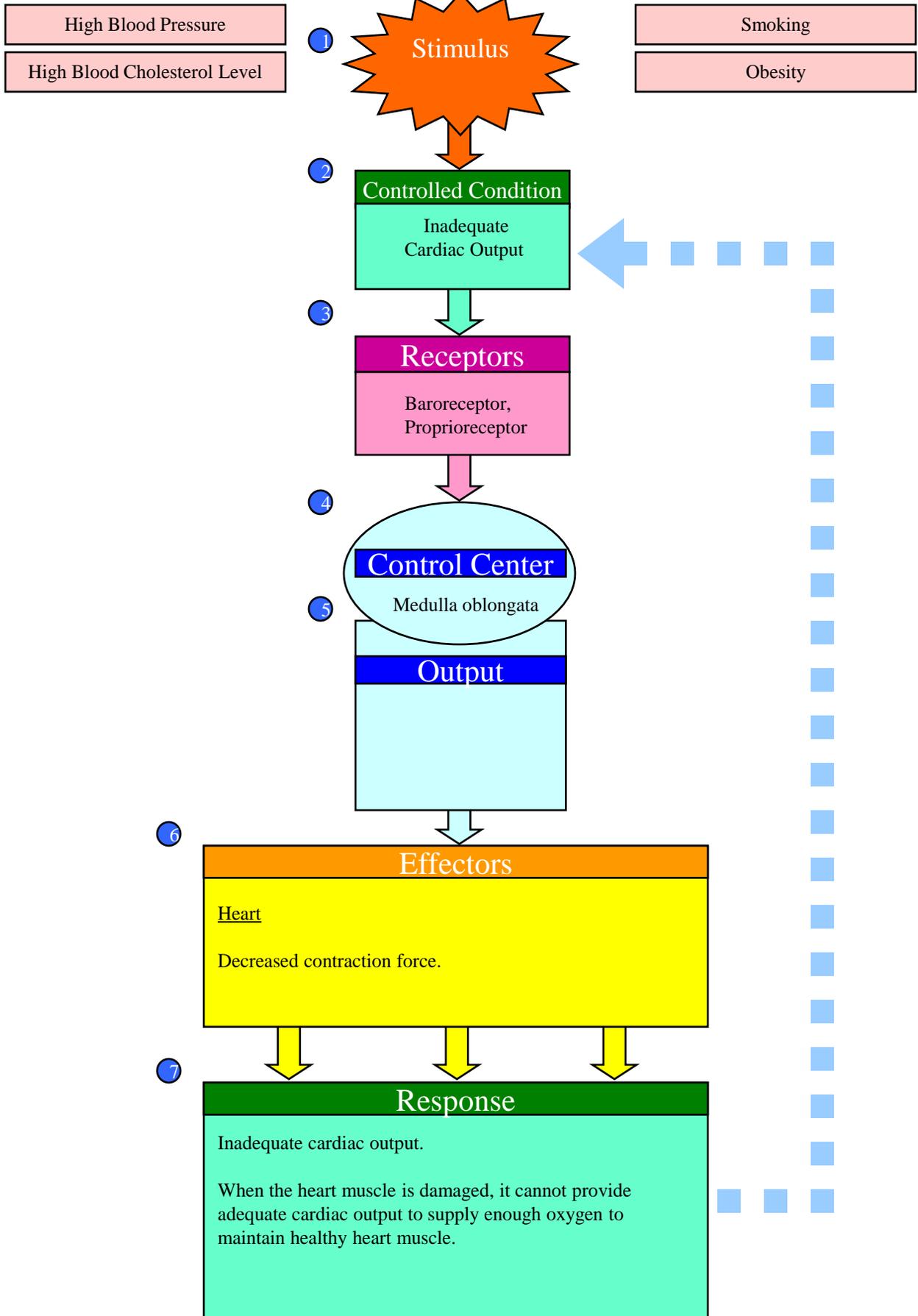
# Homeostasis of Heart Rate



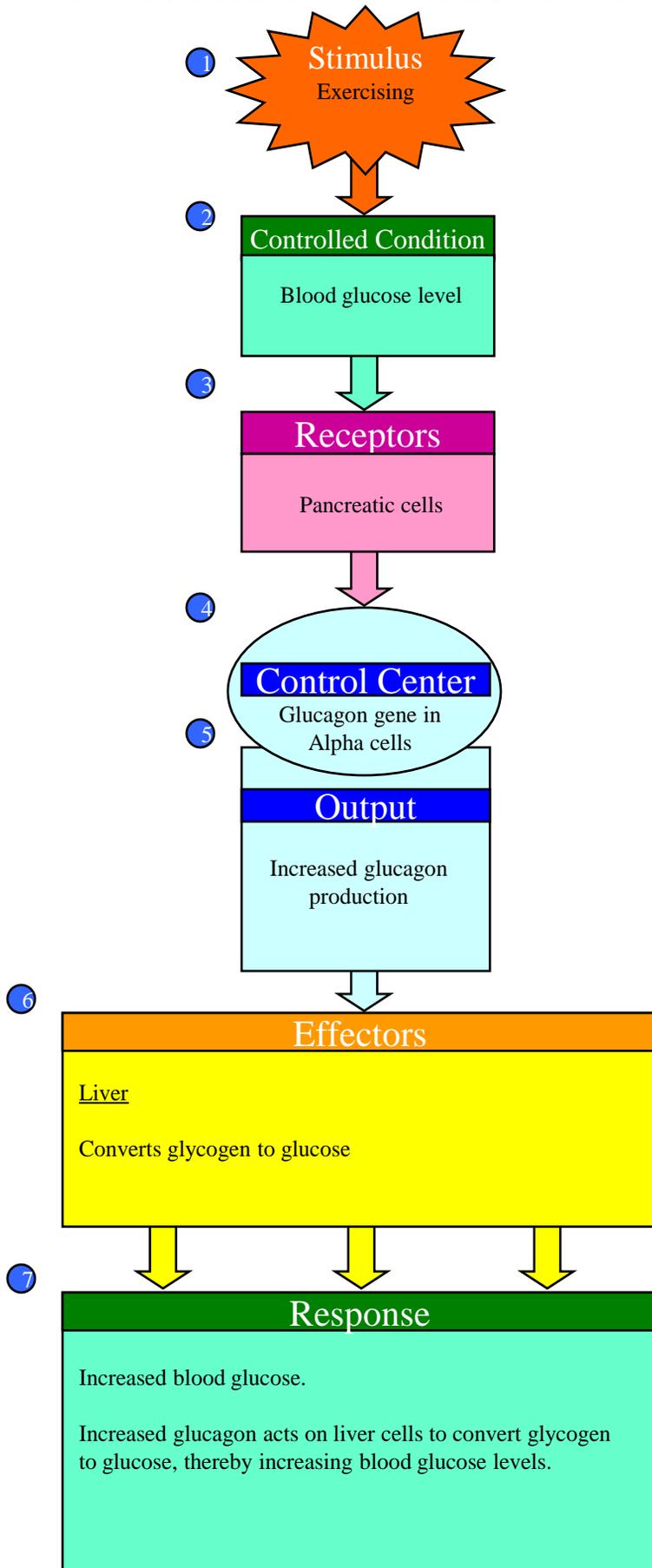
# Homeostasis of Heart Rate



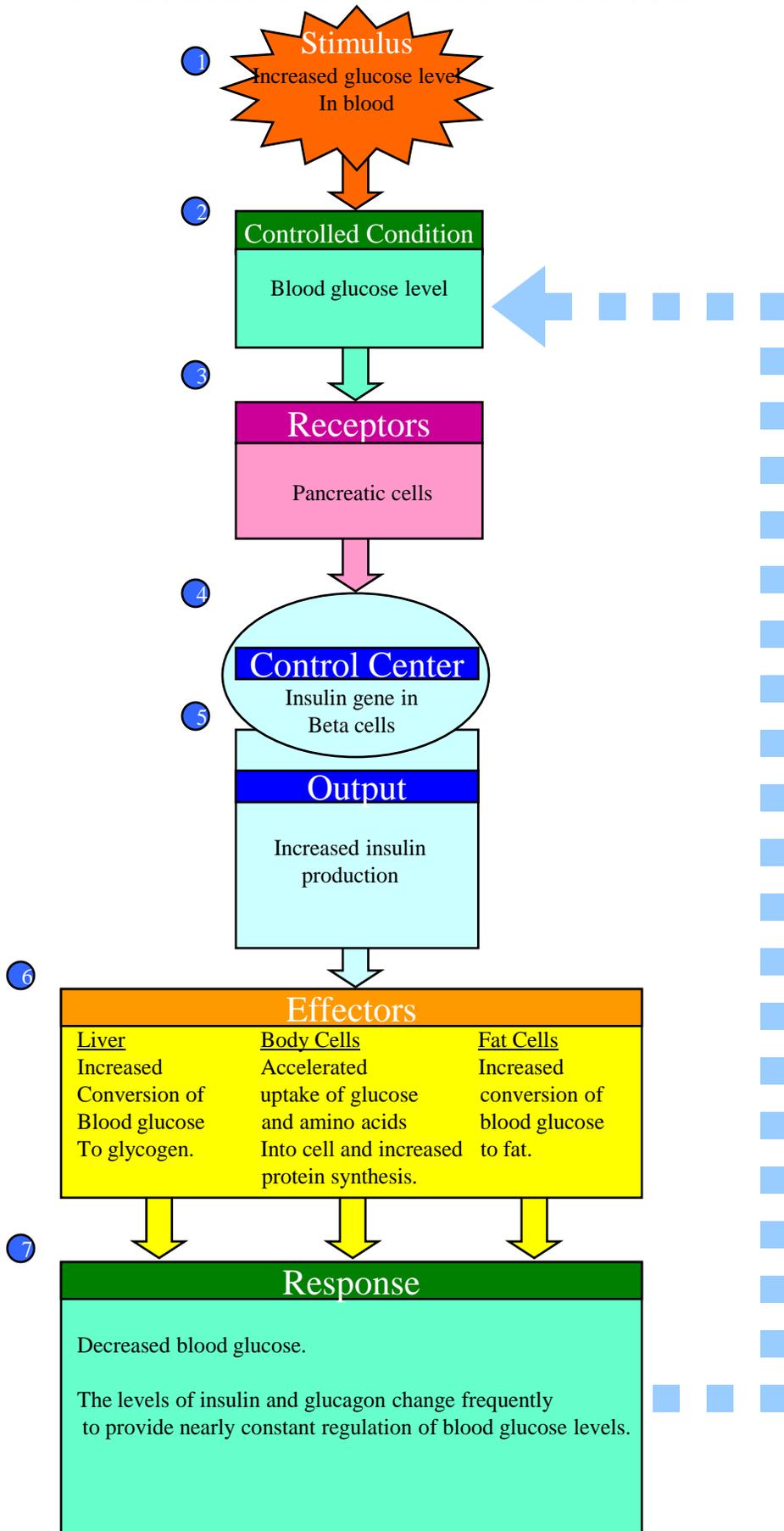
# Homeostasis of Heart Rate



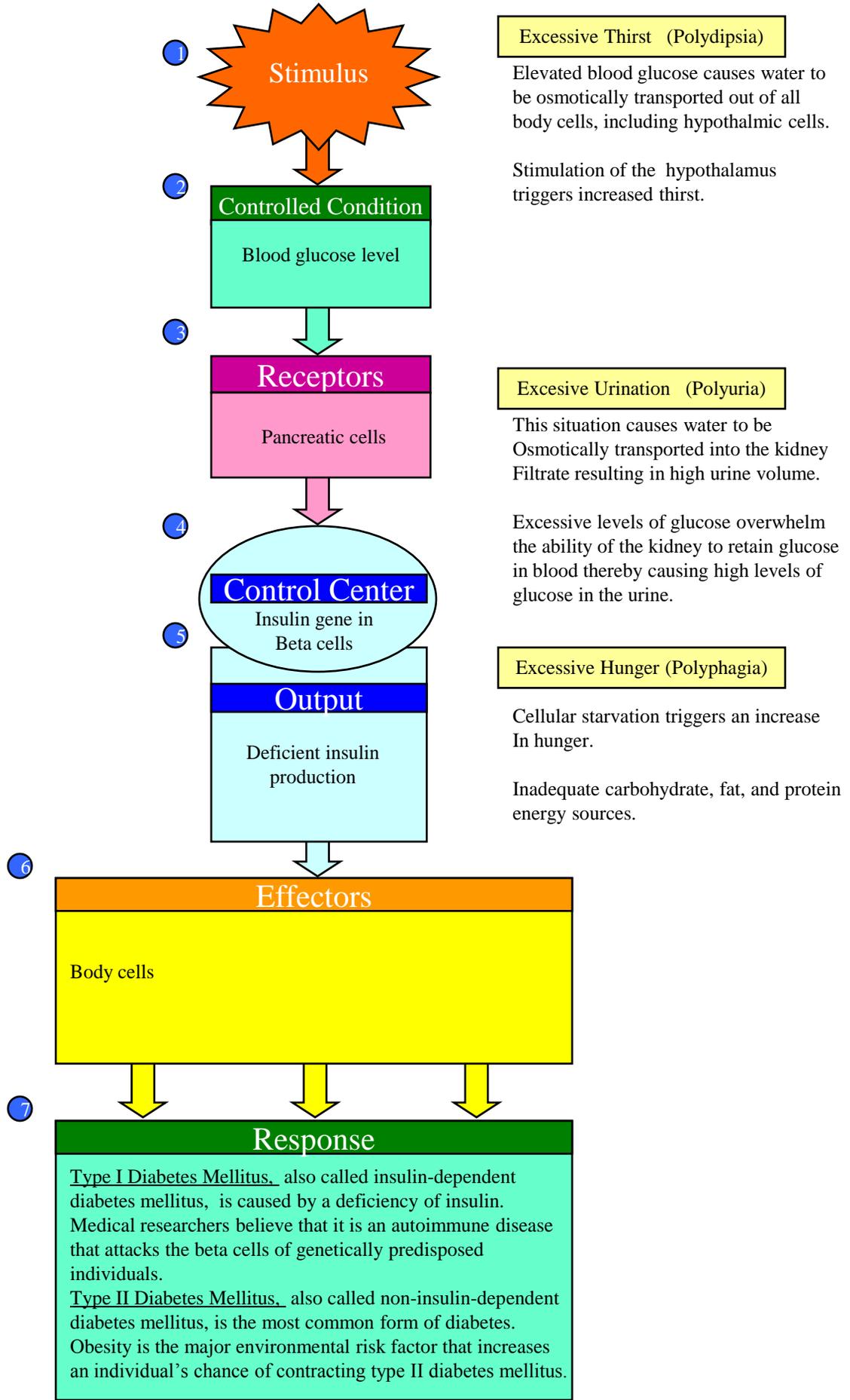
# Homeostasis of Blood Glucose



# Homeostasis of Blood Glucose



# Homeostasis of Blood Glucose



## Excessive Thirst (Polydipsia)

Elevated blood glucose causes water to be osmotically transported out of all body cells, including hypothalamic cells.

