



Hydration Status Evaluation

It's important for you, as a practitioner, to understand how dehydration presents in the body and how to determine if some of your client's complaints or conditions are related to chronic dehydration.

Dehydration frequently mimics other conditions and it's important that you understand how to evaluate to determine if a client is genuinely dehydrated.

There are three types of dehydration:

- **Hypotonic** - which is primarily a loss of electrolytes (sodium in particular)
- **Hypertonic** - which is primarily a loss of water
- **Isotonic** - which is an equal loss of water and electrolytes

The most common type of dehydration seen in humans is isotonic, generally due to insufficient water intake or increased water loss through sweating, diarrhea, or excessive urination (often due to adrenal overdrive or the excessive consumption of dehydrating foods or fluids).

Ideally, water consumption should be at least one half the number of pounds of body weight in fluid ounces.

Health and Habit Questions to Ask to Assess Dehydration:

In short, always ask your client:

- How much water do you drink?
- How much do you exercise and sweat?
- Do you know how to differentiate hunger from thirst?



If seeking detail, ask your client the following:

- Ask about their “drinking habits”. Many times your clients will think they are getting enough water because they are drinking other beverages like soft drinks, coffee, tea, alcohol, milk and fruit juice. Caffeine and alcohol are dehydrating and cause excess fluid loss, so they actually have a negative effect on total water consumption.
- Also ask about your clients’ exercise habits. They’ll need an additional 8 ounces of water for every 15 minutes of exercise.
- Ask about their climate and how much they sweat. Water is lost to sweat in a hot environment, thus increasing their need.
- Ask about the quantity and color of their urine. Dark yellow urine is an indication of dehydration. With sufficient water intake, urine should be very light or clear.

Detecting Dehydration:

According to Dr. F. Batmanghelidj, an MD who has studied dehydration extensively as reported in his books, *You’re not Sick You’re Thirsty* and *Your Body’s Many Cries for Water*, the following symptoms and conditions may be an indication that the person is dehydrated. The presence of multiple symptoms increases the likelihood that dehydration is an underlying cause.

Physical/Emotional Signs and Symptoms of Dehydration:

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|-------------------------|------------------------------|----------------------------|
| • Headache | • Decreased urination | • Difficulty breathing |
| • Tired | • Increased body temperature | • Seizures |
| • Flushed | • Extreme fatigue | • Chest and abdominal pain |
| • Irritable | • Muscle cramps | • Unconsciousness |
| • Anxious | • Headaches | • Warm extremities |
| • Dejected | • Nausea | • Dry mucous membranes |
| • Depressed | • Tingling of the limbs | • Reduced skin turgor |
| • Not sleeping well | • Muscle spasms | • Wrinkles |
| • Heavy headed | • Vomiting | • Decreased urine output |
| • Irresistible cravings | • Racing pulse | |
| • Fear of crowds | • Dim vision | |
| • Increased heart rate | • Painful urination | |
| • Increased respiration | • Confusion | |
| • Decreased sweating | | |

Exam Findings with Dehydration:

- Decreased blood pressure
- Decreased or increased heart rate
- Decreased or increased respiration
- Shriveled skin
- Sunken eyes

Conditions That May Be Caused By or Are a Sign of Dehydration:

- Asthma
- Allergies
- Hypertension
- Constipation
- Type II diabetes
- Autoimmune diseases
- Heartburn
- Angina
- Low back pain
- Joint pain
- Migraines
- Colitis
- Fibromyalgia
- Bulimia
- Morning sickness during pregnancy

Note: Read chapter 6 - 8 in *Your Body's Many Cries for Water* for details.

Lab Values That Are a Possible Sign of Dehydration:

Elevated blood level of:

- Sodium
- Potassium
- Chloride
- Creatinine
- Magnesium
- Protein
- Albumin
- Red blood cells
- Hemoglobin
- Hematocrit
- Blood urea nitrogen (BUN)

Decreased blood level of:

- Carbon dioxide
- Bicarbonate (electrolytes)