

Index

• Numerics •

11 essential vitamins, 125

• A •

ABV (alcohol by volume), 116–117

acesulfame-K, 257–258

across-fiber pattern theory of gustatory coding, 198

acrylamides, 269–270

ACSH (American Council on Science and Health) Web site, 342–343

Adamson, Eve (*Cooking Basics For Dummies*, 3rd Edition), 261

additives

allergens, 295

coloring agents, 291–292

defined, 289

emulsifiers, 293

flavor enhancers, 291

flavors, 291

food processing, 252

Generally Recognized as Safe (GRAS), 290, 294

natural, 290

nutrients, 290–291

preservatives, 252, 290, 292–296

safety of, 293–295

stabilizers, 293

sulfites, 296

synthetic, 290

texturizers, 293

thickeners, 293

Adequate Intake (AI), 45, 48–49

ADH (antidiuretic hormone), 119, 179

adipose (fatty) tissue, 82

adrenal glands, 34

adrenaline (epinephrine), 34, 307

aflatoxins, 173

ageusia (loss of taste), 199

aging adults

appetite, 58

supplements, 58–59

AI (Adequate Intake), 45, 48–49

alanine, 72

albumin, 77

alcohol

aphrodisiac qualities, 331

binge drinking, 123

biochemical processes, 113–115

calories, 30

carbohydrates, 115

cholesterol levels, 345–346

Dietary Guidelines for Americans 2005, 218–219

digestive system, 23–24, 117–119

distillation, 115

drug interactions, 122–123, 316

effect on mood, 312

empty calories, 30–31

energy, 116, 118

ethanol (ethyl alcohol), 30–31, 113–114

fermentation, 114–115

fetal alcohol syndrome (FAS), 122

fruits, 116

grains, 116

health benefits, 119–120, 345–346

health risks, 119–120

medicines, 316

milk, 116

moderate drinking, 119–120, 124, 218–219

motor skills, 122

neutral spirits, 115

nutrients, 116

proof, 117

Recommended Dietary Allowances (RDAs), 46–47

red wines, 346

resveratrol, 124

sugar, 116

urination, 119

alcohol abuse, 120–121

- alcohol by volume (ABV), 116–117
 - alcoholism, 121–122
 - alkaline pancreatic juices, 24
 - allergens, 295, 301, 303
 - allergies. *See* food allergies
 - alpha-tocopherol, 50
 - alphatocopherol equivalents (a-TE), 50
 - alternative foods
 - artificial sweeteners, 256–258, 294
 - fat substitutes, 18, 255–256
 - aluminum cookware, 273
 - American Cancer Society, 329, 341
 - American Council on Science and Health (ACSH) Web site, 342–343
 - American Dietetic Association, 16, 340
 - American foods, 206–207
 - American Heart Association Web site, 340
 - American Plastics Council Web site, 276
 - amino acid score, 74
 - amino acids
 - peptides, 70
 - protein, 69–72
 - supplements, 56
 - tryptophan, 314
 - amylases, 22–23
 - anabolism, 26
 - anandamide, 312, 349
 - anaphylaxis, 303
 - anemia, 78
 - animal protein, 73–74
 - anorexia nervosa, 195
 - antibodies, 301–303
 - antidepressants, 310–311
 - antidiuretic hormone (ADH), 119, 179
 - antigen, 303, 333
 - antimicrobials, 292
 - antioxidants, 170–171, 292
 - aphrodisiacs, 331
 - appetite
 - aging adults, 58
 - cues, 191–192
 - defined, 187–188
 - eating disorders, 194–196
 - effect of temperature on, 192
 - exercise, 192–193
 - intravenous feeding, 193
 - leptin, 190–191
 - medicines, 193–194
 - menstrual cycle, 34
 - satiety, 190
 - arachidonic acid, 84–85
 - Arby's (ingredient guide), 244
 - arginine, 72
 - aromas
 - cooked foods, 270–271
 - food processing, 253–254
 - arsenic, 10
 - artificial sweeteners, 256–258, 294
 - ascorbic acid, 292
 - asparagine, 72
 - asparagus, 331
 - aspartame, 257–258
 - aspartic acid, 72
 - a-TE (alphatocopherol equivalents), 50
 - Atkins diet, 83
 - AussieBum “Essence” underwear, 64
 - average daily calorie allowance, 43–44
- B •**
- babies
 - birth defects, 59
 - breast milk, 348
 - bacon, 94, 281
 - bacteria
 - in feces, 26
 - mutans streptococci*, 177
 - bad cholesterol, 93
 - basal metabolism, 33
 - basophils, 302–303
 - beans
 - amino acid score, 74
 - cholesterol levels, 326, 346
 - gas, 346
 - health benefits of, 346
 - isoflavones, 171
 - protein, 74
 - Beaumont, William, M.D., “Experiments and Observations on the Gastric Juice and the Physiology of Digestion,” 25
 - beef
 - amino acid score, 74
 - cheeseburgers, health benefits of, 270
 - cholesterol, 94
 - cooked temperature guidelines, 266

