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Surveys are conducted quarterly:
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Cost of Food at Home for a Week in Alaska March 2002

Up to three stores in each of 20 communities were surveyed during March of 2002 for the cost of a specific set of food and non-food items. The 104 food items selected were taken, with some modification, from the USDA Low-cost Food Plan which is itself based on a nationwide survey of eating habits of Americans, conducted in 1977-78. In addition, the costs of such items as water, propane and electricity were collected. All costs were adjusted to reflect local sales tax where applicable.

The estimated prices of unavailable food items in various communities were calculated as the expected cost as judged from the prices of all available items relative to the price of those items in Anchorage. The percent of foods unavailable in each community are shown in the survey.

Weekly food consumption rates for a family of 4, children 6 - 11 years, form the basis of the expressed food costs. All other costs are ratios of that cost as calculated from the USDA Cost of Food at Home survey issued March 2002. The cost for this family of 4 can be calculated from the table by summing the individual members. For smaller families such a sum would be too low and should be adjusted up by 20%, 10% or 5% for families of 1, 2 or 3 persons respectively. Similarly, the sum for larger families would be too high and downward adjustments of 5% and 10% are suggested for 6 and 7 or more member families. These adjustments reflect that some economies may be realized when preparing foods for larger families.

Rows 19 through 23 represent historical food costs. The Anchorage column is a comparison of present to previous Anchorage costs. Similarly the U.S. Average column represents changes in U.S. average prices. A one (1) appearing in the Anchorage column indicates that the current Anchorage cost is 1% higher now than at that date. Therefore, rising food costs are indicated by positive values. The remaining columns are each community's cost relative to Anchorage at that date. For instance, a cell containing a one (1) indicates a community that was experiencing a food cost 1% higher than Anchorage at that date.

Calculating Daily Energy Requirement The first detailed estimates of human energy requirement (kilocalories or Calories) were published by Harris and Benedict in 1919, which remains the defining work on the subject. There are many factors, which affect energy needs including, age, sex, weight, physiological status such as pregnancy or lactation, level of activity and illness. Consequently, any calculation of energy requirement is only an estimate. Knowing the precise energy requirement of an individual would only be useful if the precise energy value of foods were known, which in general is not so. It is possible to look up energy content of food in tables, but the food you have in hand, say a peanut butter sandwich, may not be composed of the identical ingredients used in the analyses and therefore will not have identical or even closely similar energy content. Furthermore, the food label now seen on all food packages has estimates of energy that are based on table values, the food in the package was not analyzed, only estimated. In general, the energy value on a food label is assumed to be accurate within 15%. In short, a calculated human energy requirement may be entirely adequate given the lack of uncertainty in application.The simplest means of calculating energy requirement is to assume 30 kcal/kg as a daily requirement for a sedentary person. The typical person is taken to be 70 kg (154 pounds, 2.2 lbs/kg), so

the daily requirement would be 2100 kcal (the Calorie on a food package is a kilocalorie and as such should always be capitalized). Subtract 100 kcal from the total for each 10 years of age over 30. For a 50 year old, 2100 - 200 = 1900 kcal per day. For individuals with a lifestyle of moderate activity, start with 35 kcal/kg, or 40 kcal/kg if engaged in sports.In 1932 Max Kleiber published a means of calculating the daily basal energy requirements for any animal, humans included, also based on weight. Basal energy is the heat released from a fasted, lying animal. It is an excellent point for comparison among animals, but requires additional work for use at a practical level. Here, energy per day (kcal/day) is calculated as $70W^{3/4}$, where 3/4 (0.75) is the exponent on weight (kilograms). This is easy enough to do if you have a modern calculator. For those familiar with logarithmic tables or who have a slide rule, the calculation is not difficult, otherwise you will be doing the cube and two square roots of weight by hand. The 70 kg man in this case will require $70 \times 70^{3/4} = 1694$ kilocalories per day as a basal energy intake. Basal intake does not take into account the energy required to eat or digest food (add about 10%), nor other normal daily activities of even a sedentary person. I'll skip these interesting theoretical calculations and move on to the use of the more practical Harris-Benedict equation.The Harris-Benedict equations reflect the important factors of basal energy demand listed in paragraph one, excepting activity level that is not part of the basal demand. The equations are:Men, energy per day (kcal/day) = 66.5 + 13.8(weight in kg) + 5(height in cm) - 6.8 (age in years)

Women, energy per day (kcal/day) = 655.1 + 9.6(weight in kg) + 1.8 (height in cm) - 4.7(age in years)For a 70 kg man, 175 cm tall (5 feet 9 inches), aged 25, the Harris-Benedict equation predicts: 66.5 + 13.8(70) + 4(175) - 6.8(25) = 1738 kcal/day.Adding in the energy demands of physical activity requires some judgment, but for starters, add 20 to 40% for sedentary activity (mostly sitting), 55 to 65% for light activity (moving about and daily walking), 70 to 75% for moderate activity (lots of moving about and some daily

vigorous exercise) and 80 to 100% for heavy activity (daily exercise program). For the example above, assuming moderate exercise, the energy requirement for moderate activity (70% increase) would be 1738(0.7) = 1217 kcals. We add that to the basal requirement to arrive at a daily-required energy intake of 1738 + 1217 = 2955 kcals. If such an individual consumed fewer calories than this, he would loose weight, or would gain weight if he slacked off on exercise or overate.

Sources:

Harris, J.A. and F. G. Benedict, 1919. A biometrical study of basal metabolism in man. Carnegie Inst. of Wash. Pub. 279.
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Submitted By:

Bret R. Luick
Foods & Nutrition Specialist