Stimulation of the hypothalamus triggers increased thirst.

## Excessive Urination (Polyuria)

This situation causes water to be osmotically transported into the kidney filtrate resulting in high urine volume.

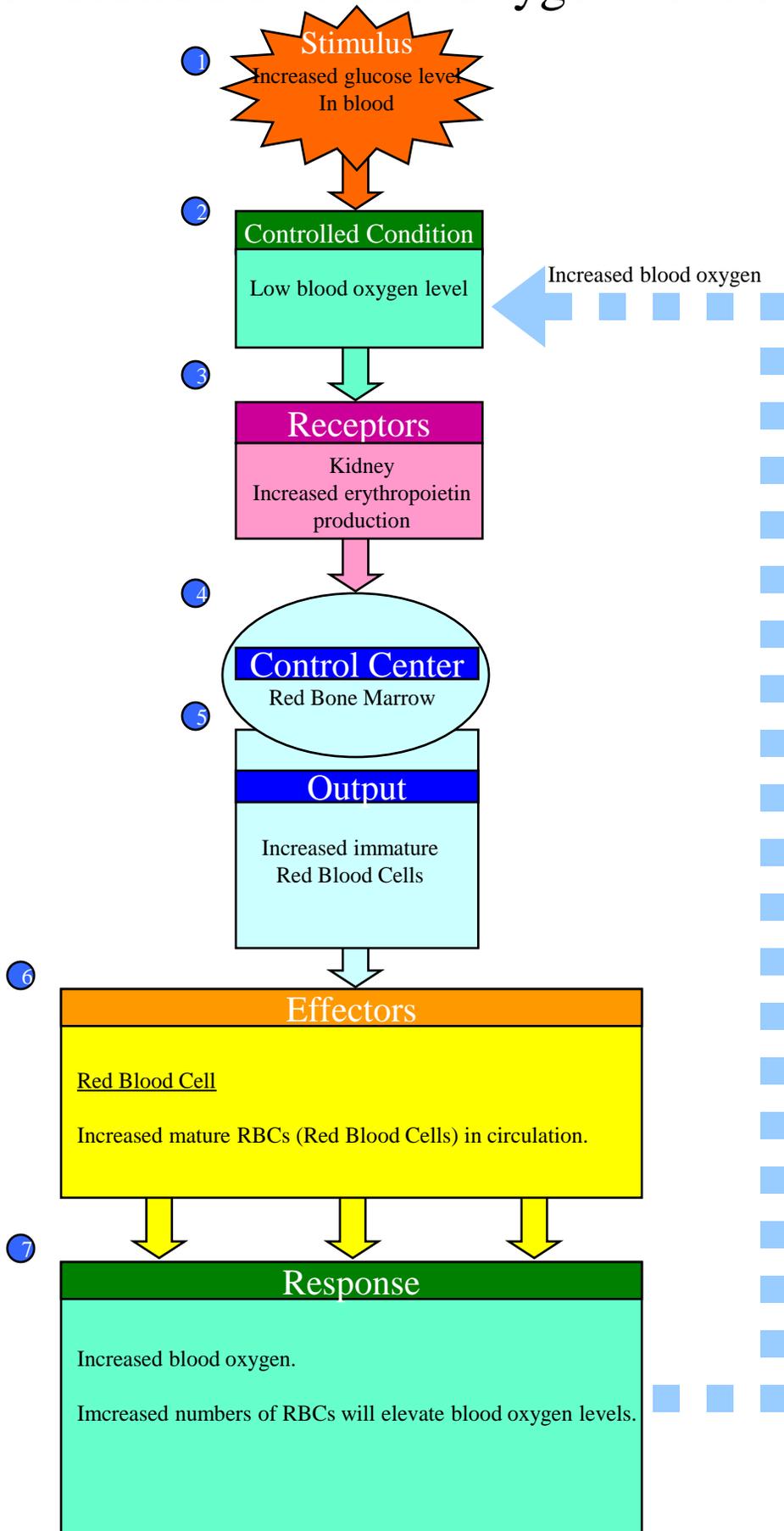
Excessive levels of glucose overwhelm the ability of the kidney to retain glucose in blood thereby causing high levels of glucose in the urine.

## Excessive Hunger (Polyphagia)

Cellular starvation triggers an increase in hunger.

Inadequate carbohydrate, fat, and protein energy sources.

# Homeostasis of Blood Oxygen Levels

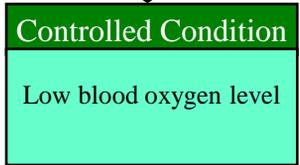


# Homeostasis of Blood Oxygen Levels

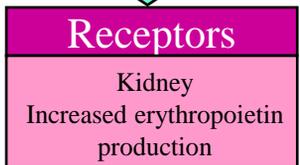
(Anemia) ①



②



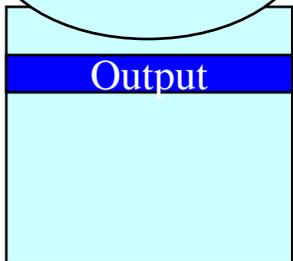
③



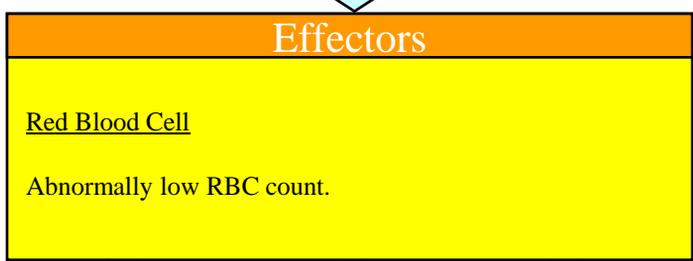
④



⑤



⑥

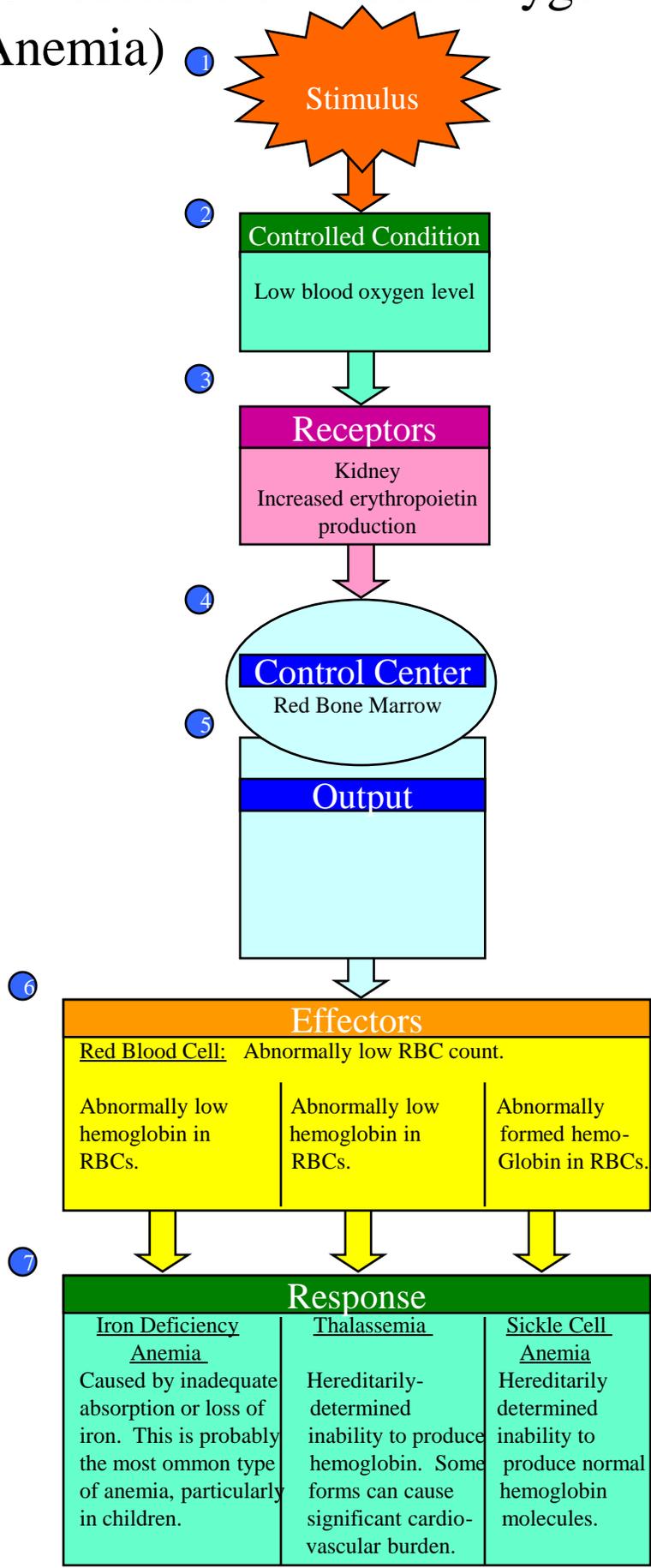


⑦

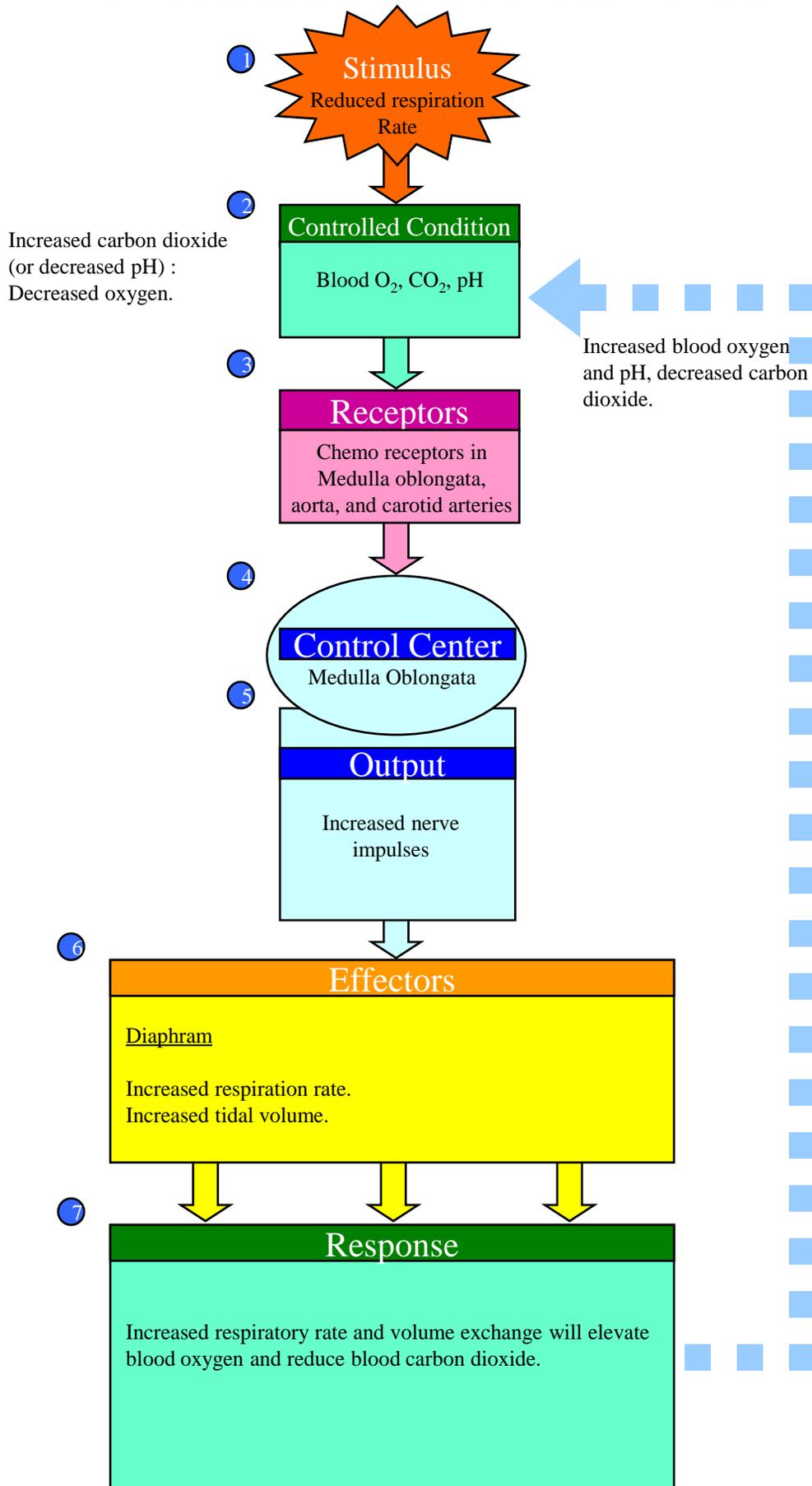
Response		
<u>Hemorrhagic Anemia</u> Caused by blood loss due to wounds, ulcers or heavy menstrual bleeding.	<u>Pernicious Anemia</u> Caused by low hemopoiesis which is caused by the lack of intrinsic factor, a molecule needed for the absorption of Vitamin B12.	<u>Aplastic Anemia</u> Can occur following the destruction of red bone marrow from a tumor, toxins in the body, radiation, and some medicines.