- E. coli*, 253, 264, 266, 286
storage tips, 280–282
- benzoic acid, 292
- beriberi (vitamin B1–deficiency disease),
15, 30
- berries, 347
- best if used by date, 288
- beta carotene, 325
- beta glucan, 346
- BHA (butylated hydroxyanisole), 292
- BHT (butylated hydroxytoluene), 292
- bile, 21, 24, 83
- binge drinking, 123
- biochemical processes in making alcohol,
113–115
- bioengineered foods, 297–298
- biotin, 52, 134, 142
- bipolar disorder, 310
- bird’s nest soup, 331
- birth defects
fetal alcohol syndrome (FAS), 122
neural tube defects, 59
- bison meat, 347
- bitter flavor, 198, 202–203
- black tea, 351–352
- blood pressure
alcohol, 345
chocolate, 349
diastolic pressure, 330
Dietary Approaches to Stop Hypertension
(DASH), 329–330
extra-potassium diet, 327
potassium, 183
sodium, 180–181
systolic pressure, 330
water, 183
- blue cohosh, 61
- blueberries, 347
- BMI (Body Mass Index), 39–41
- body
cholesterol, 90–91
digestive system, 19–28
makeup of water, fat, and protein, 13–14,
69–70, 82
nutrients, 10
- Body Mass Index (BMI), 39–41
- boiling water, 263
- bomb calorimeter, 31
- bone cancer (osteosarcoma), 177
- bones
calcium, 152–153
exercise, 213
growth and density, 326
protein, 70
- botulism, 264, 266, 284–285
- bread
cutting calories, 357
dietary fiber, 110
restaurants, 240
- breast milk, 348
- breast-feeding, special nutritional needs,
147, 167
- Brown, W. Virgil (*Lowfat Cooking For
Dummies*), 261
- buffalo, 347
- bugs, edible, 201
- bulimia, 195
- Burger King (ingredient guide), 244
- butter, 90, 95, 358
- butylated hydroxyanisole (BHA), 292
- butylated hydroxytoluene (BHT), 292
- C •
- cadmium, 10
- caffeine
chocolate, 349
coffee, 332, 349
drug interactions, 316
effect on mood, 312–314
tea, 352
- calcium
bones, 152–153, 326
deficiencies, 162
health benefits, 151
health consequences of a deficiency, 9
natural sources of, 151, 158, 355–356
osteoporosis, 34
overdoses, 163
Recommended Dietary Allowances
(RDAs), 53, 158
supplements, 59, 167

