PUBLIC HEALTH

Lie Down and Gain

Exercise plays a tremendous role in weight control regardless of calorie intake, and some exercise should be included with every diet.

➤ FOR THE WEIGHT conscious, a new study indicates the impossibility of winning the battle of the bulges without combining at least some exercise with calorie counting.

For example, a luncheon of a club sandwich and a glass of milk takes about nine hours to burn if the eater limits his activities to reclining. The lunch averages out to approximately 756 calories, or approximately one-fourth the total daily recommended calories for a male.

A little arithmetic shows that the sedentary life will let the clock run out and start around again before the calories are expended. And, as Dr. Frank Konishi, Southern Illinois University, puts it to his colleagues in the Journal of the American Dietetic Association, 46:186, 1965, "A very sedentary life with moderate calorie intakes may lead to a slow accumulation of body fat, particularly in middle-aged individuals."

Now take the same lunch and add a little exercise. It still will take two and a half hours of walking to burn off the food. Step up the pace to bike riding and the time is cut to one and a half hours. Swimming will burn the energy in a little over one hour. Running will do the job in 39 minutes.

Dr. Konishi finds from his research that "it is apparent that physical activity should be a major factor to consider in preventing or treating obesity.

"However, the prevalence of obesity in the United States suggests that many individuals fail to appreciate the value of physical activity."

Below is a chart from the journal showing how long it takes to exercise away the calories in certain foods.

• Science News Letter, 87:183 March 20, 1965

TABLE 1 **Energy equivalents of food calories expressed in minutes of activity**

FOOD	CALORIES	ACTIVITY				
		Walking*	Riding bicycle†	Swimming‡	Running#	Reclining¶
		min.	*min.*	*min.*	*min.*	*min.*
Apple, large	101	19	12	9	5	78
Bacon, 2 strips	96	18	12	9	5	74
Banana, small	88	17	11	8	4	68
Beans, green, 1 c.	27	5	3	2	1	21
Beer, 1 glass	114	22	14	10	6	88
Bread and butter	78	15	10	7	4	60
Cake, 1/12, 2-layer	356	68	43	32	18	274
Carbonated beverage, 1 glass	106	20	13	9	5	82
Carrot, raw	42	8	5	4	2	32
Cereal, dry, ½ c., with milk and sugar	200	38	24	18	10	154
Cheese, cottage, 1 Tbsp.	27	5	3	2	1	21
Cheese, Cheddar, 1 oz.	111	21	14	10	6	85
Chicken, fried, ½ breast	232	45	28	21	12	178
Chicken, "TV" dinner	542	104	66	48	28	417
Cookie, plain, 148/lb.	15	3	2	1	1	12
Cookie, chocolate chip	51	10	6	5	3	39
Doughnut	151	29	18	13	8	116
Egg, fried	110	21	13	10	6	85
Egg, boiled	77	15	9	7	4	59
French dressing, 1 Tbsp.	59	11	7	5	3	45
Halibut steak, ¼ lb.	205	39	25	18	11	158
Ham, 2 slices	167	32	20	15	9	128
Ice cream, 1/6 qt.	193	37	24	17	10	148
Ice cream soda	255	49	31	23	13	196
Ice milk, 1/6 qt.	144	28	18	13	7	111
Gelatin, with cream	117	23	14	10	6	90
Malted milk shake	502	97	61	45	26	386
Mayonnaise, 1 Tbsp.	92	18	11	8	5	71
Milk, 1 glass	166	32	20	15	9	128
Milk, skim, 1 glass	81	16	10	7	4	62
Milk shake	421	81	51	38	22	324
Orange, medium	68	13	8	6	4	52
Orange juice, 1 glass	120	23	15	11	6	92
Pancake with sirup	124	24	15	11	6	95
Peach, medium	46	9	6	4	2	35
Peas, green, ½ c.	56	11	7	5	3	43
Pie, apple, 1/6	377	73	46	34	19	290
Pie, raisin, 1/6	437	84	53	39	23	336
Pizza, cheese, 1/8	180	35	22	16	9	138
Pork chop, loin	314	60	38	28	16	242
Potato chips, 1 serving	108	21	13	10	6	83
Sandwiches						
Club	590	113	72	53	30	454
Hamburger	350	67	43	31	18	269
Roast beef with gravy	430	83	52	38	22	331
Tuna fish salad	278	53	34	25	14	214
Sherbet, 1/6 qt.	177	34	22	16	9	136
Shrimp, French fried	180	35	22	16	9	138
Spaghetti, 1 serving	396	76	48	35	20	305
Steak, T-bone	235	45	29	21	12	181
Strawberry shortcake	400	77	49	36	21	308

*Energy cost of walking for 70-kg. individual = 5.2 calories per minute at 3.5 m.p.h.
†Energy cost of riding bicycle = 8.2 calories per minute.
‡Energy cost of swimming = 11.2 calories per minute.
#Energy cost of running = 19.4 calories per minute.
¶Energy cost of reclining = 1.3 calories per minute.

BIOLOGY

Pink Creature Lives Closest to South Pole

➤ A TINY PINK spider-like animal has been found living closer to the South Pole than any other creature.

An eight-legged mite, about one-hundredth of an inch long, thrives in a little green world of microscopic algae and fungi on a mountain range jutting through the frigid Antarctic icecap only 309 miles from the Pole. Keith A. J. Wise of Hawaii's Bishop Museum said the mite, identified as *Nanorchestes antarcticus,* lives more than one hundred miles closer to the Pole than insects had previously been found. This is several hundred miles closer than penguins and other birds—the only higher animals that nest in Antarctica.

Found near the mouth of the Robert Scott glacier on the Queen Maud mountain range, the pink mite is able to survive because the temperature of the miniature garden is high enough to melt the snow into trickles of water.

Flat, crusty lichens, a primitive form of plant, were discovered only 266 miles from the South Pole, closer to the Pole than life of any kind has been proved to exist.

Dr. Wise and Dr. J. Linsley Gressitt, director of the Bishop Museum project, discovered individuals of tiny water-dwelling rotifers and small insects called springtails living farther south than other insects.

About 50 species of arthropods exist in Antarctica. They all are wingless. Most of them live on microscopic algae and fungi. Sleeping through the cold, dark Antarctic winter, these tiny arthropods become active when the temperature reaches the melting point.

The survey of the insect and mite population of Antarctica has been carried on for six years as part of the U.S. Antarctic Research Program (USARP), administered by the National Science Foundation.

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BOTANY

Chemical Secret For Daffodil Youth

➤ FRESHLY CUT daffodils can keep their beauty for a long time if their yellow flowers are dipped into a solution of two chemicals.

By dipping the floral parts for five seconds into combinations of benzyladenine and various concentrations of the sodium salt of 2, 4-dichlorophenoxyacetic acid, scientists have been able to retard aging in King Alfred daffodils, reported Dr. D. J. Ballantyne, University of Victoria, B. C., Canada.

Cauliflowers also have been effectively slowed down in their aging process by the chemicals, which are available for experimental purposes.

Cut flowers wilt and die probably because the flower dehydrates, the scientist stated in Nature, 205:819, 1965.

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