# Homeostasis of Blood Oxygen Levels

(Anemia)

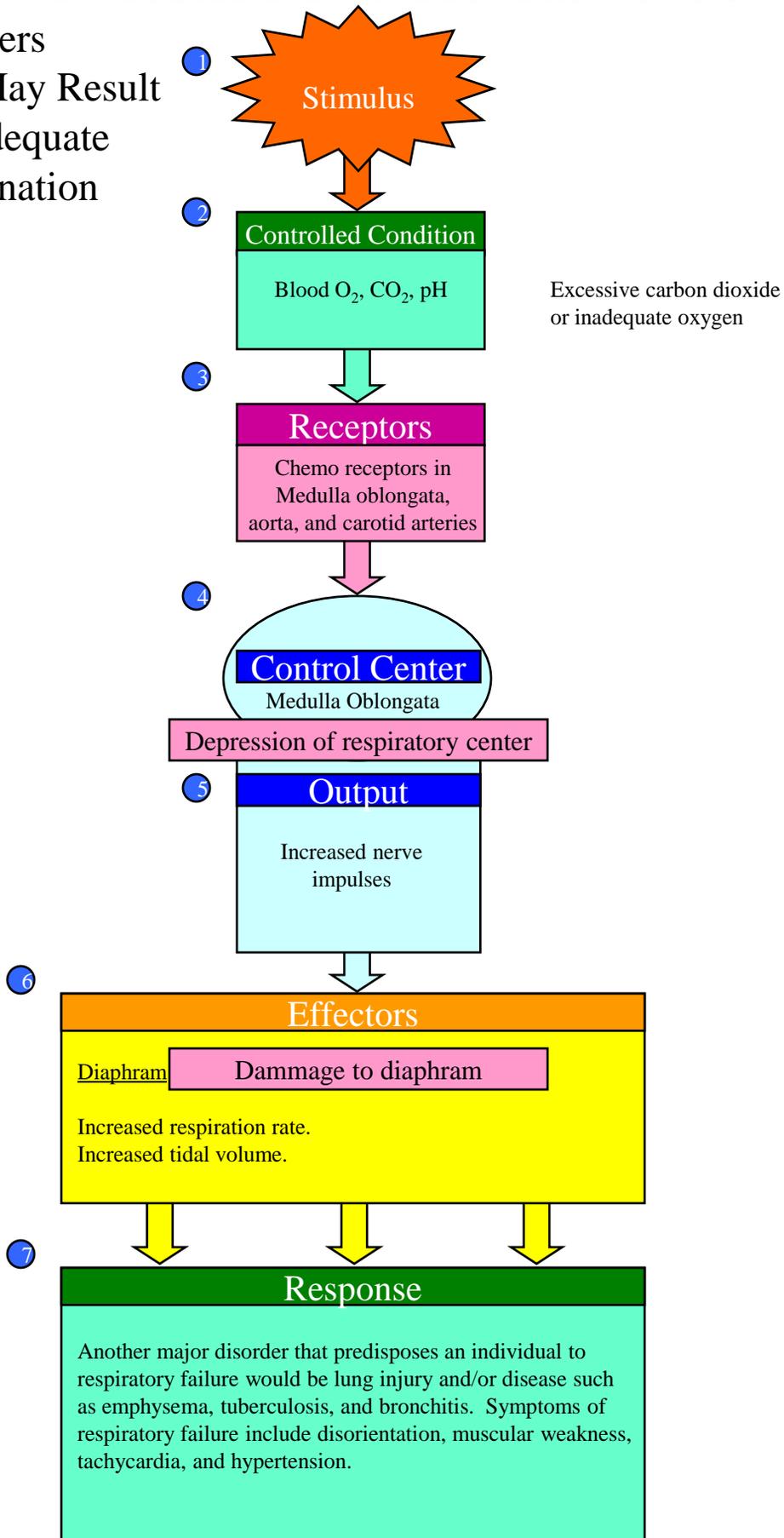


# Homeostasis of Blood Gas Levels

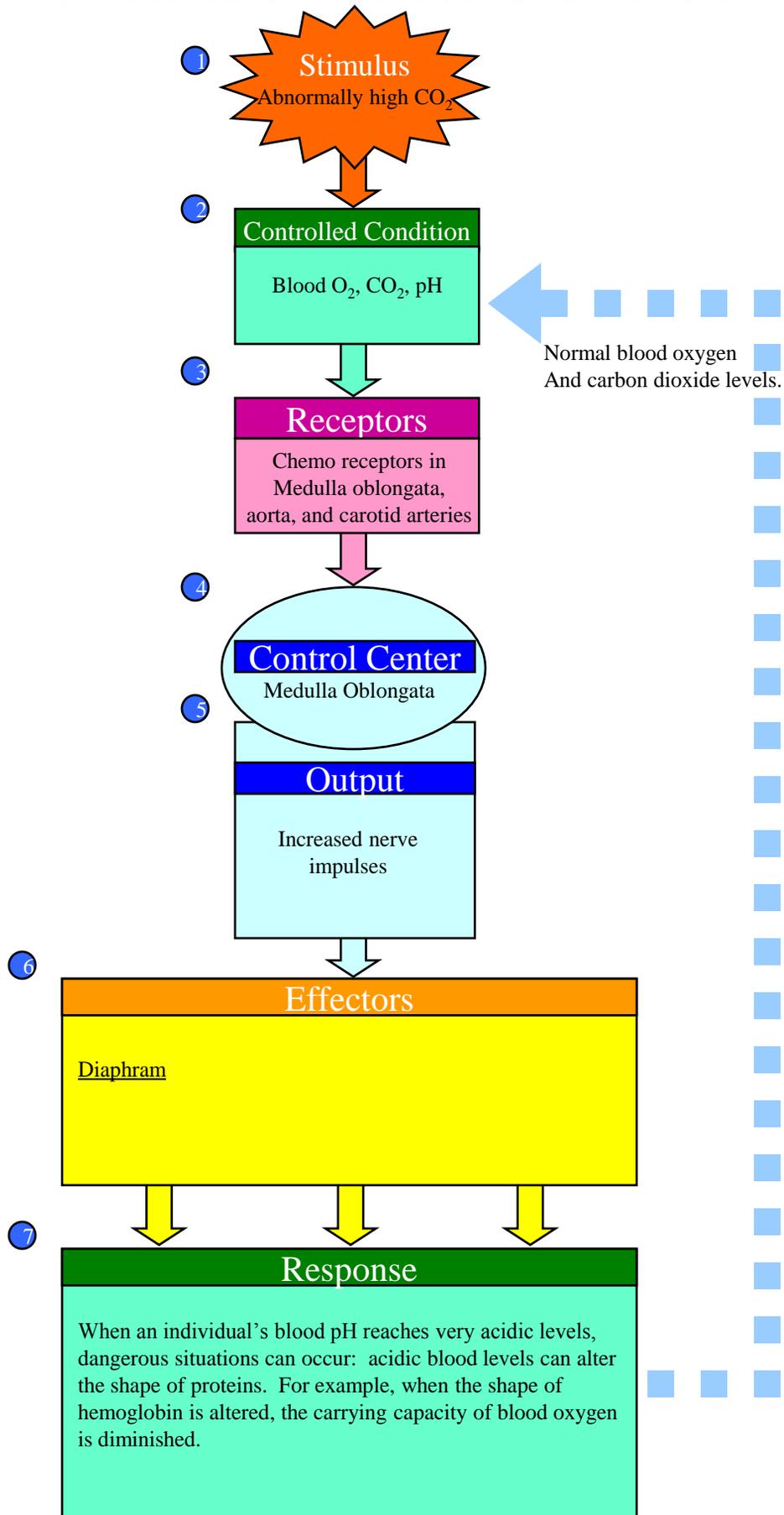


# Homeostasis of Blood Gas Levels

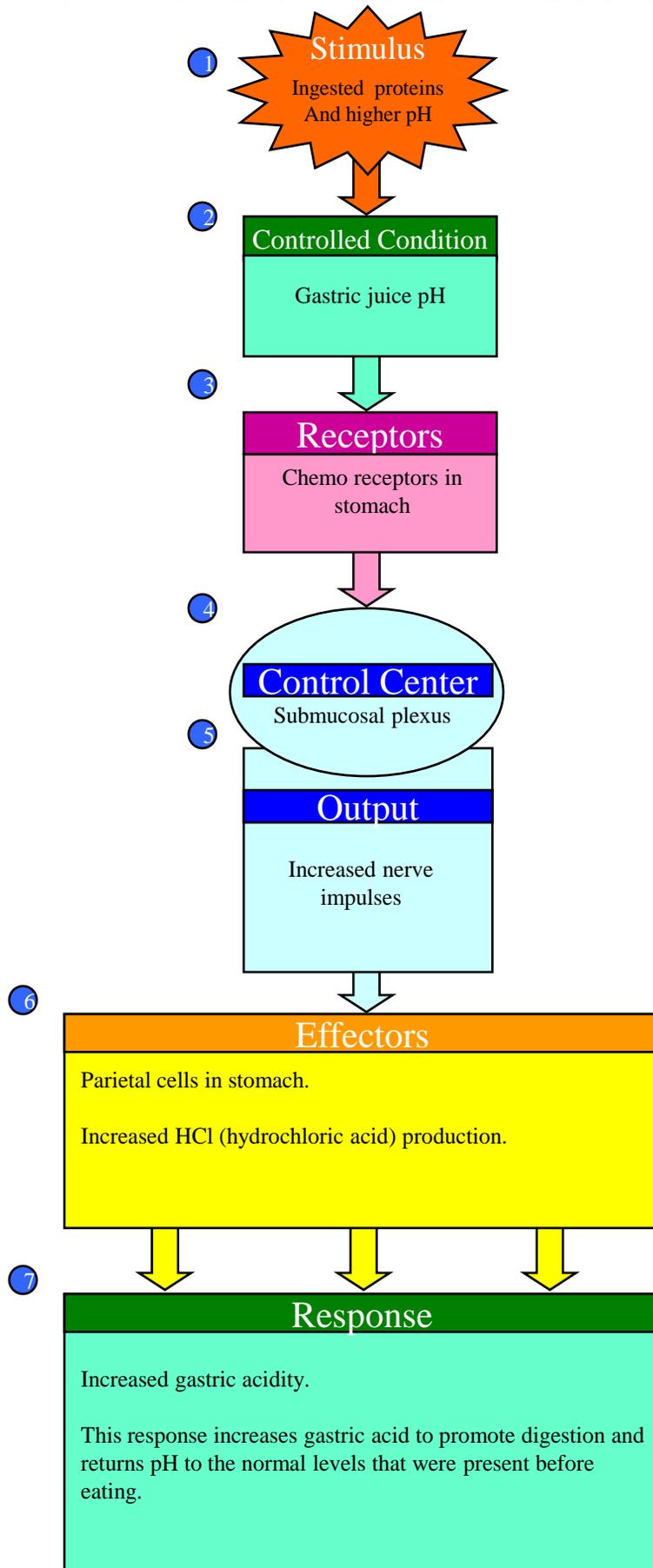
Disorders  
That May Result  
In Inadequate  
Oxygenation



