Ph	Measurement of how acidic or alkalotic your blood is	Regulated by both lungs and kidneys	7.35-7.45
CO2	Measurement of carbon dioxide in the blood **C**o2 think a**C**id	Regulated by the lungs	35-45
HCO3	Measurement of bicarbonate in the blood **B**icarbonate the **B**ase	Regulated by the kidneys	22-26

A-Arterial

B-Blood

G-Gas

ABG's measure how **acidic** or **alkalotic** the blood is in the arterial circulation.

ABG Interpretation

Acidosis	Normal	Alkalosis
PH < 7.35	7.35-7.45	> 7.45
CO2 < 45	35-45	< 35
HCO3< 22	22-26	>26

Is it a respiratory or a metabolic problem?

ROME Method

Respiratory	PH >7.45	CO2 <35	ALKALOSIS
Opposite	PH < 7.35	CO2 >45	ACIDOSIS
Metabolic	PH > 7.45	HCO3 >26	ALKALOSIS
Equal	PH < 7.35	HCO3 <22	ACIDOSIS

TIC-TAC-TOE METHOD

ACID	NORMAL	BASE

Uncompensated, partially compensated, or fully compensated?

Uncompensated= if the **PH** is out of range & **CO2** or **HCO3** is in range

Partially compensated= if CO2, HCO3, & PH are ALL out of range

Fully compensated= the PH is range (7.35-7.45)- <u>JUST BCAUSE THE PH IS "NORMAL," IT CAN STILL FALL ON ACIDOTIC SIDE OR ALKALOTIC SIDE</u>

7.35……7.40……..7.45

7.40 is the absolute normal

How do the organs compensate? THINK BICARB (B) = BASE

Kidneys excretes excess ACID & BICARB (HCO3)

OR

Kidneys retaining HYDROGEN & BICARB (HCO3)

Kidneys take hours to days to compensate!

Lungs compensates FAST! THINK CO2 (CO2) = ACID

HPYERventilation = ALKALOSIS BLOWING OFF TO MUCH CO2.

HPYPOventilation= ACIDOSIS RETAINING TOO MUCH CO2.