- calcium propionate, 292
- calculating Body Mass Index (BMI), 40
- calories
 - alcohol, 30
 - average daily calorie allowance, 43–44
 - carbohydrates, 30
 - counting, 32
 - cutting, 42–43, 355–358
 - defined, 11, 29
 - discretionary calories, 37
 - empty calories, 30–32
 - energy, 32–36
 - fats, 30, 81–82
 - food intake guidelines in *Dietary Guidelines for Americans 2005*, 37, 219–220
 - kilocalories, 29
 - measuring the number of, 31
 - protein, 30
- Campylobacter jejuni*, 264, 266
- cancer
 - acrylamides, 269–270
 - antioxidants, 170–171
 - bone cancer, 177
 - carcinogens, 294–295
 - colon cancer, 328–329
- cancer-fighting foods
 - American Cancer Society recommendations, 329
 - cruciferous vegetables, 173
 - fiber, 328–329
 - fruits, 328
 - low-fat foods, 329
 - vegetables, 328
 - white tea, 351–352
- candy-like taste and appearance of supplements, dangers of, 60
- canned foods, 283–285
- Cannon, Walter B. (American physiologist), 189
- canola oil, 90
- carbohydrates
 - alcohol, 115
 - calories, 30
 - complex carbohydrates, 98
 - cooking, 269–270
 - defined, 97
 - dietary fiber, 98, 105–112
 - digestive system, 22–25, 103–104
 - energy, 100–102
 - exercise, 104–105
 - health benefits of, 102
 - lactose intolerance, 103–104
 - Recommended Dietary Allowances (RDAs), 46–47
 - simple carbohydrates, 97–98
 - sources of, 102–103
 - sugar, 99–100
- carcinogens, 294–295
- carnitine, 10
- carotenoids, 50, 127, 170–171, 271
- casseroles, storage, 280
- catabolism, 26
- cataracts, 332
- catechins, 351
- caviar, 331
- cavities, 177
- CDC (Centers for Disease Control) Web site, 287
- celery, 331
- celiac disease, 15
- cellulose, 99
- Celsius (C) temperatures, converting to Fahrenheit (F), 265
- Center for Science in the Public Interest (CSPI)
 - genetically engineered foods, 297–298
 - Web site, 342–343
- Centers for Disease Control (CDC) Web site, 287
- ceramic cookware, 273–274
- cereals, 110, 332
- chaparral, 61
- chaqui* (jerky), 251
- cheese and cholesterol, 95
- cheeseburgers, health benefits of, 270
- chemical digestion, 21
- chicken. *See* poultry
- chicken soup, 330–331
- children
 - candy-like taste and appearance of supplements, dangers of, 60
 - essential proteins, 72
- Chinese restaurant syndrome, 198
- chloride, 178, 181

- chocolate
 - anandamide, 312
 - aphrodisiac qualities, 331
 - effect on mood, 312
 - healthful properties, 348–349
 - phenylethylamine (PEA), 315
- cholecalciferol (vitamin D3), 50
- cholesterol
 - alcohol, 345–346
 - bacon, 94
 - bad cholesterol (LDLs), 93
 - beans, 326, 346
 - beef, 94
 - berries, 347
 - bison meat, 347
 - body's use of, 90–91
 - breast milk, 348
 - butter, 95
 - cheese, 95
 - chocolate, 348–349
 - dairy products, 95–96
 - eggs, 96
 - fats, 81, 90–91
 - fish, 95, 350
 - good cholesterol (HDLs), 93
 - heart disease, 91
 - lard, 96
 - lipoproteins, 92–94
 - low-cholesterol, low-saturated-fat diet, 326–327
 - maintaining levels of, 91–94
 - meat, 94–95
 - milk, 95
 - National Cholesterol Education Program (NCEP), 91
 - nuts, 350–351
 - oats and oat bran, health benefits of, 112, 346
 - omega-3 fatty acids, 350
 - phytosterols, 348
 - pork, 94
 - poultry, 95
 - pterostilbene, 347
 - seasonal changes in, 92
 - soluble fiber, 106
 - soybean-based products, 172
 - Stage 1 Diet, 326–327
 - stearic acid, 348
 - sterols, 83–84, 87
 - tea, 351
- cholestokinin, 83
- choline
 - defined, 10
 - health benefits, 134
 - natural sources of, 10, 140
 - overdose effects, 144
 - Recommended Dietary Allowances (RDAs), 46, 53–54, 134, 140
- choosing
 - restaurant menu items, 239–242
 - supplements, 61–64
- chopped meat, 358
- chromium, 53–54, 157
- chyme, 24
- citrulline, 72
- citrus fruits, 332
- CLA (conjugated dienoic linoleic acid), 270
- clinical mood disorders, 310
- Clostridium botulinum*, 264, 266
- Clostridium perfringens*, 266
- cocoa butter, 348
- coffee, 332, 349
- colchicine, 183
- colon, 26
- colon cancer, 328–329
- colors. *See* food colors
- comfrey, 61
- common cold, 326, 330–332
- comparison of artificial sweeteners, 258
- complementarity, 75–76
- complete protein, 75
- complex carbohydrates, 98
- conditioned response to food, 21–22, 187–188
- confounding variables, 41–42
- conjugated dienoic linoleic acid (CLA), 270
- contaminants
 - botulism, 264, 266, 284–285
 - Campylobacter jejuni*, 264, 266
 - Clostridium botulinum*, 264, 266
 - Clostridium perfringens*, 266
 - cooking away, 264–265
 - E. coli*, 253, 264, 266, 286
 - Listeria monocytogenes*, 253, 264, 266
 - Salmonella* bacteria, 129, 264, 266, 286
 - spoiled or contaminated foods, 219