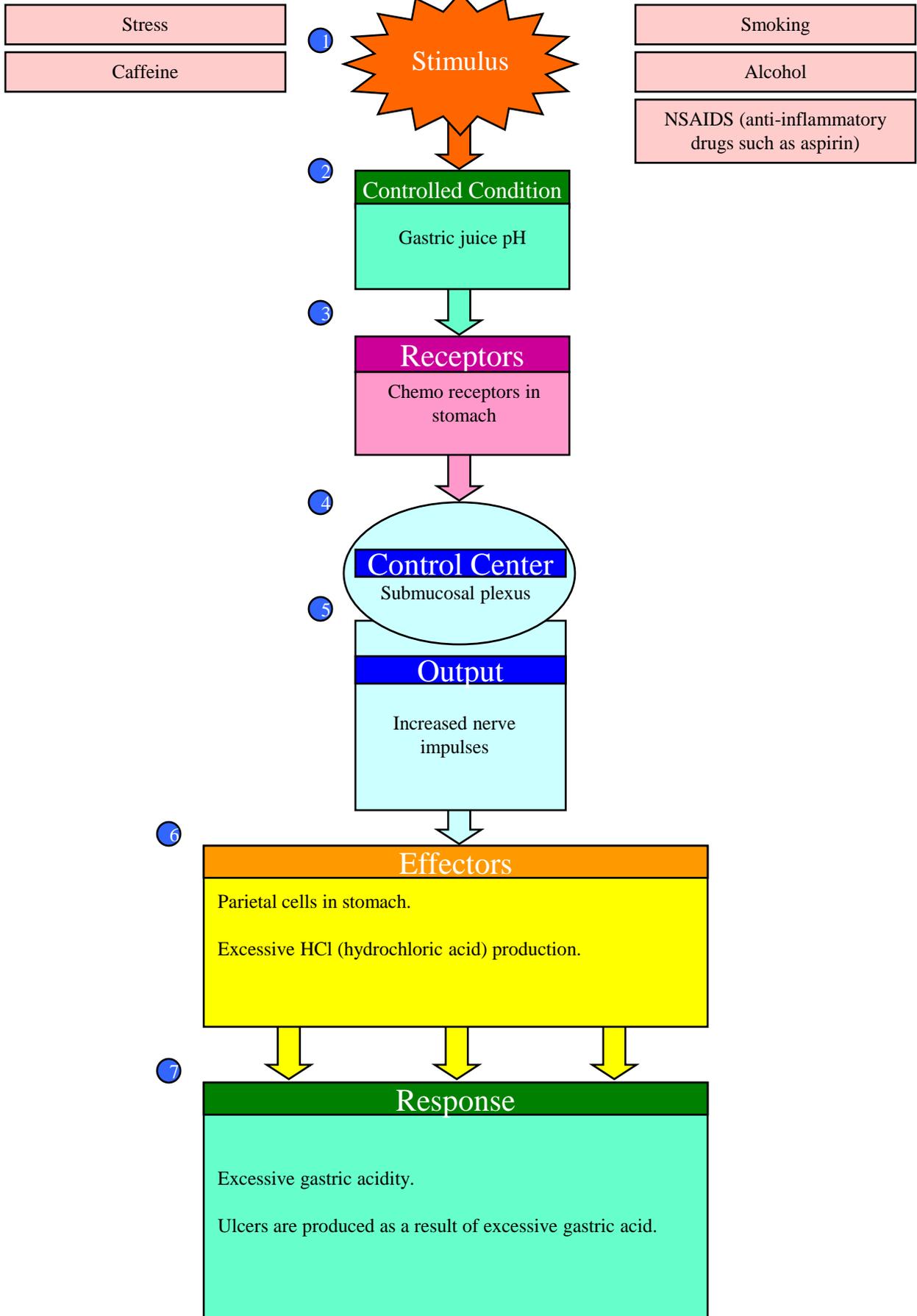
# Homeostasis of Blood Gas Levels



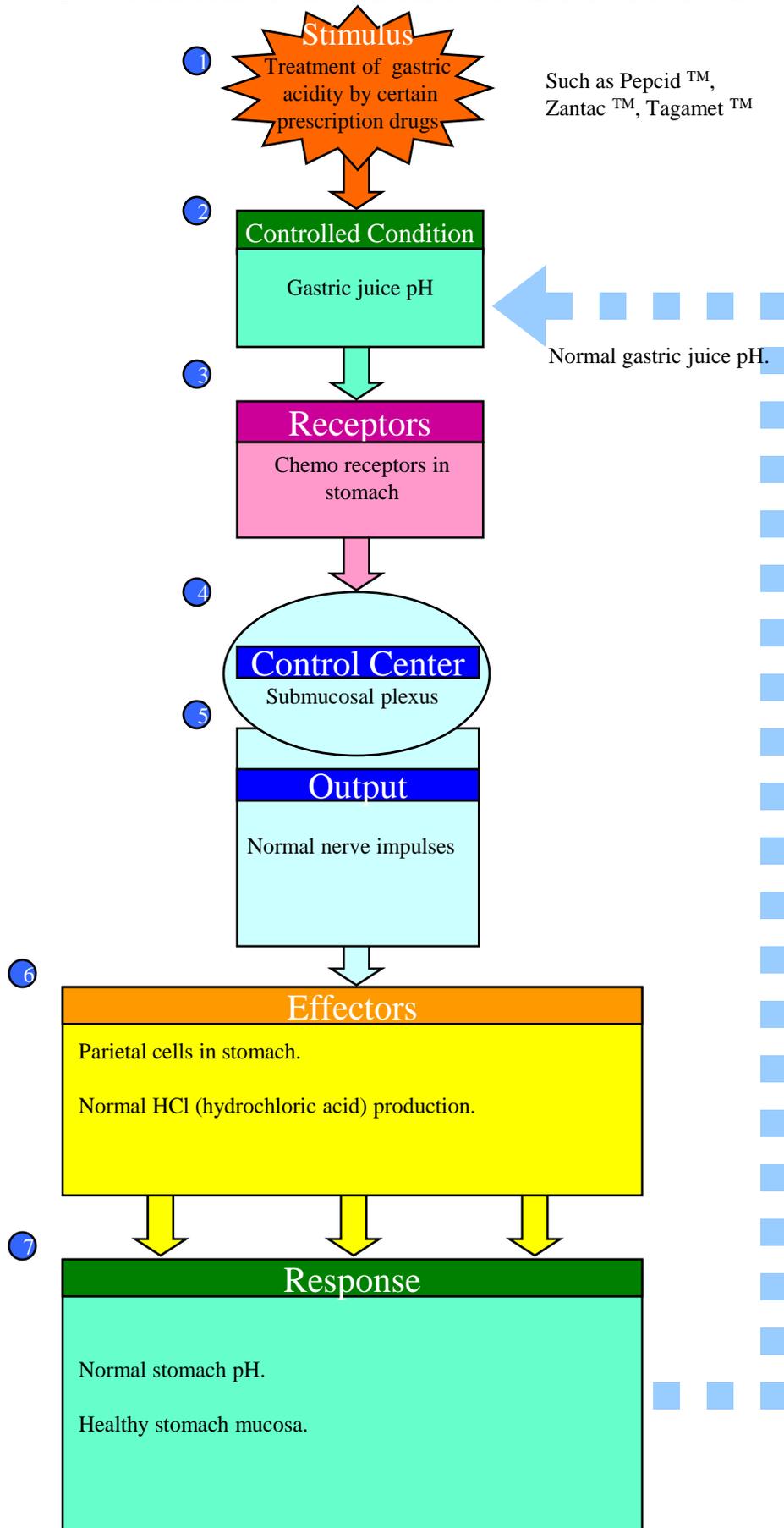
# Homeostasis of Gastric Secretions



# Homeostasis of Gastric Secretions

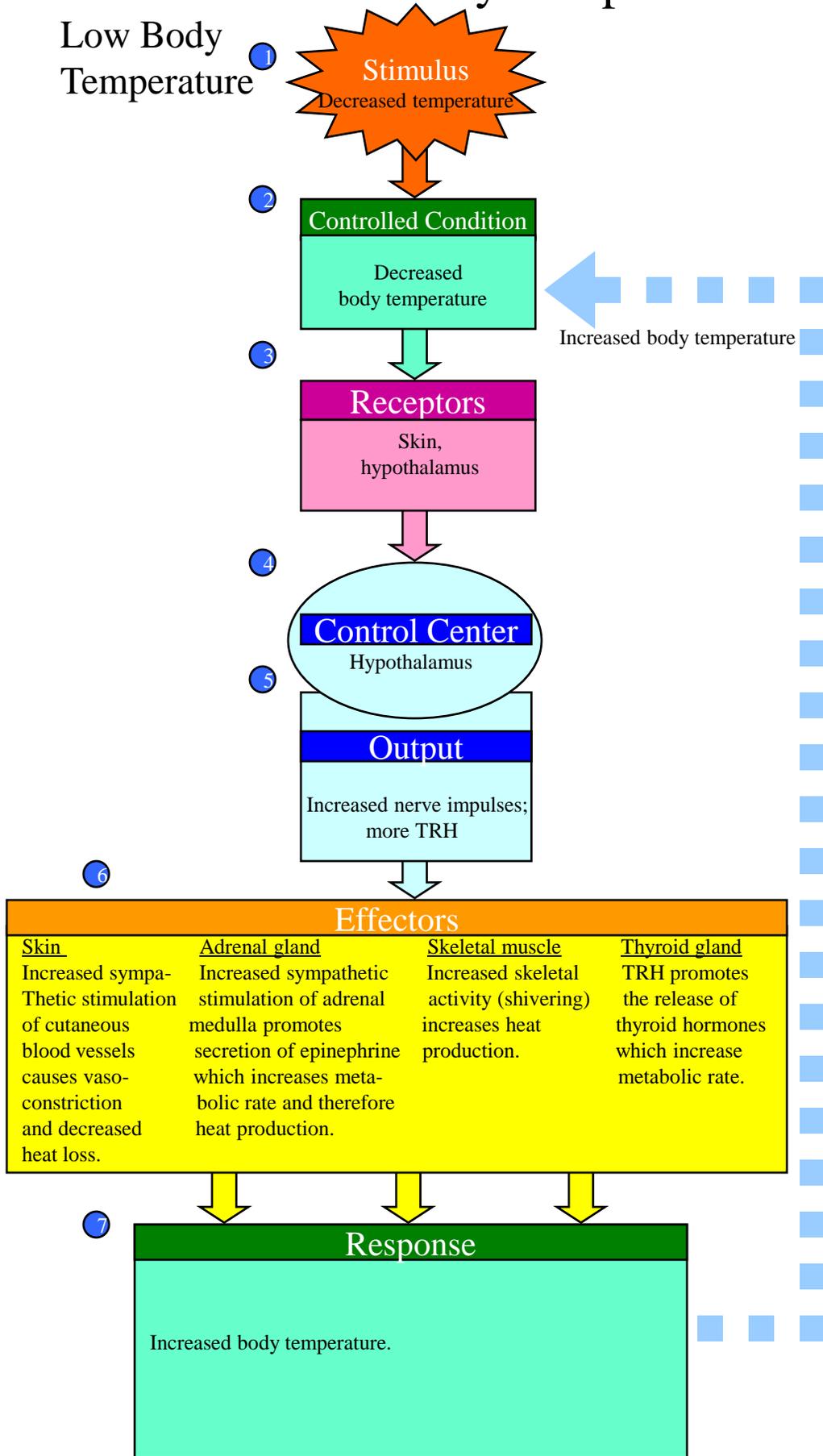


# Homeostasis of Gastric Secretions



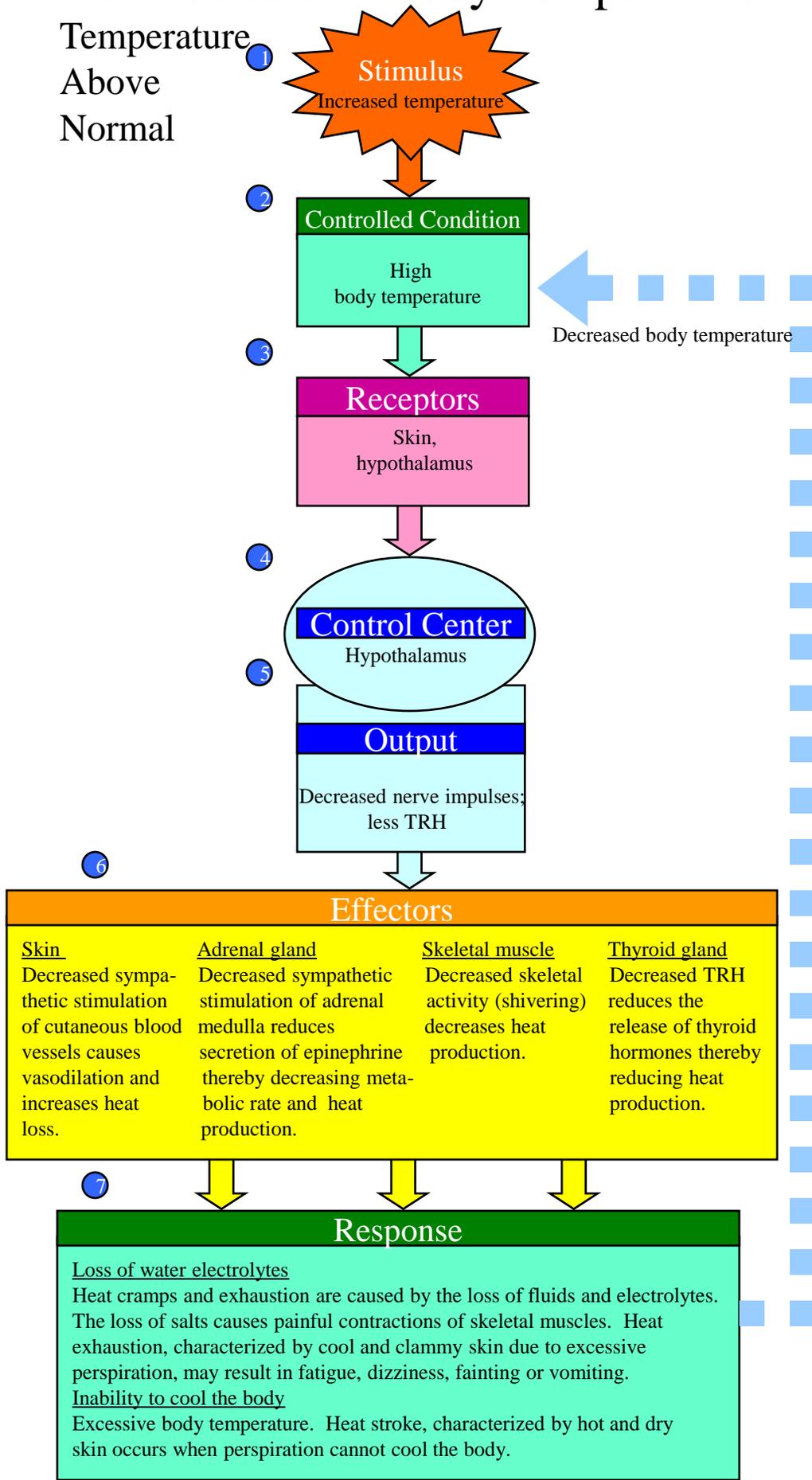
# Homeostasis of Body Temperature

Low Body Temperature

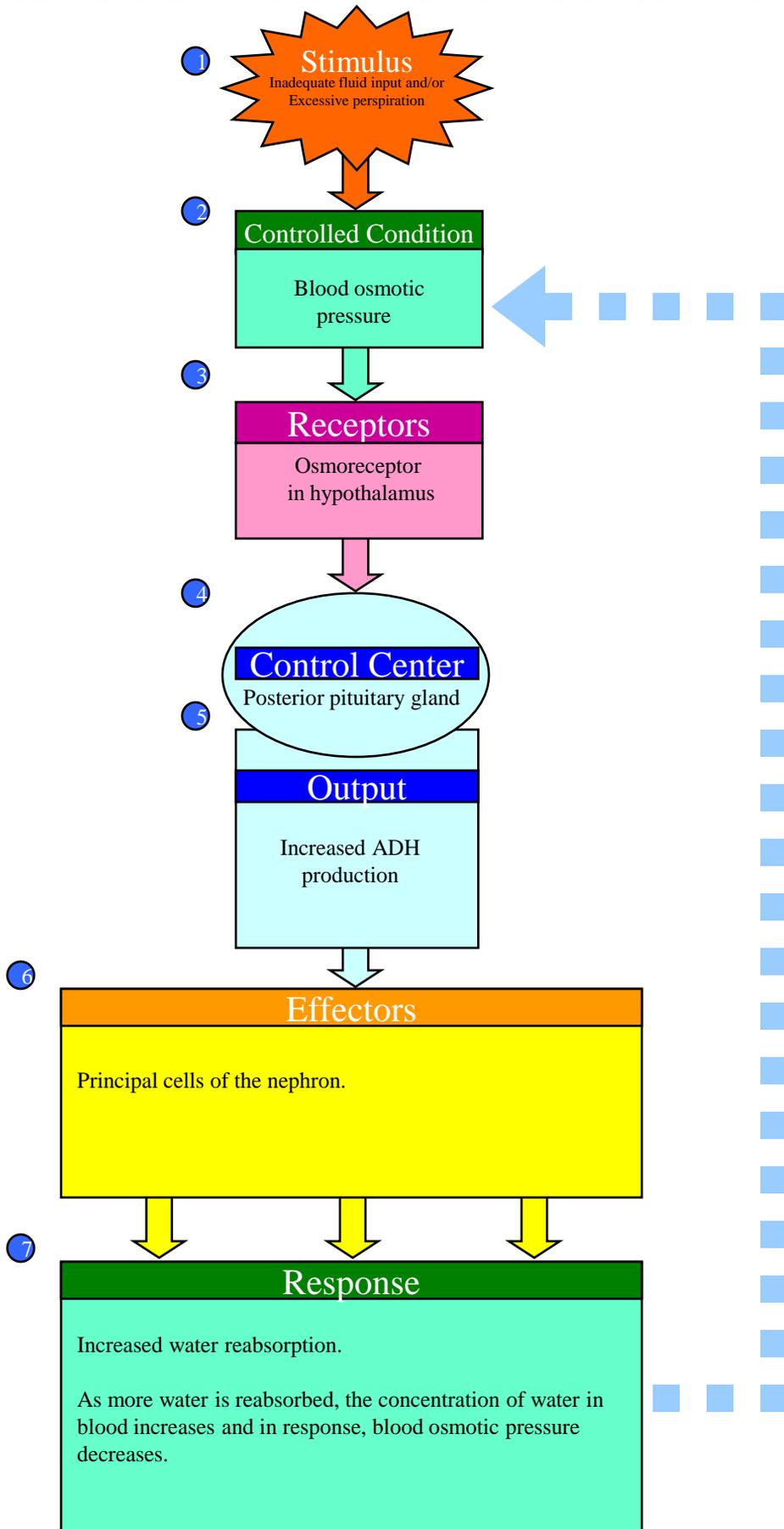


