

The Water in You

An average adult body is 50 to 60 percent water -- that's roughly 45 quarts. Men are more watery than women. A man's body is 60 to 65 percent water, compared to 50 to 60 percent for a woman. In infants, the figure is a whopping 70 percent according to statistics compiled by the International Bottled Water Association.

Percentage of water making up tissues, organs, fluids and bone in the human body: Brain 73%, Heart 73%, Lungs 83%, Muscle 79%, Liver 71%, Kidney 79%, Bone 31%, Blood 90%, Saliva 99%, Perspiration 99%

Think of what you need to survive, really just survive. Food? Water? Air? X-Box? Naturally, I'm going to concentrate on water here. Water is of major importance to all living things; in some organisms, up to 90 percent of their body weight comes from water. Up to 60 percent of the human body is water, the brain is composed of 70 percent water, and the lungs are nearly 90 percent water. About 90 percent of our blood is water, which helps digest our food, transport waste, and control body temperature. Each day humans must replace 2.7 - 3.7 liters of water, some through drinking and the rest taken by the body from the foods eaten.

There just wouldn't be any you, me, or Fido the dog without the existence of an ample liquid water supply on Earth. The unique qualities and <u>properties of water</u> are what make it so important and basic to life. The cells in our bodies are full of water. The excellent ability of water to dissolve so many substances allows our cells to use valuable nutrients, minerals, and chemicals in biological processes.

Water's "stickiness" (from <u>surface tension</u>) plays a part in our body's ability to transport these materials all through ourselves. The carbohydrates and proteins that our bodies use as food are metabolized and transported by water in the bloodstream. No less important is the ability of water to transport waste material out of our bodies.

Water Content of Foods

Here's an activity to use when discussing the percentages of water and land on the earth and when discussing water content of the human body and the foods we eat. Bring in a slice of bread, a carrot, an apple, popped popcorn, a potato, celery, an orange and a banana. Make a 7-column chart to record the data. The column headings include food, estimated and actual fresh weight, estimated and actual dried weight, difference and percentage of water. Estimate, weigh, slice, dry and re-weigh each food. Lastly, graph the fresh and dried weights on a bar or line graph and the students write a summary of their findings. Dry seeds, such as the grains and legumes were intentionally left off the following list as they should have a common moisture content of 10% or less. All pure fats and oils contain no water. The water content of each of the foods below is shown by the number following the food. After these foods have been dehydrated, their weight will be reduced by close to the following percentage:

Almonds	7%	Cauliflower (raw)	91%	Grapefruit Raw	88%
Apples	85%	Celery	94%	Grapes	82%
Apricots	85%	Cheese American	37%	Ham Smoked (cooked)	54%
Bananas	76%	Cherries (raw)	80%	Honey	15%
Bean Sprouts	92%	Chicken (broiled)	71%	Jams/Preserves	30%
Beef (raw)	54%	Coconut (dried)	7%	Kale	87%
Bread (whole wheat)	35%	Collards (boiled)	91%	Lettuce Head	96%
Broccoli	91%	Corn (sweet, fresh)	74%	Macaroni (cooked)	72%
Butter	20%	Cucumbers (raw)	96%	Margarine	20%
Cabbage (raw)	92%	Eggs (raw, whole)	74%	Molasses	25%
Cantaloupe	91%	Eggplant (raw)	92%	Okra (boiled)	91%
Carrots (raw)	88%	Fruit cocktail	80%		
Olives	80%	Pickles Dill	93%	Strawberries (raw)	90%
Onions	89%	Pineapple (raw)	85%	Sweet Potatoes (boiled)	71%
Oranges	86%	Plums (raw)	87%	Swiss Chard	94%
Papyas Raw	89%	Pork Chops (broiled)	45%	Tomatoes (raw)	93%
Parsley Raw	86%	Potatoes (raw)	85%	Turkey (roasted)	62%
Peaches Raw	90%	Pumpkin (canned)	90%	Veal (broiled)	60%
Peanut Butter	1%	Radishes (raw)	95%	Walnuts	4%
Pears Raw	82%	Raspberries	81%	Watercress (raw)	90%
Peas Raw	81%	Rutabas (boiled)	90%	Watermelon	93%
Pecans	7%	Sauerkraut (canned)	93%		
Peppers Green	94%	Spinach (raw)	92%		
		Squash (boiled)	96%		