- contaminants (*continued*)
Staphylococcus aureus, 266
Trichinella, 253, 286
- Controlling Cholesterol For Dummies*
 (Wiley Publishing), 92
- converting Fahrenheit (F) temperatures to Celsius (C), 265
- cooking
 acrylamides, 269–270
 aromas, 270–271
 carbohydrates, 269–270
 contaminants, 264–265
 fat, 267
 flavors, 270–271
 food color, 271
 grains, 269
 methods of, 261–263
 microwave oven, 262–263, 276
 nutrients, 277–278
 protein, 267
 temperature guidelines for cooked food, 266–267
 texture of food, 267–268
- Cooking Basics For Dummies*, 3rd Edition
 (Miller, Rama, Adamson, and Puck), 261
- cookware, 272–276
 copper cookware, 273
 copper mineral, 53, 156, 160–161
 core temperature, 182
 corn oil, 90
 coumestans, 171
 counting calories, 32
 cranberries, 347
 cravings, 200
 cretinism, 162
 cruciferous vegetables, 173, 271
- CSPI (Center for Science in the Public Interest)
 genetically engineered foods, 297–298
 Web site, 342–343
- cutting calories, 42–43, 355–358
- cyanocobalamin (vitamin B12)
 body's production of, 26
 health benefits, 133
 natural sources of, 133, 139–140
 Recommended Dietary Allowances (RDAs), 52, 139–140
 signs of deficiency, 142
- cyclamates, 257–258
 cysteine, 72
 cytokines, 332
- D •
- daidzein, 170–172
 daily calorie allowance, 43–44
 dairy products
 allergic reactions to, 304–305
 cholesterol, 95–96
 lactose intolerance, 103–104
 low- or no-fat, 355–356
 yogurt, 352–353
- DASH (Dietary Approaches to Stop Hypertension), 329–330
- defatting
 meat, 358
 poultry, 356
- deficiency diseases
 anemia, 78
 beriberi (vitamin B1–deficiency disease), 15, 30
 defined, 328
 essential nutrients, 12
 kwashiorkor (protein-deficiency disease), 12
 scurvy (vitamin C–deficiency disease), 12, 328
- dehydration, 179, 181–182, 251
- Delaney clause, 294–295
- deli meats
Listeria monocytogenes, 253, 264, 266
 storage of, 280
- delivering medicines through food, 333–334
- demulcents, 331
- dental cavities, 177
- deoxyribonucleic acid (DNA), 71
- depression, 310
- desserts
 chocolate, 348–349
 low-fat desserts, 356
 restaurants, 242
- diabetes
 healthful foods, 346
 malnutrition, 15