# Homeostasis of Body Temperature

Temperature  
Above  
Normal

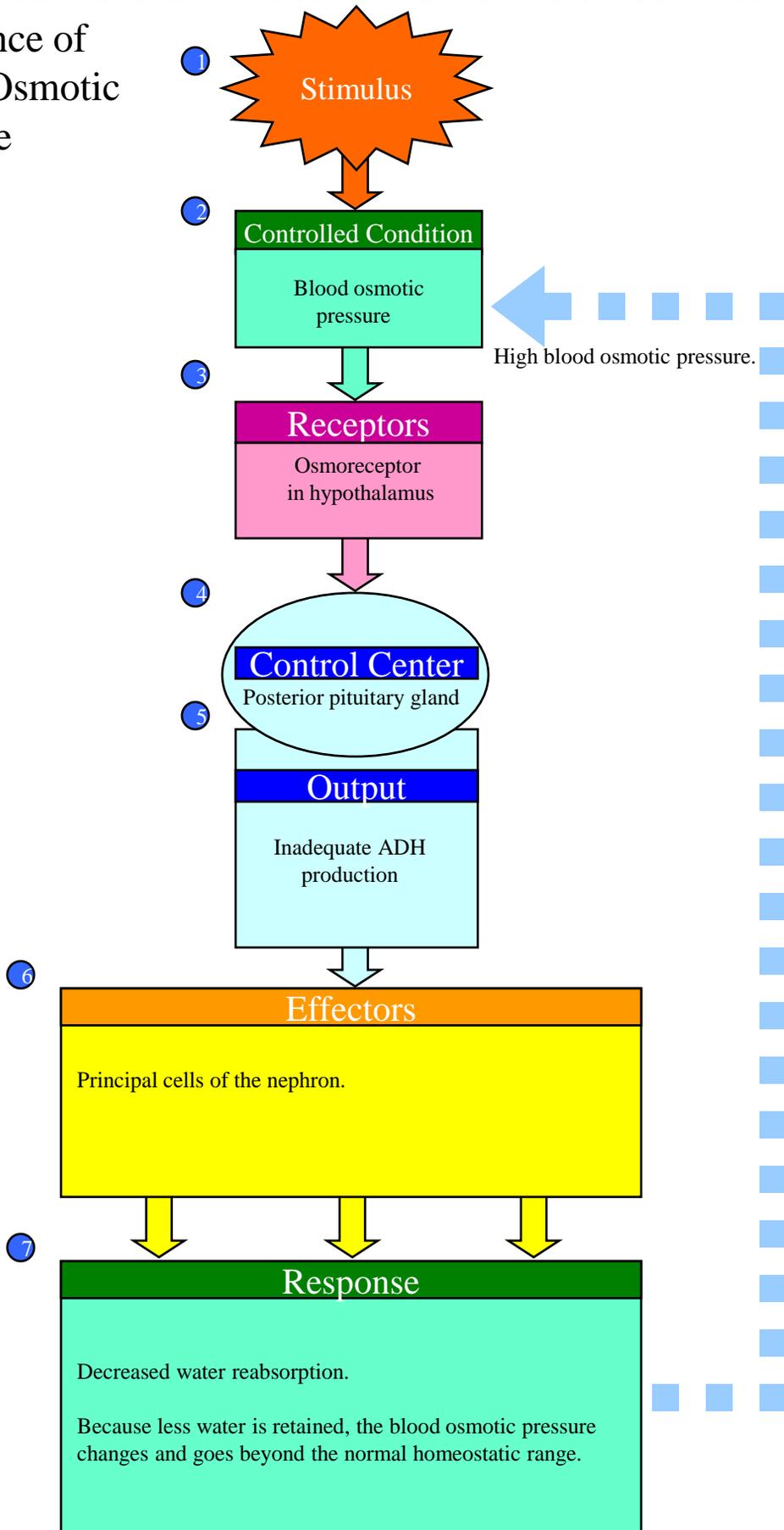


# Homeostasis of Water and Ion Concentrations



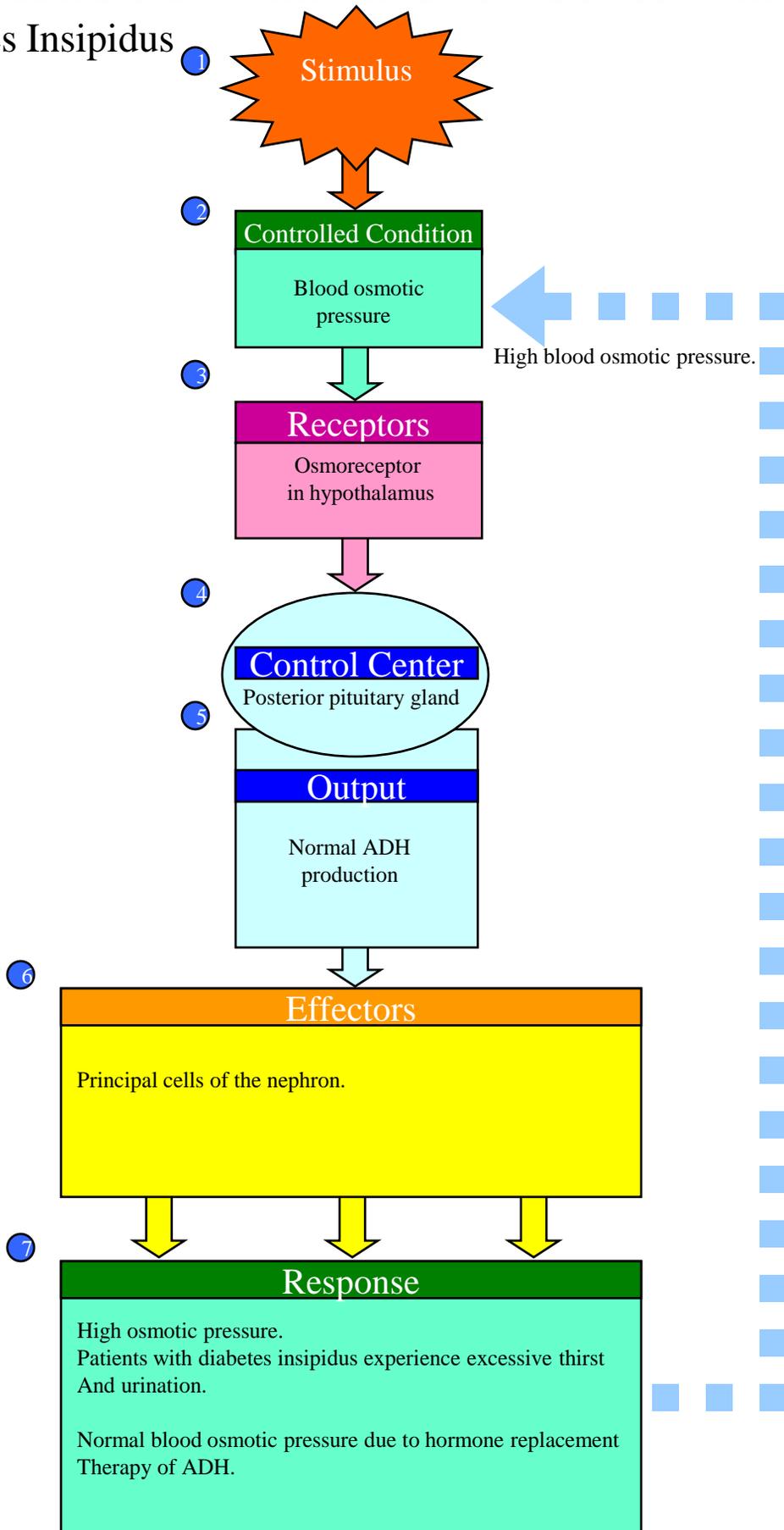
# Homeostasis of Water and Ion Concentrations

Imbalance of  
Blood Osmotic  
Pressure



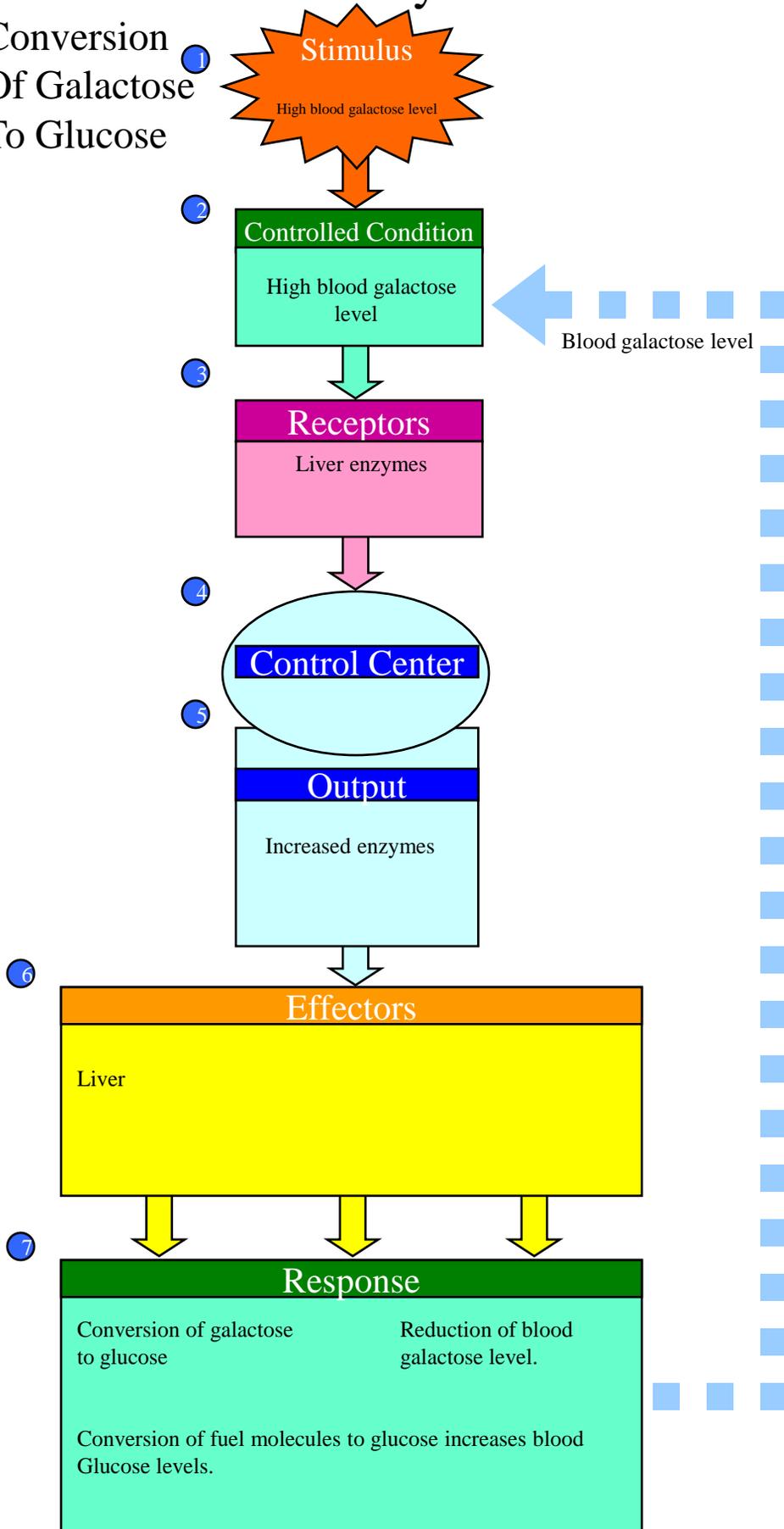
# Homeostasis of Water and Ion Concentrations

