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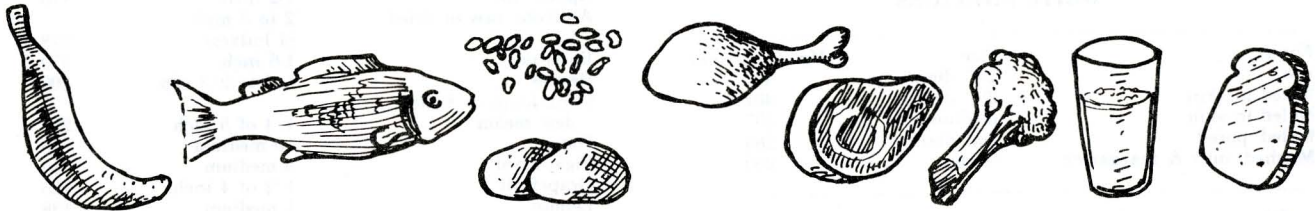
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Potassium in the Diet

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During most of the 1800's sodium chloride (table salt), calcium, and phosphate were thought to be the only minerals that human beings needed. Because minerals were such a small portion of the body's makeup, little importance was given to them.

Gradually, questions were raised about the amount and the function of potash (potassium) and soda (sodium) in foods and in the body. In 1885 an English scientist by the name of Ringer discovered that body tissues, such as the heart, functioned best in a solution containing a mixture of sodium, potassium, and calcium. Since that time, scientists have used Ringer's solution in studying isolated muscle tissues.

The body contains approximately 250 grams of potassium. Most of this is found inside the cells of muscle and nerve tissues but little occurs in fat cells. Smaller amounts of potassium are found in fluids outside the cell.

Potassium works with calcium and sodium to conduct nerve impulses across cell membranes so that muscles can work. As the muscle contracts or tightens, potassium leaves the cell. As the muscle relaxes, potassium goes back into the cell. Sodium and calcium are moving from one side of the cell wall to the other during the same time that potassium is moving in the opposite direction.

The kidney is an important body organ that carefully regulates potassium levels in the body. When body potassium is low, less potassium is excreted in the urine. However, there is always some potassium excreted during urination.

Likewise, the body protects itself from losing too much potassium in heavy sweating. When sweating excessively such as in exercising, the body gradually adjusts so that less potassium is lost in the sweat. Because of the body's adjustment process and because of the plentiful supply of potassium in foods, speciality potas-

sium foods or pills are not necessary for healthy individuals.

Since potassium is an important mineral for cells, the body needs more potassium than usual when building or repairing muscle tissue such as during growth or following starvation or injury. Potassium is lost in injuries such as cuts and scratches and burns because of the breakdown of tissue cells.

Potassium deficiencies are rarely related to dietary intake. Abnormal potassium levels occur only in unusual situations such as kidney failure or severe dehydration. Dehydration occurs when vomiting and diarrhea continue for a long period of time causing a great loss of body fluids. This is why dehydration may be dangerous to infants and small children. Low potassium levels in the body also can result from wasting diseases, burns, malnutrition, diabetic acidosis, or certain diuretics.

Diuretics are medicines which help the body to lose water. These are often referred to as "water pills." Many of the diuretics cause a loss of potassium from the body tissues. When diuretics are used almost daily, symptoms of potassium deficiency may occur. Because potassium is important in muscle cells, low body potassium causes muscle weakness. A person with low potassium levels will feel tired and weak. Anyone who is taking water pills or has recurring vomiting and/or diarrhea should be alert to the possibility of losing too much potassium. A physician should be consulted.

Recommended Dietary Allowances

The Food and Nutrition Board estimates a safe and adequate intake of potassium as 1875 to 5625 milligrams for adults. About 2.5 grams (2500 milligrams) would meet daily needs. The average American intake is estimated to be between 2 to 6 grams a day.

Potassium is found in many plant and animal foods. Foods in each of the four food groups are good sources of potassium - milk, meat and meat alternates, fruits and vegetables. Dried dates, bananas, cantaloupes, apricots, and citrus are fruits which are exceptionally good sources of potassium. Small amounts of potassium are found in whole grains. Whole grains have more potassium than refined grains because potassium is lost in milling.