- Diabetes For Dummies*, 2nd Edition, (Wiley Publishing), 15
- diarrhea, 182
- diastolic pressure, 330
- diet pills
- alcohol-drug interactions, 123
 - ephedra, 60–61
 - Phen-Fen, 42
- Dietary Approaches to Stop Hypertension (DASH), 329–330
- dietary fiber
- bread, 110
 - cancer-fighting properties, 328–329
 - cereals, 110, 332
 - defined, 98, 105
 - digestive system, 106, 325
 - fruits, 110–111
 - grains, 110
 - gums, 346
 - high-fiber diet, 327
 - insoluble fiber, 106–107
 - modified citrus pectin, 106–107
 - oats and oat bran, 112, 346
 - pectin, 346
 - phytochemicals, 170
 - recommended amounts, 108–109
 - soluble fiber, 106–107
 - sources of, 107, 173
 - vegetables, 111
- Dietary Guidelines for Americans 2005*
- alcohol, 218–219
 - average daily calorie allowance, 43–44
 - exercise recommendations, 212–214
 - food choice recommendations, 214–216
 - food intake guidelines, 37, 219–220
 - hard copy ordering information, 210
 - organization of, 210
 - previous editions, 209–210
 - safety of foods, 219
 - sodium, 216–218
 - weight control recommendations, 37–39, 211–212
- Dietary Reference Intake (DRI), 45, 48–50
- Dietary Supplement Health and Education Act, 60
- dietary supplements. *See* supplements
- DiETING For Dummies* (Wiley Publishing), 340
- dietitians, 16
- diets
- amount spent on annually in America, 42
 - Atkins diet, 83
 - Dietary Approaches to Stop Hypertension (DASH), 329–330
 - eating disorders, 194–196
 - elimination diets, 306
 - extra-potassium diet, 327
 - high-fiber diet, 327
 - high-protein diet, 32, 183
 - low-cholesterol, low-saturated-fat diet, 326–327
 - low-protein diet, 79, 327
 - meal size and frequency, 191
 - sodium-restricted diet, 327
 - Stage 1 Diet, 326–327
 - vegetarianism, 330
- digestive system
- alcohol, 23–24, 117–119
 - carbohydrates, 22–25, 103–104
 - chemical digestion, 21
 - conditioned response to food, 21–22
 - dietary fiber, 106, 325
 - esophagus, 22
 - eyes, 21–22
 - fats, 25, 83–84
 - feces, 26, 28
 - fiber, 325
 - first observation of, 25
 - functions of, 19–20
 - large intestine, 26
 - mechanical digestion, 21
 - mouth, 22
 - nose, 21–22, 199
 - protein, 22–25
 - rejection reaction to food, 22
 - saliva, 22
 - small intestine, 24–27
 - stomach, 22–24
 - teeth, 22
 - time required for digesting a meal, 28
 - vitamins, 25
 - water, 175–176
- dioxin, 18
- discovery of vitamins, 126
- discretionary calories, 37

- diseases and conditions
- ageusia (loss of taste), 199
 - alcohol abuse, 120–121
 - alcoholism, 121–122
 - anaphylaxis, 303
 - beriberi (vitamin B1–deficiency disease), 15, 30
 - celiac disease, 15
 - colon cancer, 328
 - common cold, 326, 330–332
 - dental cavities, 177
 - diabetes, 15, 346
 - eating disorders, 194–196
 - fetal alcohol syndrome (FAS), 122
 - goiter, 162, 165
 - heart disease, 75, 91, 93, 112, 345–346, 348–352
 - hyperthyroidism, 34
 - hypoglycemia, 315
 - hypothyroidism, 34
 - Keshan disease, 155
 - ketosis, 83
 - kwashiorkor (protein-deficiency disease), 12
 - mood disorders, 310–311
 - neural tube defects, 59
 - obesity, 40–42, 194
 - osteoporosis, 34
 - phenylketonuria (PKU), 257
 - polymer fume fever, 275
 - scurvy (vitamin C–deficiency disease), 12
 - sore throat, 331
 - stroke, 87, 93, 348–350, 352
- distillation (alcohol), 115
- distilled water, 184
- diuretics, 123, 180, 183, 320, 327
- DNA (deoxyribonucleic acid), 71
- do not use after date, 288
- dopamine, 310–311
- DRI (Dietary Reference Intake), 45, 48–50
- dried foods, 285–286
- drug interactions
- alcohol, 122–123, 316
 - caffeine, 316
 - causes of, 317–318
 - nutrient absorption, 319–322
 - vitamins, 145
- drugs. *See* medicines
- Dunkin' Donuts (ingredient guide), 244
- duodenum, 27
- **E** ●
- E. coli*, 253, 264, 266, 286
- EAR (Estimated Average Requirement), 49
- eating disorders, 194–196
- eating out. *See* restaurants
- edible vaccines, 333–334
- editions of *Dietary Guidelines for Americans*, 209–210
- eggs
- allergic reactions to, 304–305
 - cholesterol, 96
 - cooked temperature guidelines, 266
 - packing date, 288
 - protein, 74
 - storage guidelines, 280
- electrolyte replacement formula, 182
- electrolytes, 176, 178, 180–183
- elements. *See* minerals
- 11 essential vitamins, 125
- elimination diets, 306
- ELISA (enzyme-linked immunosorbent assay), 303, 306
- emetics, 195
- empty calories, 30–32
- emulsifiers, 293
- enamelware, 274
- energy
- alcohol, 116, 118
 - calories, 11, 32–36
 - carbohydrates, 100–102
 - defined, 10–11
 - energy-in, energy-out theory, 212
 - hormones, 34–35
 - physical work, 35–36
 - resting energy expenditure (REE), 33–35
- enzyme-linked immunosorbent assay (ELISA), 303, 306
- enzymes
- amylases, 22–23
 - gastric alcohol dehydrogenase, 23
 - intestinal, 24
 - lingual lipases, 22