## Diabetes Insipidus



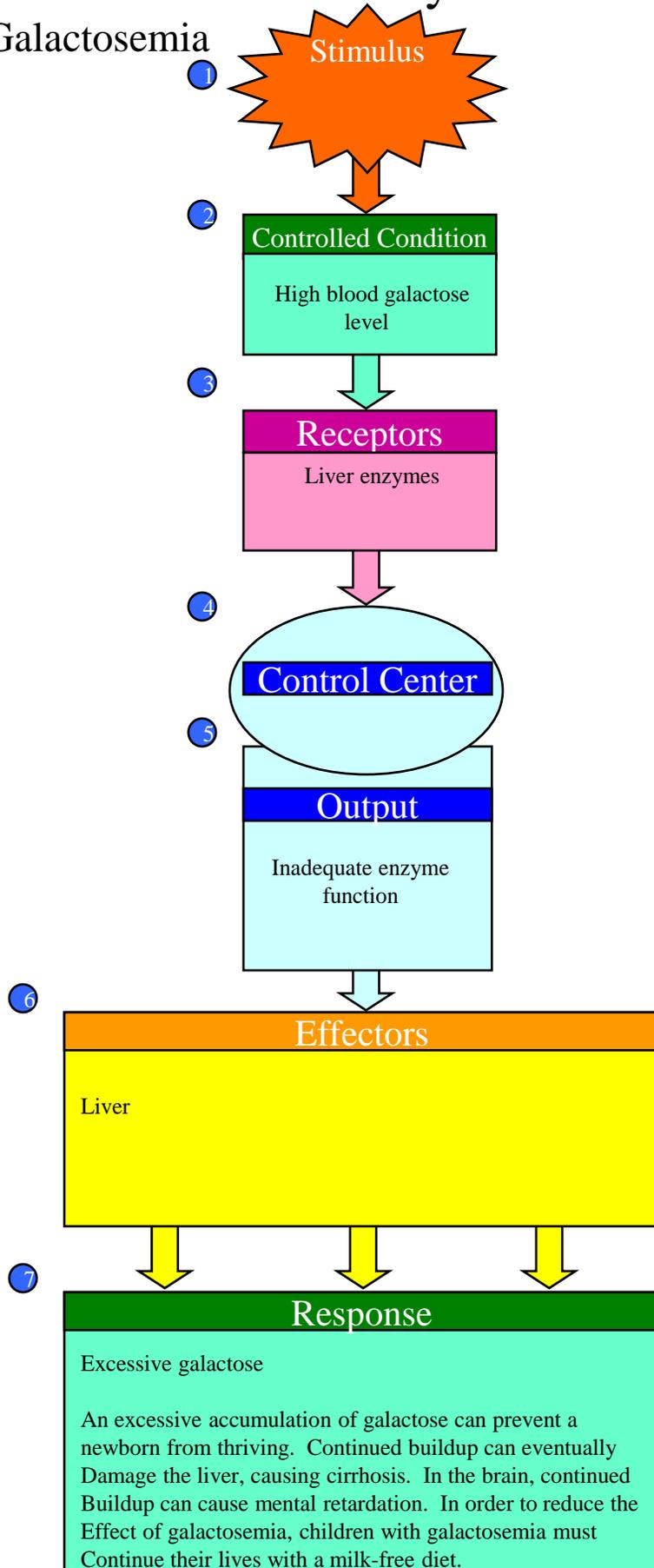
# Homeostasis of Enzyme Function

Conversion  
Of Galactose  
To Glucose

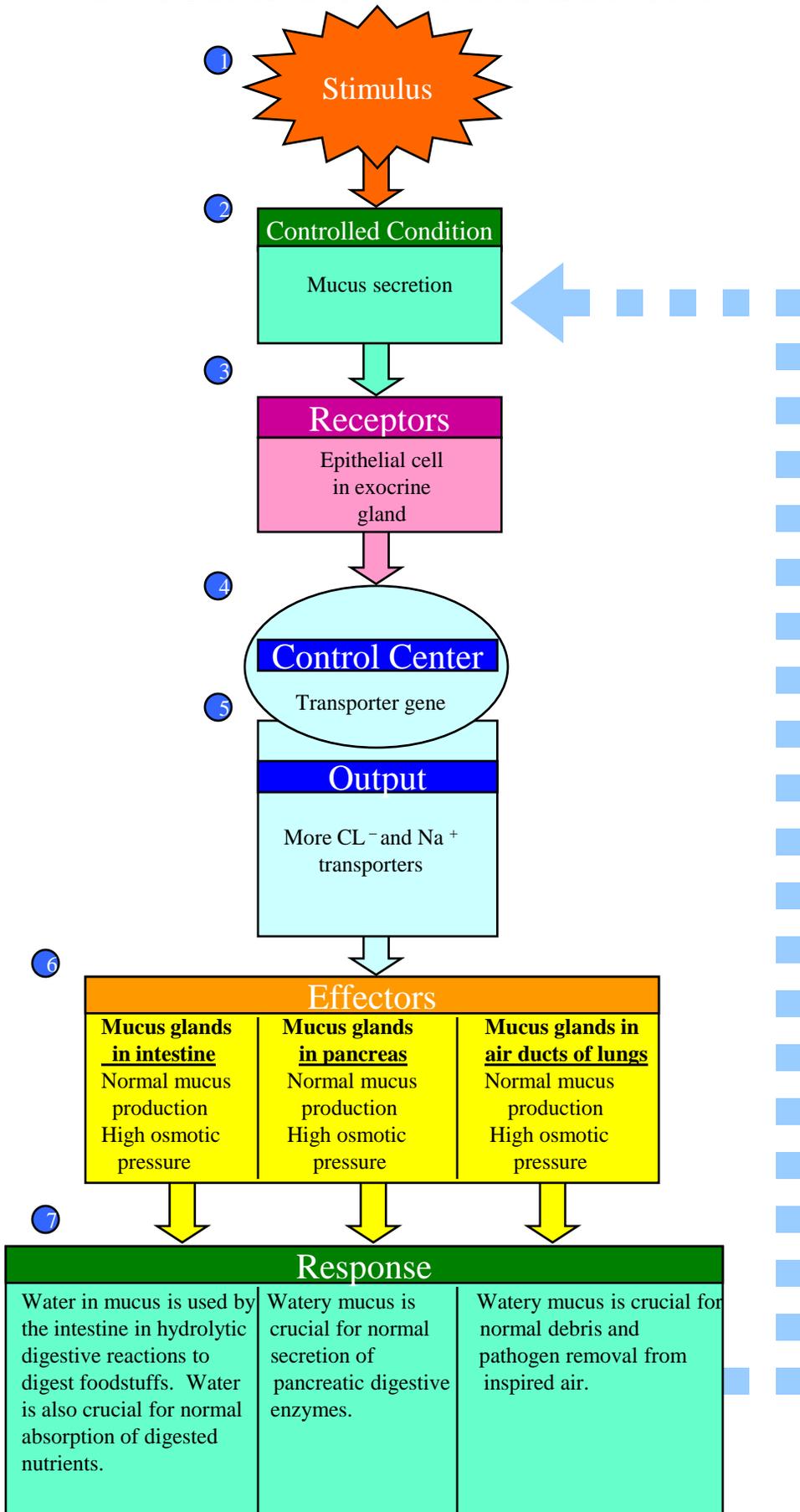


# Homeostasis of Enzyme Function

Galactosemia

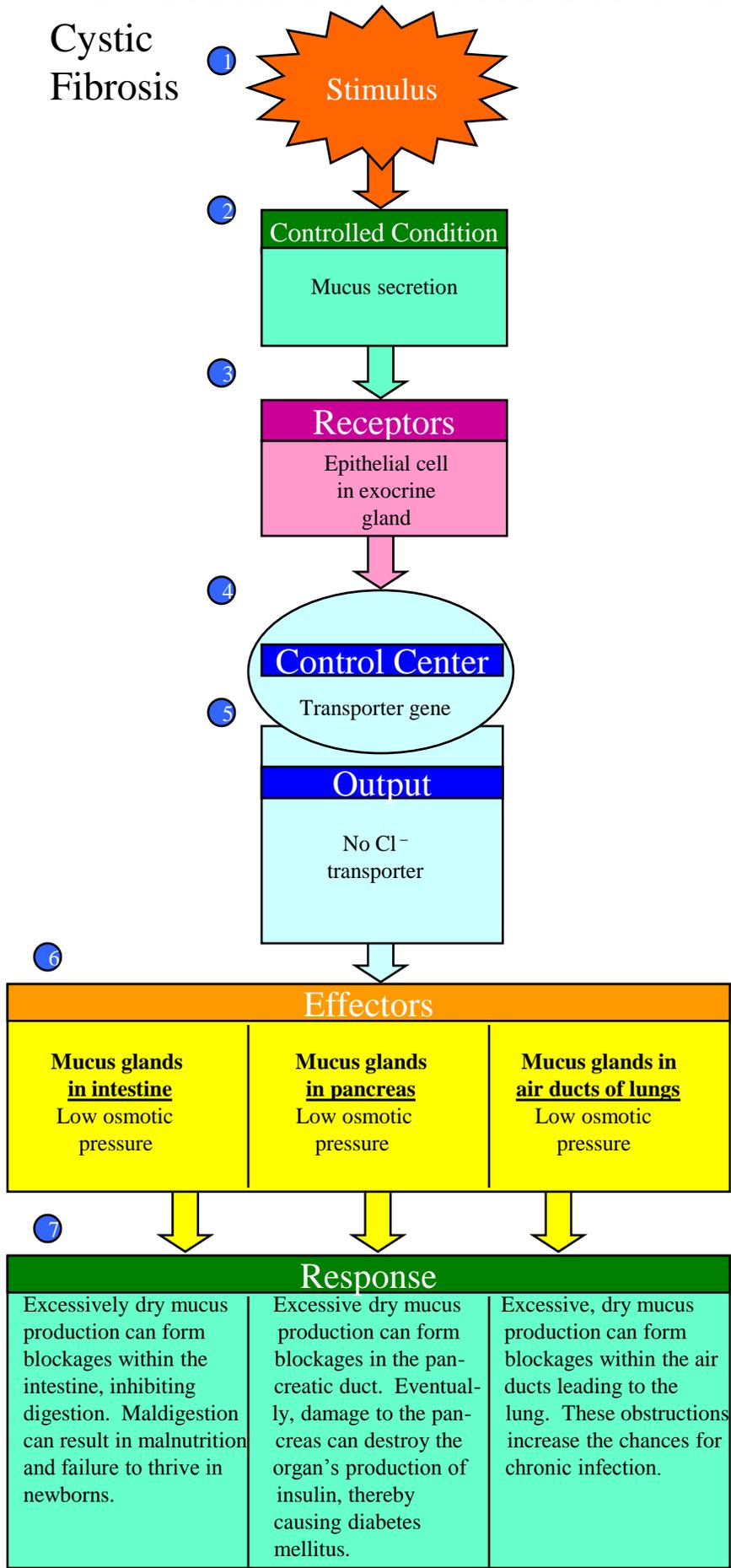


# Homeostasis of Mucus Secretion

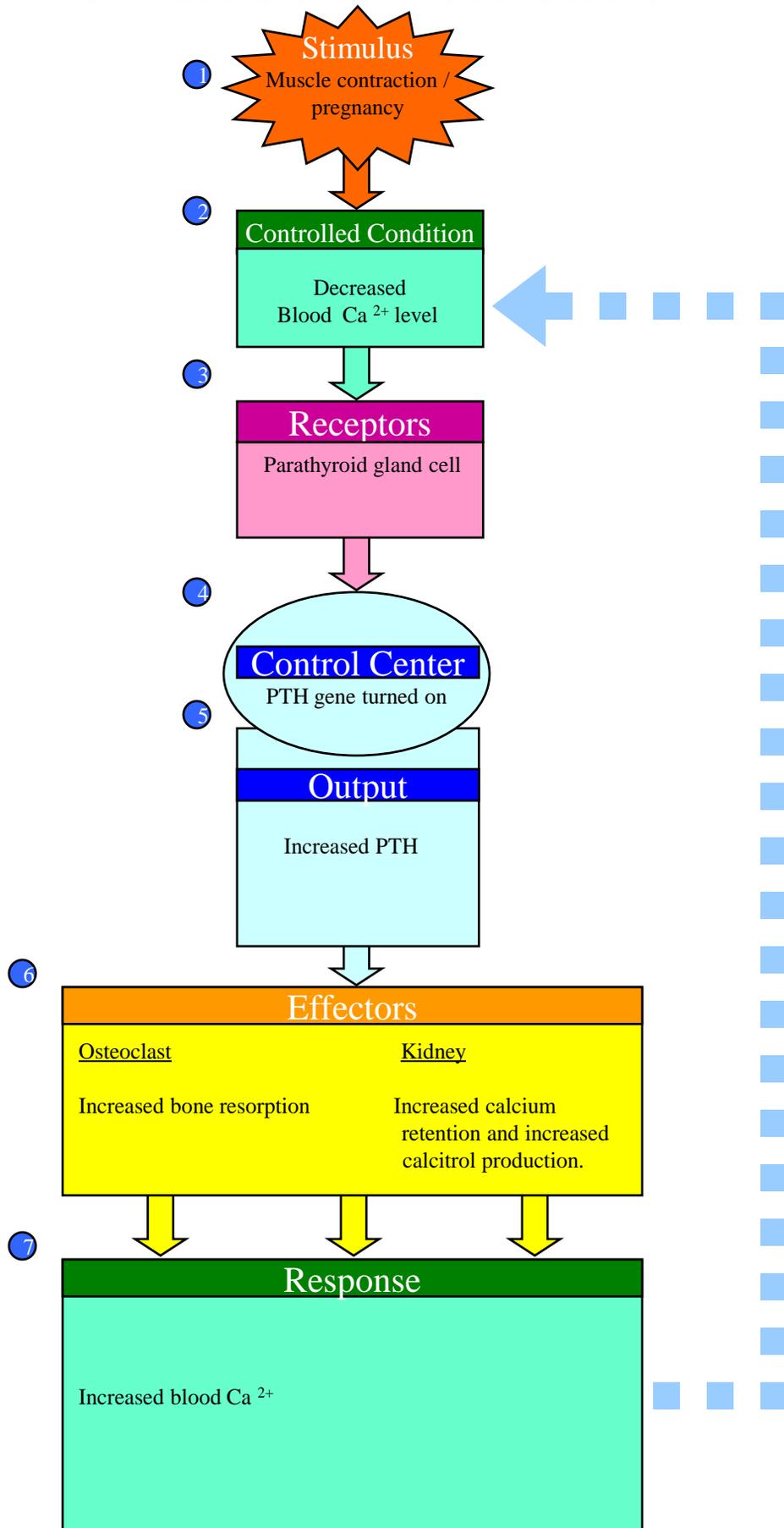


# Homeostasis of Mucus Secretion

Cystic  
