

BIOFIT

BLUEPRINTBOOTCAMP

Blood Chem Fluids and Electrolytes

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Fluids and Electrolytes

- **Sodium:** One of the major salts in the body fluid, sodium is important in the body's water balance and the electrical activity of nerves and muscles.
- **Chloride, Serum:** Similar to sodium, it helps to maintain the body's electrolyte balance.
- **Potassium:** Helps to control the nerves and muscles.
- **Carbon Dioxide (Bicarbonate):**
Ordered as part of an electrolyte panel.
The electrolyte panel is used to detect, evaluate, and monitor electrolyte imbalances.



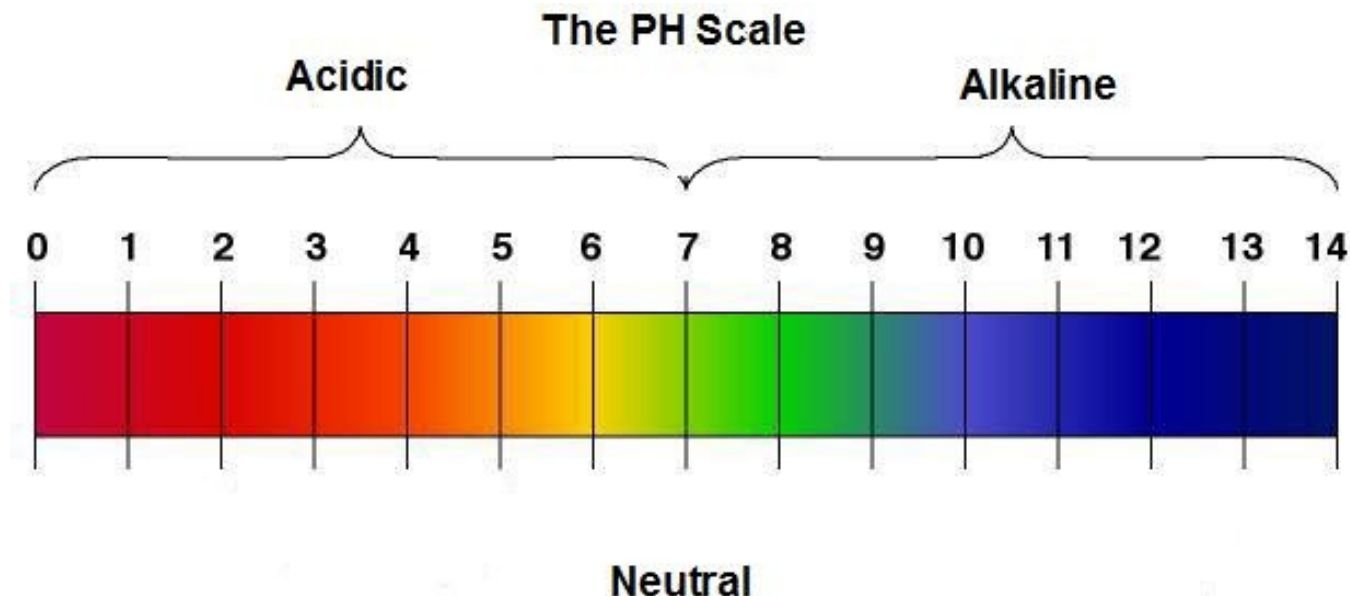
Acid Alkaline

Acidosis

- ✓ Chloride +
- ✓ Potassium +
- ✓ Carbon Dioxide -

Alkalosis

- ✓ Chloride -
- ✓ Potassium -
- ✓ Carbon Dioxide +



Electrolytes and Adrenals

Adrenal Fatigue

- ✓ Potassium +
- ✓ Sodium -
- ✓ Glucose -

Hyper Adrenal

- ✓ Potassium -
- ✓ Sodium +
- ✓ Glucose +
- ✓ Triglycerides +

3		Units	PATHOLOGICAL RANGE		FUNCTIONAL RANGE		CURRENT
4	CATEGORIES		Min	Max	Min	Max	01/24/10
14	Sodium, serum	mmol/L	135.0	148.0	135.0	140.0	133
15	Potassium, serum	mmol/L	3.5	5.5	4.0	4.5	4.7

Hypo
Adrenal

3		Units	PATHOLOGICAL RANGE		FUNCTIONAL RANGE				
4	CATEGORIES		Min	Max	Min	Max	10/06/09	06/26/08	11/20/06
14	Sodium, serum	mmol/L	135.0	148.0	135.0	140.0	139	139	143
15	Potassium, serum	mmol/L	3.5	5.5	4.0	4.5	3.6	4.1	3.9

Hyper
Adrenal

Adrenal Fatigue Actions

- ✓ Stress management: meditation, yoga, HeartMath™, appreciation
- ✓ High green, vitamin and mineral rich diet
- ✓ Vitamin C rich foods or supplements: goji, acai, pomegranate, camu concentrates, greens, colorful fruits and veggies
- ✓ Activated forms of B vitamins, i.e. Premier Research Living source liquids
- ✓ Antioxidants
- ✓ Adaptogenic herbs – more later
- ✓ Zinc



Fluids and Electrolytes Case Analysis

3		Units	PATHOLOGICAL RANGE		FUNCTIONAL RANGE		
4	CATEGORIES		Min	Max	Min	Max	10/06/09
14	Sodium, serum	mmol/L	135.0	148.0	135.0	140.0	142
15	Potassium, serum	mmol/L	3.5	5.5	4.0	4.5	3.5
16	Chloride, serum	mmol/L	99.0	111.0	100.0	106.0	105
17	Carbon Dioxide, total	mmol/L	19.0	31.0	25.0	30.0	23
18	Calcium, serum	mg/dL	8.7	10.5	9.2	10.1	10
19	Phosphorus, serum	mg/dL	2.3	4.8	3.5	4.0	3.9



- ❖ High sodium, low potassium seen in hyperactive adrenals
- ❖ Low carbon dioxide seen in metabolic acidosis
- ❖ Follow-up: address stress issues
- ❖ Adrenal Stress Test
- ❖ Alkaline diet high in fresh whole fruits and vegetables

Anion Gap

(Sodium + Potassium) – (Chloride + Co2)

High

- ✓ Metabolic Acidosis
- ✓ Thiamine Deficiency
- ✓ Dehydration
- ✓ Toxin ingestion
- ✓ Diabetes
- ✓ Lactic Acidosis

Low

- ✓ Rare
- ✓ Hypoalbuminemia
- ✓ Multiple Myeloma
- ✓ Neoplasm
- ✓ Lithium Toxicity
- ✓ Increased calcium or magnesium