lipases, 82
pancreatic, 24
protein, 70–71
stomach, 23
stomach juices, 23
supplements, 56
ephedra, 60–61
(–)epicatechin compound, 348
epinephrine (adrenaline), 34, 307
Equal artificial sweetener, 257
ESADDIs (Estimated Safe and Adequate Daily Dietary Intakes), 45, 48
esophagus, role in digestive system, 22
essential fatty acids, 84–85
The Essential Guide to Prescription Drugs 2006 (Harper Collins), 322–323
essential nutrients, 12
essential proteins, 72
Estimated Average Requirement (EAR), 49
Estimated Safe and Adequate Daily Dietary Intakes (ESADDIs), 45, 48
estrogen, 34–35
ethanol (ethyl alcohol), 30–31, 113–114
ethnic foods, 205–206
exercise
 appetite, 192–193
 benefits of, 213
 bones, 213
 brainpower, 213
 carbohydrates, 104–105
 electrolytes, 182–183
 energy-in, energy-out theory, 212
 recommendations in *Dietary Guidelines for Americans 2005*, 212–214
 vitamins, 146
 water, 182–183
 weight loss, 43, 212
exotic foods, developing a taste for, 204
“Experiments and Observations on the Gastric Juice and the Physiology of Digestion” (Beaumont), 25
expires date, 288
extracellular fluid, 176
extra-potassium diet, 327
eyes
 beta carotene, 325
 cataracts, 332
 role in digestive system, 21–22

● F ●

FAAN (Food Allergy and Anaphylaxis Network) Web site, 341–342
facts about nutrition, 16–17
Fahrenheit (F) temperatures, converting to Celsius (C), 265
FAS (fetal alcohol syndrome), 122
fast-food restaurants, 242–245
fat in human body
 adipose (fatty) tissue, 82
 body’s makeup of, 13–14, 82
 fat cells, 82, 190
 fat substitutes, 18
fats
 Atkins diet, 83
 calories, 30, 81–82
 cancer-causing properties, 329
 cholesterol, 81, 90–91
 cocoa butter, 348
 cooking, 267–268
 cutting fat calories, 355–357
 digestion of, 25, 83–84
 essential fatty acids, 84–85
 fatty acids, 86–90
 food sources of, 85
 health benefits, 82
 health risks, 81
 lipases, 82–83
 lipids, 81
 lipoproteins, 92–94
 monounsaturated, 86, 89–90
 oils, 81, 90, 357–358
 Olestra/Olean fat substitutes, 18, 255–256
 omega-3 fatty acids, 87–88, 350
 phospholipids, 83–84
 polyunsaturated, 86, 89–90
 Recommended Dietary Allowances (RDAs), 46–47, 84
 saturated, 86, 89–90
 Simplese fat substitute, 256
 stanols, 87
 sterols, 83–84, 87
 substitutes, 18, 255–256
 triglycerides, 83
fat-soluble vitamins, 126–130
fattest cities (*Men’s Fitness* magazine), 38