Fibrosis

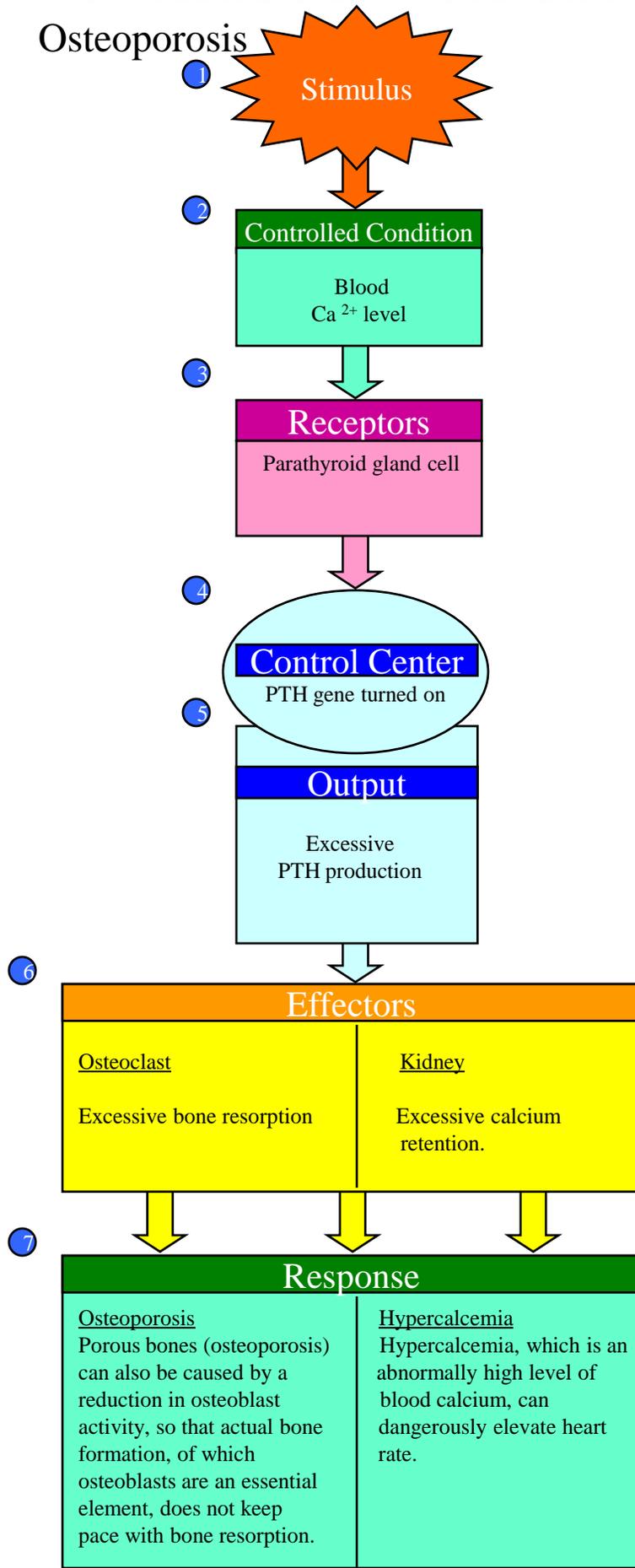


# Homeostasis of Blood Calcium

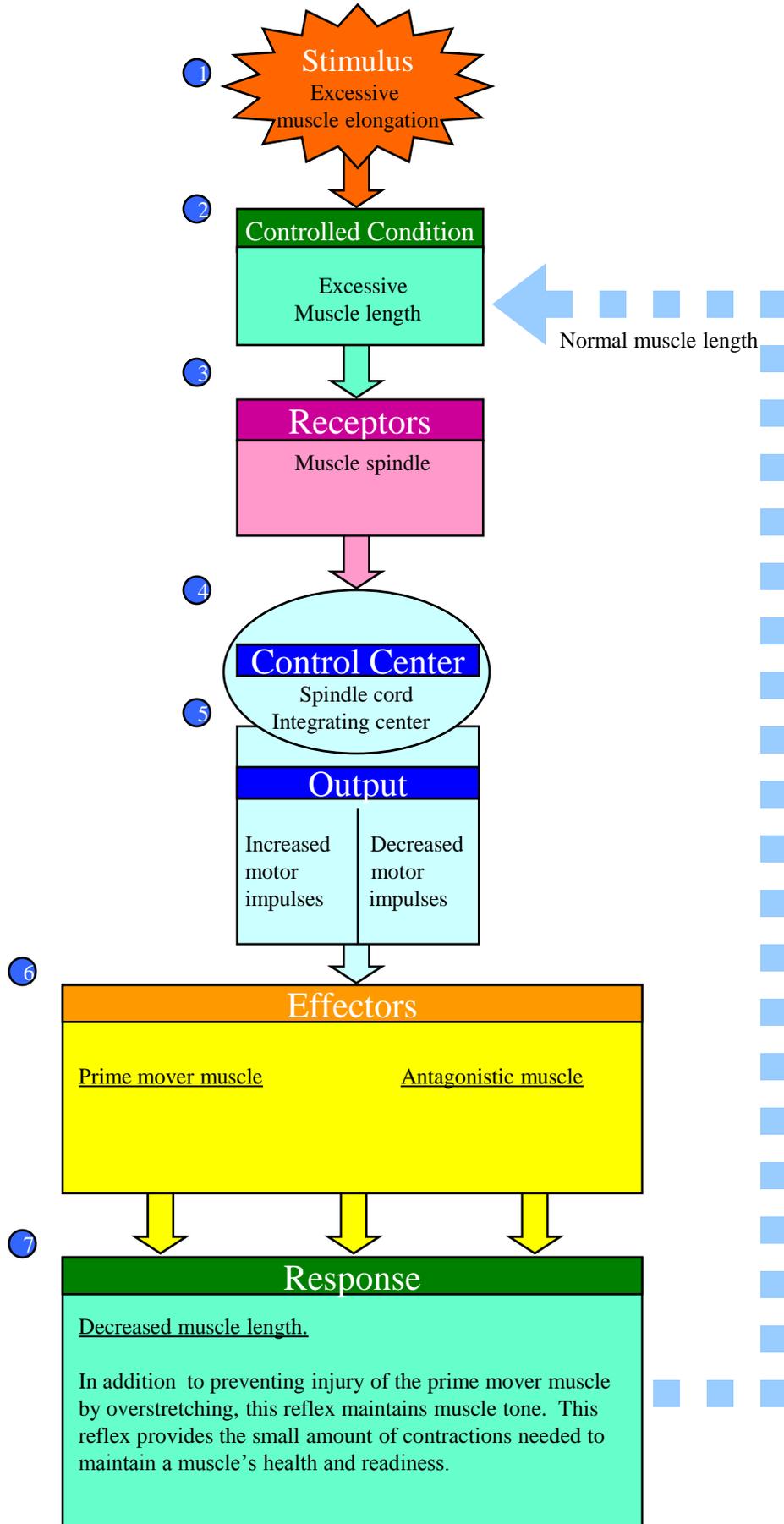


# Homeostasis of Blood Calcium

Osteoporosis

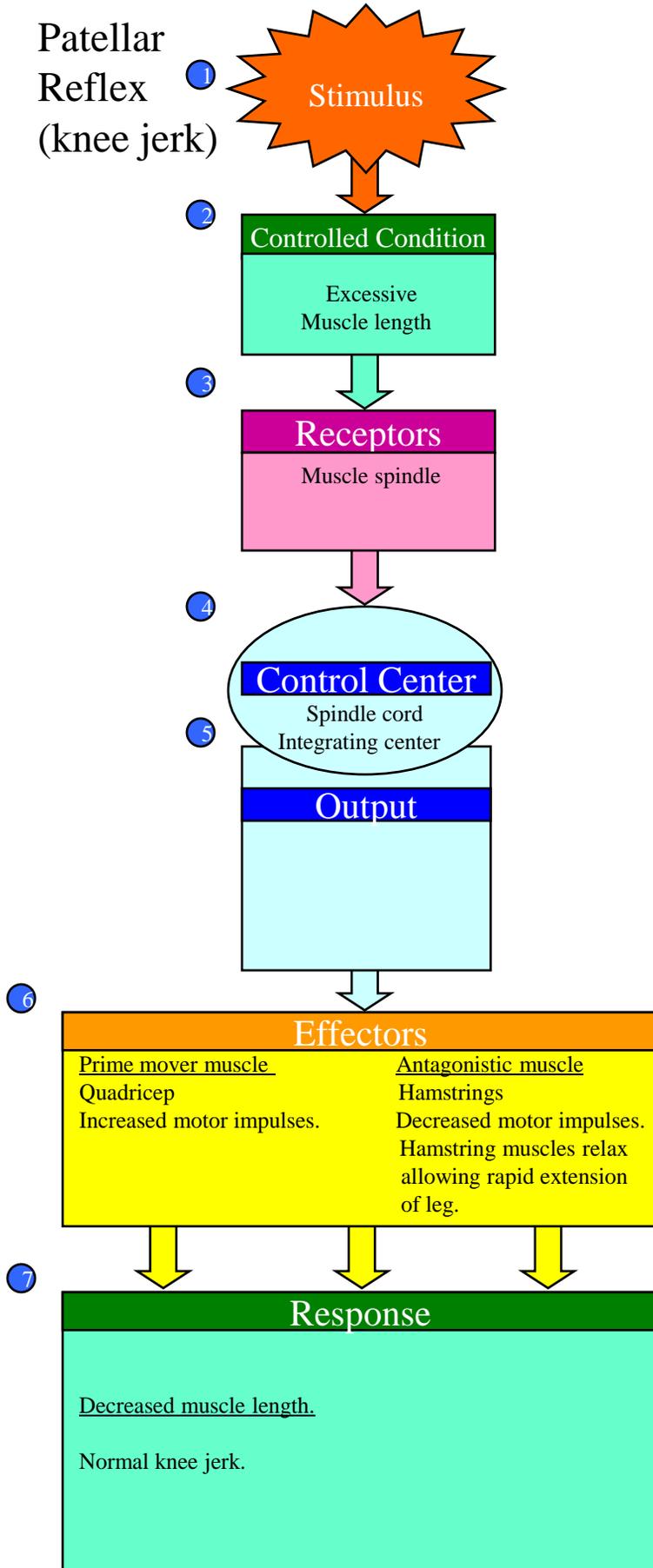


# Somatic Reflex Arc Function



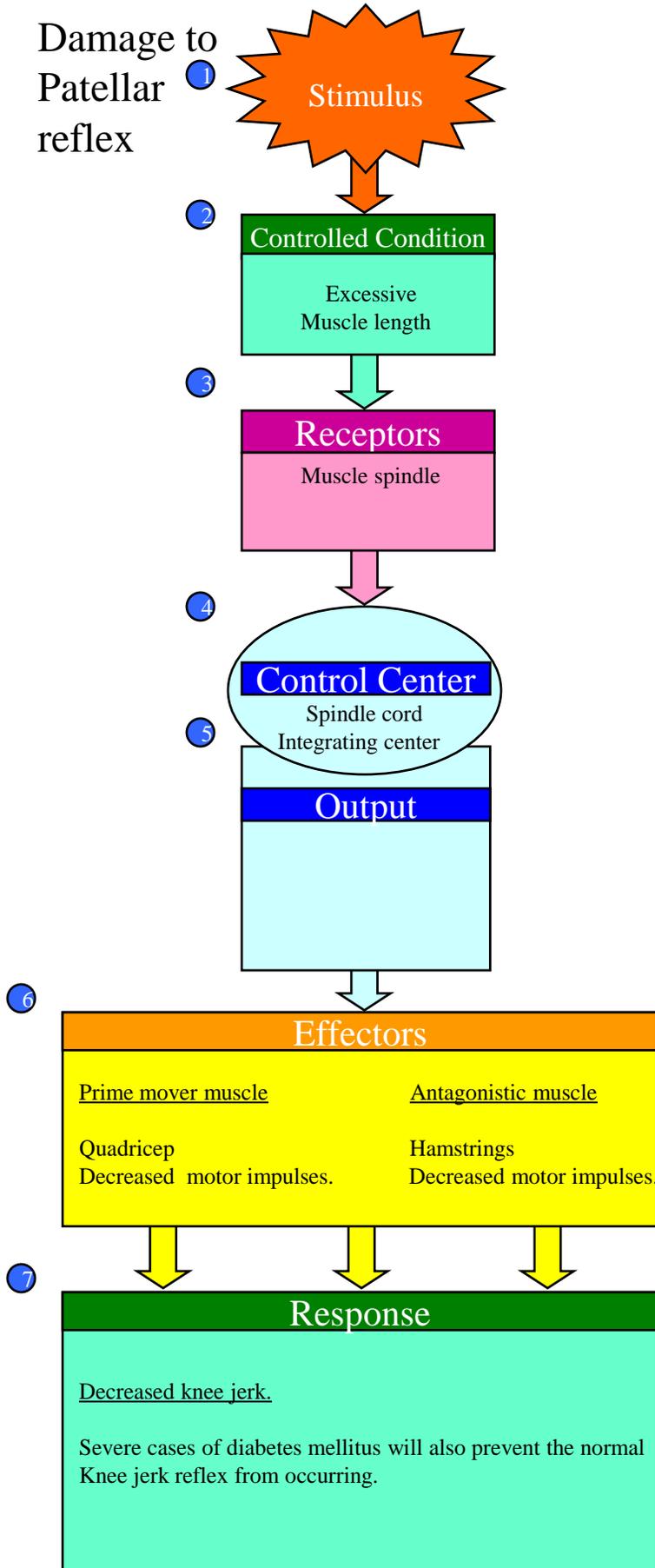
# Somatic Reflex Arc Function

Patellar  
Reflex  
(knee jerk)

