

## Water and Minerals

### Water

- Most essential nutrient
- 50-70% of body weight is fluid
- Intracellular fluid
- 
- Extracellular fluid
- 

### Functions of Water

### Temperature Regulation

### Fluid Recommendations

- 1 ml/kcal
- Example: 2,200 kcals \* 1 ml/kcals = 2,200 ml (≈ 9 cups)
- 1 cup = 240 ml
- Recommendations: 9 cups/day for females and 13 cups/day for males as a starting point

### Increased Fluid Needs

### Water Loss

- Urine – Greatest amount of water loss
- Stool – Diarrhea (increased losses)
- Perspiration – Exercise and heat increase losses
- Exhaled air

### Dehydration

- Thirst: early dehydration
- Urine color: dark urine, low volume (urine should be pale yellow)
- 1 lb loss = 2 cups fluid
- Symptoms: headache, dry mouth, dark urine
- Advanced dehydration:

### Minerals

- Major Minerals
- Require > 100 mg/day
- Examples: calcium, phosphorus
- Trace Minerals
- Require < 100 mg/day
- Examples: Iron, zinc

### Sodium

- Found as sodium chloride (table salt)
- 40% sodium
- 60% chloride
- Function

Deficiency

### Hypertension

- Blood Pressure
- Systolic/Diastolic
- Normal
- High Blood Pressure

### Hypertension

- 50 million Americans suffer from hypertension

### Hypertension

- Risk
- Treatment

### Hypertension – Diet