The figures in the chart below show that baked foods lose little potassium. But potassium is soluble in water. When foods are pared and boiled in a small amount of water, about a fourth of the potassium is lost in the cooking water if the water is discarded. Even greater amounts of potassium are lost if food is cooked in large amounts of water and/or for long periods of time.

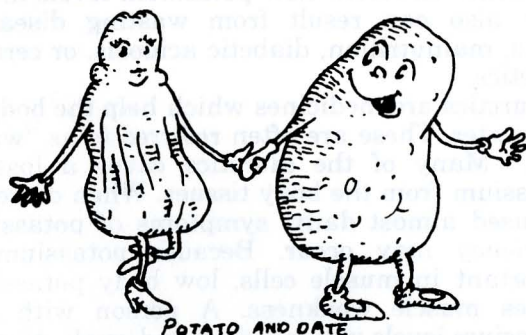
WHITE POTATOES

Form	Size	Mg. Potassium
raw	2 1/4" diam.	420
baked in skin	2 1/4" diam.	407
boiled in skin	medium	407
boiled, pared	2 1/4" diam.	285
Mashed, milk & margarine	1/2 cup	250

Since potassium is soluble in water, cheese has less potassium than milk. The potassium is lost in the liquid whey during processing.

Fat in foods contains little or no potassium. Therefore, margarine, butter, shortening, and vegetable oils do not contribute potassium to the diet.

Synthetic foods and many carbonated beverages do not contain much potassium. The few such speciality beverages that do will have the information on the label. Unfortunately, the products usually contain few or none of the many other vitamins and minerals which are important in nutrition and health. Foods in the four food groups (milk, meat and meat alternates, fruits and vegetables, breads and cereals) provide the many nutrients which are needed daily.



FOOD	HOUSEHOLD Measure	POTASSIUM Mg.
MILK		
American cheddar or Swiss cheese	1 oz.	23
Cottage cheese	1/2 cup	95
Ice cream (12% fat)	1/6 qt.	101
Buttermilk	1 cup	342
Nonfat, dried milk solids	1 oz. (4 tbsp.)	490
Nonfat (skim) fluid milk	1 cup	356
Whole fresh milk	1 cup	352
Yoghurt	1 cup	349
MEAT AND MEAT ALTERNATES		
Egg	1 large	70
Fish (catfish, cod, flounder, haddock, shad, tuna)	3 1/2 oz.	330
Beef, pork, lamb, poultry	3 oz.	320
Frankfurter, Bologna	2 oz.	125
Almonds, dried & salted	12 to 15	106
Peanuts	1 tbsp.	105
FRUITS		
Apple, raw	1-2 inch	110
Apricots, raw or dried (4 halves)	2 to 3 med.	278
Banana	1-6 inch	370
Berries	1/2 to 2/3 cup	200
Cantaloupe or honeydew melon	1/4 of 5 inch	251
Dates	10 medium	648
Figs, dried	5 medium	640
Grapefruit	1/2 of 4 inch	135
Lemon	1 medium	138
Oranges	1-2 1/2 inch	200
Peach or pear	1 medium	200
Prunes, dried	5 large	350
VEGETABLES		
Beans, dry, white, cooked	1/2 cup	416
Beans, green or yellow wax	1/2 cup	100
Beet greens, cooked	1/2 cup	332
Broccoli or cauliflower, cooked	2/3 cup or stalk	267
Cabbage, shredded	1 cup	233
Carrots, canned and drained	1/2 cup	150
Greens (dandelion, kale, mustard, spinach, turnip) cooked	1/2 cup	234
Corn or green peas, cooked	1/2 cup	110
Mushrooms, canned	1/2 cup	197
Potato, baked or boiled in skin	1-2 1/4 inch	407
Tomato	1 small	244
BREADS		
Cornbread	1 serving	127
Cracked wheat bread, enriched	1 slice	31
Pumpernickel bread	1 oval slice	145
White bread, enriched	1 slice	20
Whole wheat bread	1 slice	63
Baking powder biscuit	1-2 inch	41
Muffin	1-2 inch	50
CEREALS		
Cornflakes	1 cup	40
Oatmeal, cooked	3/4 cup	101
Brown rice, cooked	3/4 cup	42
White rice, cooked	3/4 cup	36
Macaroni, noodles, & spaghetti: cooked	1 cup	110

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