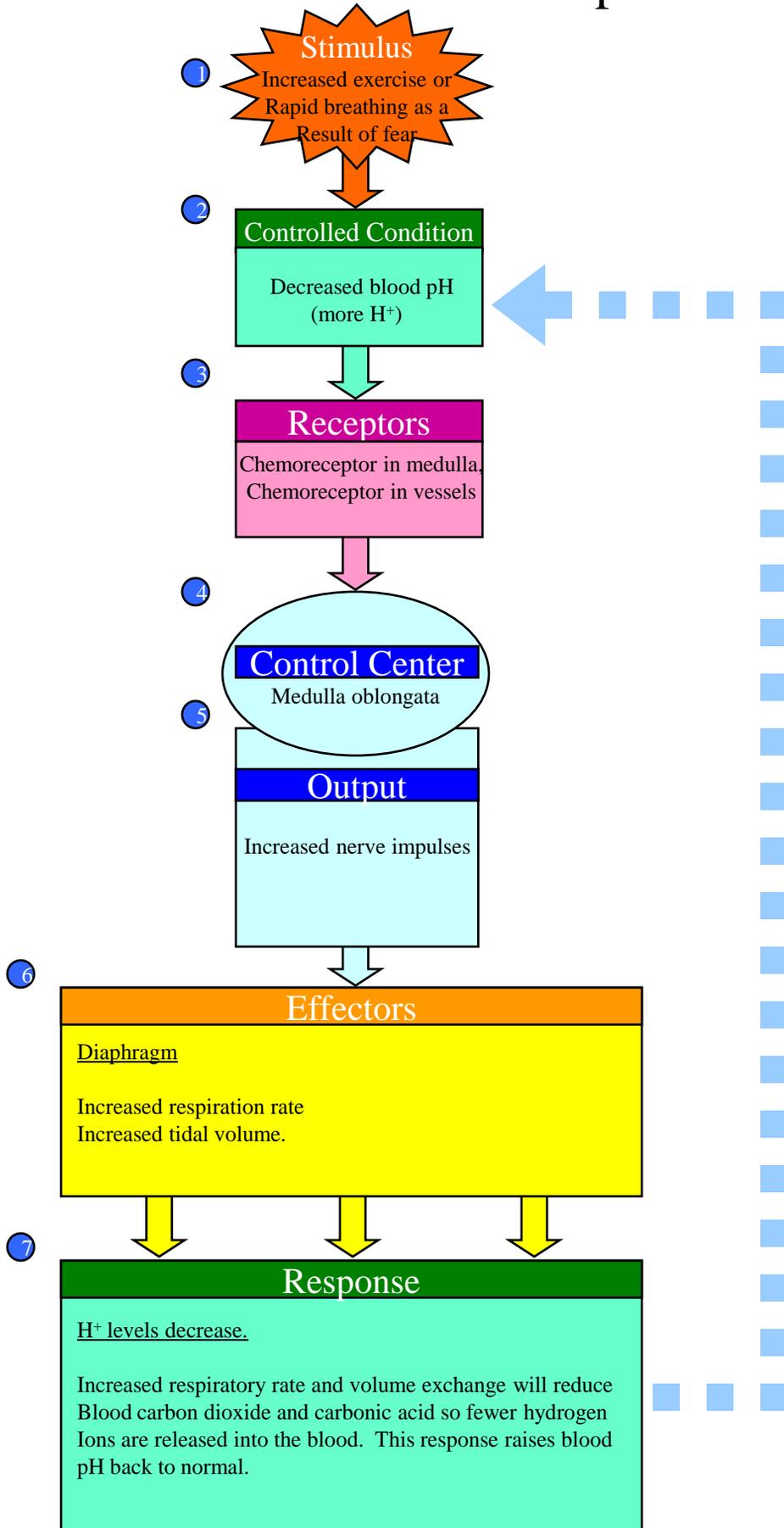


# Somatic Reflex Arc Function

Damage to  
Patellar  
reflex

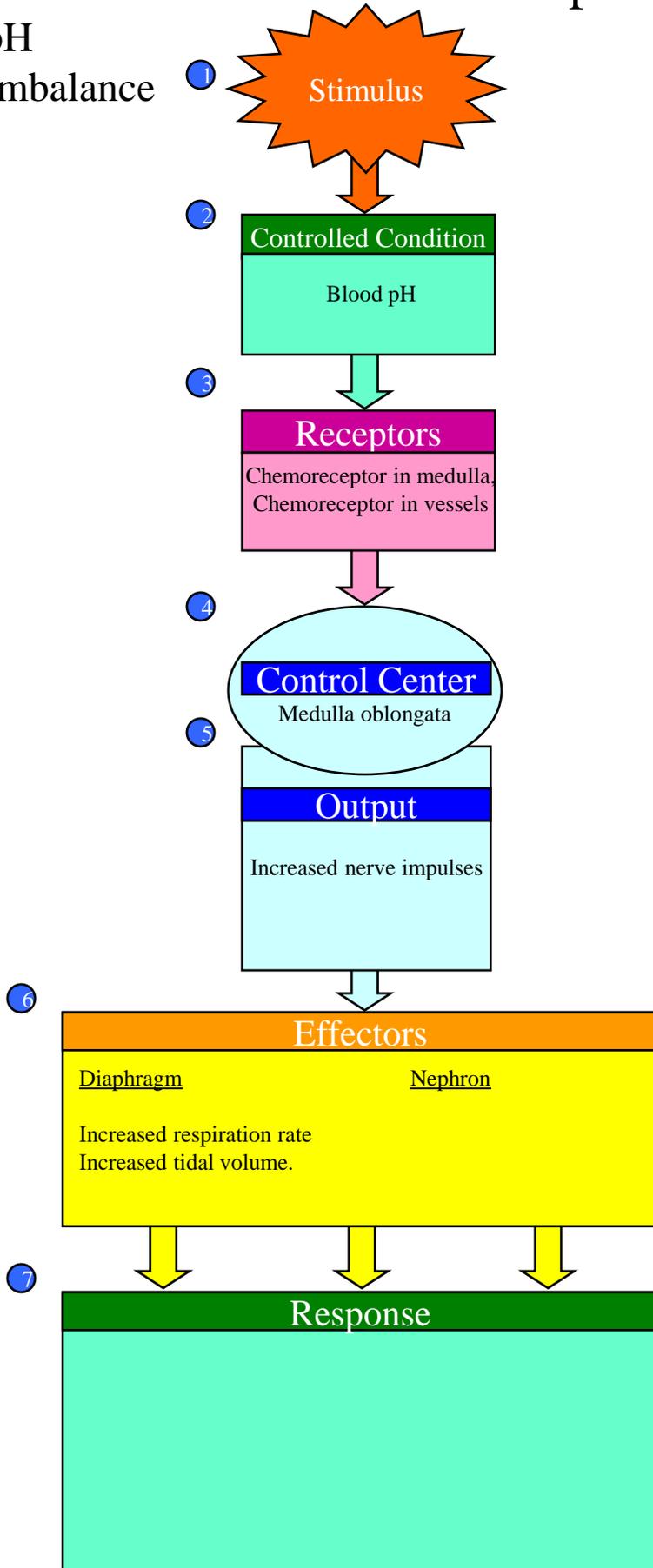


# Homeostasis of Blood pH



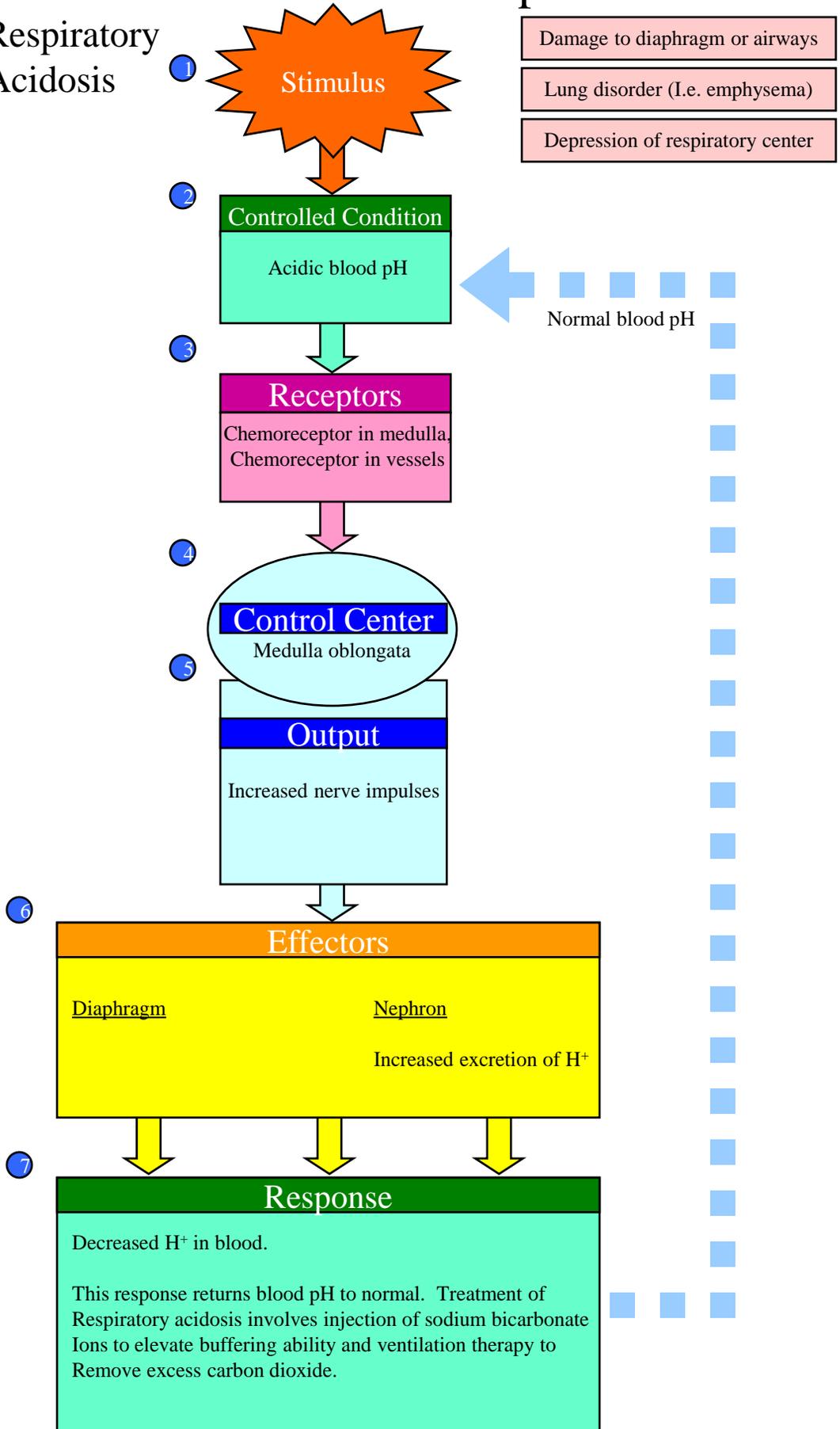
# Homeostasis of Blood pH

pH  
Imbalance



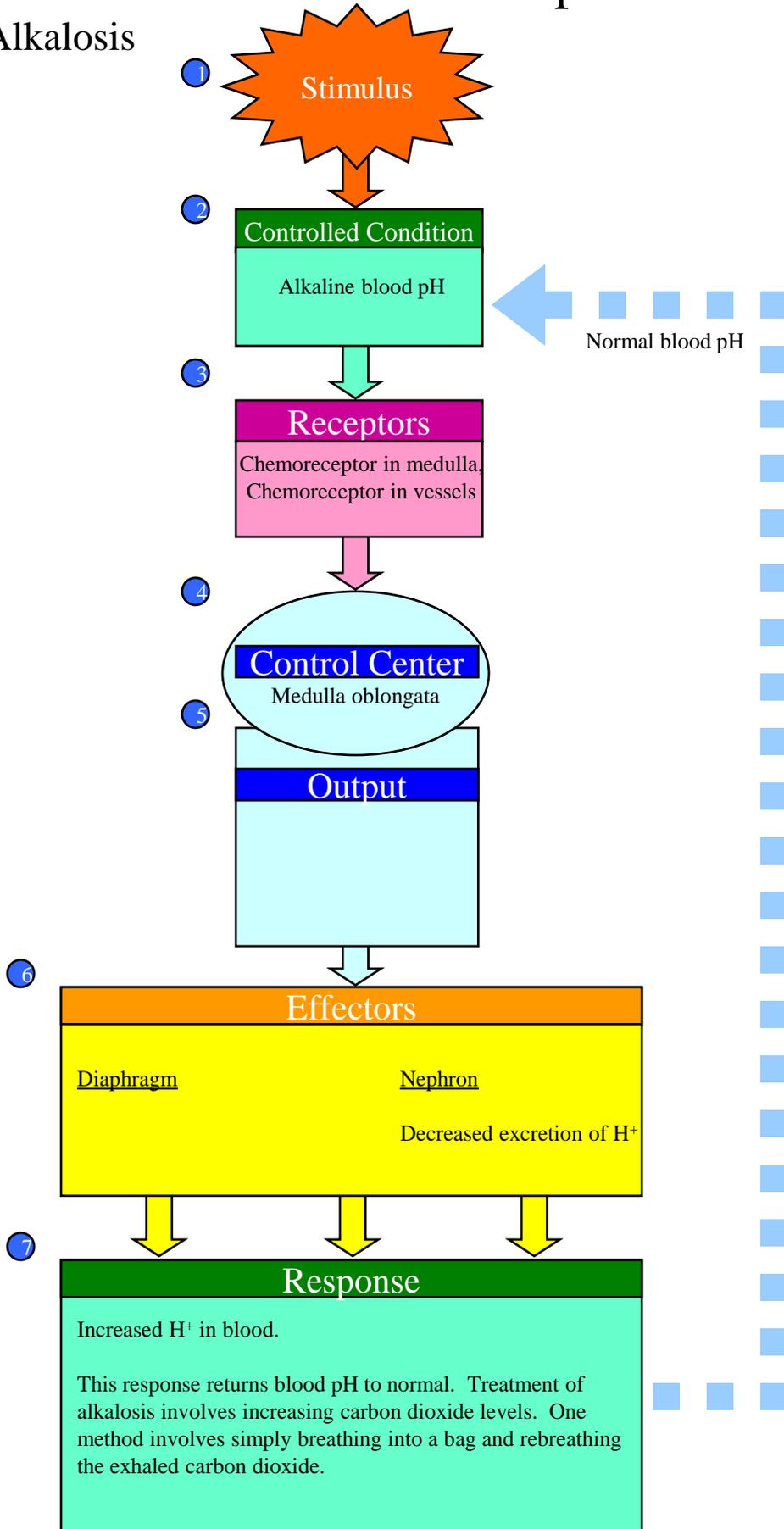
# Homeostasis of Blood pH

Respiratory  
Acidosis



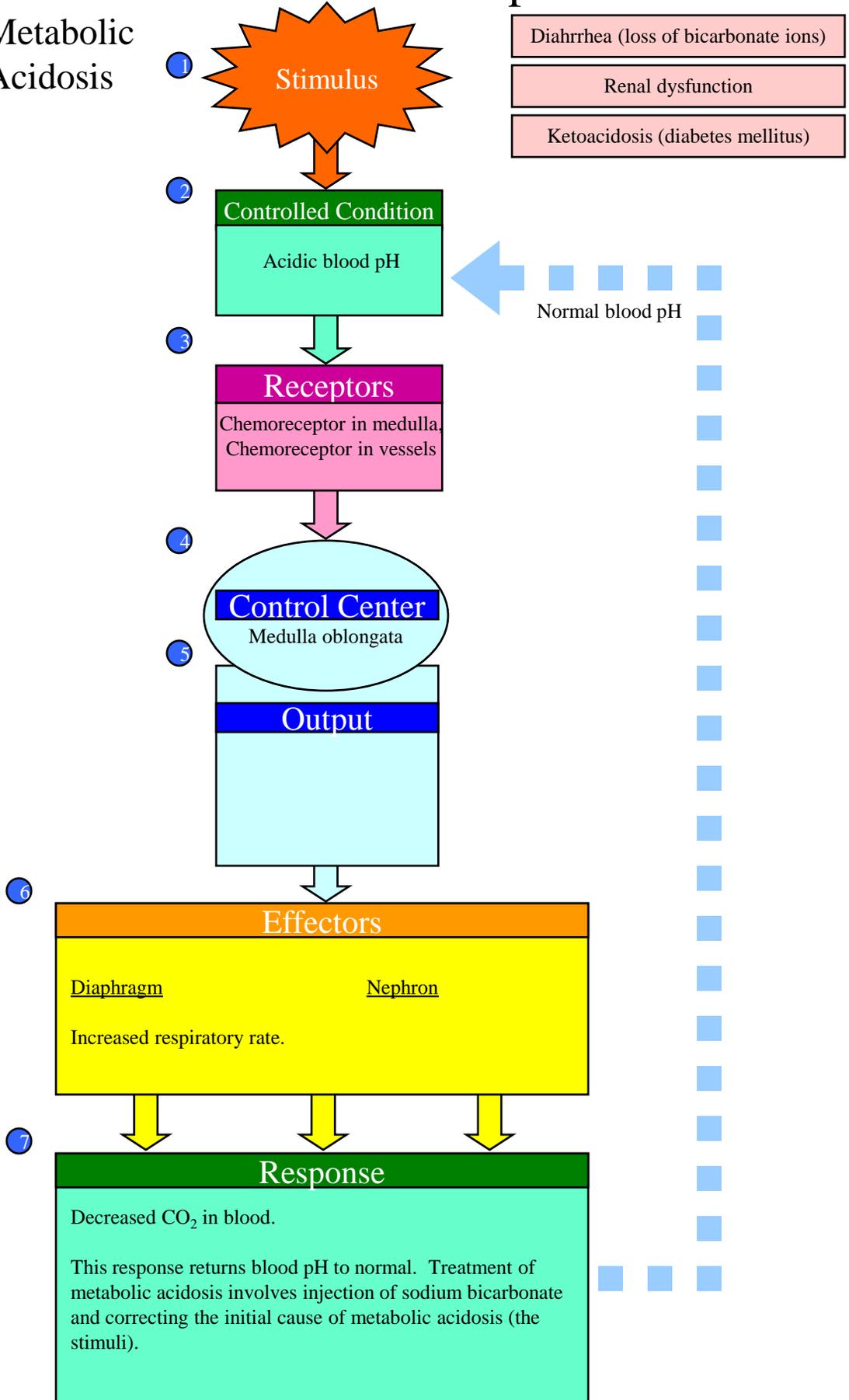
# Homeostasis of Blood pH

Alkalosis



# Homeostasis of Blood pH

Metabolic  
Acidosis



# Homeostasis of Blood pH

Metabolic Alkalosis