- fatty acids, 86–90
- FDA (Food and Drug Administration)
 - Seafood Hotline, 265
 - supplement regulation, 59–61
 - Web site, 339
- feces, 26, 28
- fermentation, 114–115
- fetal alcohol syndrome (FAS), 122
- fiber. *See* dietary fiber
- fight or flight response, 34
- fish
 - allergic reactions to, 304–305
 - amino acid score, 74
 - cholesterol, 95
 - dioxin, 18
 - FDA Seafood Hotline, 265
 - health benefits of, 87–88, 349–350
 - health risks of, 88, 350
 - iodine, 349–350
 - mercury, 88, 350
 - omega-3 fatty acids, 87–88, 350
- Fisher, Lynn (*Lowfat Cooking For Dummies*), 261
- fittest cities (*Men's Fitness* magazine), 38
- flavonoids, 351
- flavors
 - ageusia (loss of taste), 199
 - bitter, 198, 202–203
 - cooked foods, 270–271
 - flavor confusion, 199
 - flavor enhancers, 291
 - food additives, 291
 - food processing, 253–254
 - MSG (monosodium glutamate), 198–199
 - salty, 198, 201
 - sour, 198
 - sweet, 198, 200
 - taste buds, 197–200
 - umami, 198
- fluid balance, 176, 178
- fluoridated water, 177
- fluoride, 53–54, 157, 164, 177
- folate, 49, 52, 59, 133, 139, 142
- food additives. *See* additives
- food allergies
 - antibodies, 301–303
 - elimination diets, 306
 - Food Allergy and Anaphylaxis Network (FAAN) Web site, 341–342
 - foods most likely to cause allergies, 304
 - incidence of, 301
 - inheritance of, 304
 - living with, 306–307
 - physical reactions to, 302–304
 - sulfites, 295–296
 - testing for, 303, 306
- Food and Drug Administration (FDA)
 - Seafood Hotline, 265
 - supplement regulation, 59–61
 - Web site, 339
- food and drug interactions. *See* drug interactions
- food choice recommendations in *Dietary Guidelines for Americans 2005*, 214–216
- food colors
 - coloring agents, 291–292
 - cooked foods, 271
- food combinations
 - calming, 314–315
 - for complete proteins, 75
 - ethnic, 205–206
 - flavor perceptions, 200
- food intake guidelines in *Dietary Guidelines for Americans 2005*, 37, 219–220
- food intolerance, 303, 307–308
- food labels
 - alcohol, 116–117
 - best if used by date, 288
 - do not use after date, 288
 - expires date, 288
 - health claims, 232–234
 - ingredients lists, 235
 - Nutrition Facts, 228–236
 - organic, 234
 - packing date, 288
 - sell-by date, 288
 - use by date, 288
- food poisoning
 - botulism, 264, 266, 284–285
 - Campylobacter jejuni*, 264, 266
 - Clostridium botulinum*, 264, 266
 - Clostridium perfringens*, 266
 - E. coli*, 253, 264, 266, 286
 - incidence, 264

- Listeria monocytogenes*, 253, 264, 266
Salmonella bacteria, 129, 264, 266, 286
spoiled or contaminated foods, 219
Staphylococcus aureus, 266
Trichinella, 253, 286
Two-Hour Rule, 265
- food processing
 alternative foods, 255–258
 aromas, 253–254
 bioengineered foods, 297–298
 defined, 12
 dehydration, 251
 flavors, 253–254
 food additives, 252
 importance of, 12–13, 249–250
 irradiation, 253, 286–288
 nutrients, 254
 shelf life, 250
 temperature control, 251
 vacuum-packaging, 252
- food pyramids, 221–228
- food safety. *See* safety of foods
- Food Safety and Information Service
 Web site, 265
- Food Safety and Inspection Service (FSIS)
 Web site, 276
- Food Safety Network at the University of Guelph (Canada) Web site, 265
- foodborne illnesses. *See* food poisoning
- frankenfoods, 297–298
- free radicals, 171, 270
- freezing foods
 effect on food texture, 282–283
 freezer burn, 283
 refreezing, 283
 safety guidelines, 279–282
 storage tips, 279–282
- fructose (fruit sugar), 99
- fruits
 alcohol, 116
 berries, 347
 cancer-fighting properties, 328
 citrus fruits, 332
 Dietary Approaches to Stop Hypertension (DASH), 330
 dietary fiber, 110–111
 grape juice, 124
 grapefruit, 319
- isoflavones, 171
 phytochemicals, 170–171
- FSIS (Food Safety and Inspection Service)
 Web site, 276
- functional foods, 328
- Funk, Casimir (Polish biochemist), 126
- **G** •
- galactose, 99
- gallbladder, 24, 83
- gas, 26, 346, 352
- gastric alcohol dehydrogenase, 23
- gelatin, 76
- Generally Recognized as Safe (GRAS) food
 additives, 290, 294
- genetically engineered foods, 297–298
- genistein, 170–172
- geography and taste preferences,
 201–203
- glands, 34
- glass cookware, 274
- glucobrassicin, 173
- gluconapin, 173
- gluconasturtin, 173
- glucose, 99, 189, 314
- glutamic acid, 72
- gluten, 15
- glycine, 72
- glycoproteins, 71
- goiter, 162, 165
- good cholesterol, 93
- Good to Eat: Riddles of Food and Culture*
 (Harris), 201–202
- gout, 79
- grains
 alcohol, 116
 cooking, 269
 dietary fiber, 110
 health benefits of, 352
 heart disease, 352
 lignans, 171
- grams, 50
- grape juice, 124
- grapefruit, 319
- GRAS (Generally Recognized as Safe) food
 additives, 290, 294
- green tea, 351–352

growling stomach, 189
 gullet (esophagus), role in digestive system, 22
 gums, 100, 346

• H •

hard water, 184
 Harris, Marvin (*Good to Eat: Riddles of Food and Culture*), 201–202
 HDLs (high-density lipoproteins), 93
 headaches
 caffeine, 332
 MSG (monosodium glutamate), 291
 health
 deficiency diseases, 12, 15
 malnutrition, 14–15, 31–32
 metabolic disorders, 15
 nutrition studies, 17–18
 nutritional status, 14–15
 health benefits
 of alcohol, 119–120, 345–346
 of beans, 346
 of berries, 347
 of biotin, 134
 of bison meat, 347
 of calcium, 151–153
 of carbohydrates, 102
 of cheeseburgers, 270
 of chocolate, 348–349
 of choline, 134
 of chromium, 157
 of coffee, 349
 of copper, 156
 of exercise, 213
 of fats, 82
 of fish, 87–88, 349–350
 of fluoride, 157
 of folate, 133
 of iodine, 155
 of iron, 154
 of magnesium, 153
 of manganese, 157
 of molybdenum, 157
 of niacin, 132
 of nuts, 350–351
 of oats and oat bran, 112, 346
 of pantothenic acid, 134

 of phosphorus, 53, 153
 of selenium, 155–156
 of tea, 351–352
 of vitamin A, 127
 of vitamin B1 (thiamin), 131
 of vitamin B2 (riboflavin), 131
 of vitamin B6 (pyridoxine), 132–133
 of vitamin B12 (cyanocobalamin), 133
 of vitamin C, 131
 of vitamin D, 128–129
 of vitamin E, 129
 of vitamin K, 130
 of whole grains, 352
 of yogurt, 352–353
 of zinc, 155
 health claims
 food labels, 232–234
 restaurant meals, 238–239
 health risks
 of alcohol, 119–120
 of fats, 81
 of fish, 88, 350
 of vitamins (megadoses), 142–144
 heart disease
 alcohol, 345–346
 chocolate, 348–349
 cholesterol, 91
 coffee, 349
 fish, 350
 homocysteine, 75
 nuts, 351
 oats and oat bran, health benefits of, 112, 346
 plaques, 93
 stearic acid, 348
 white tea, 351
 whole grains, 352
Heartburn and Reflux For Dummies
 (Wiley Publishing), 193, 349
 hemicellulose, 99
 hemoglobin, 70
 herbs
 blue cohosh, 61
 chaparral, 61
 comfrey, 61
 ephedra, 60–61
 Kombucha tea, 61
 lobelia (Indian tobacco), 61

pennyroyal, 61
senna, 61
stephania (magnolia), 61
supplements, 56, 60–61
valerian, 61
high blood pressure. *See* blood pressure
High Blood Pressure For Dummies (Rubin),
180, 329
high-density lipoproteins (HDLs), 93
high-fiber diet, 327
high-protein diet, 32, 183
histamine, 302–303
histidine, 72
hives (urticaria), 303
homocysteine, 75
honey, 331
hormones
 antidiuretic hormone (ADH), 119, 179
 cholestinin, 83
 energy, 34–35
 glands, 34
 insulin, 314
 supplements, 56
hot dogs, 281
hot lemonade, 331
huckleberries, 347
human body
 cholesterol, 90–91
 digestive system, 19–28
 makeup of water, fat, and protein, 13–14,
 69–70, 82
 nutrients, 10
hunger
 cues, 188–189, 191–192
 defined, 187–188
 effect of temperature on, 192
 hunger pang, 189
 leptin, 190–191
 satiety, 190
hydrochloric acid, 21, 23
hydroxyglutamic acid, 72
hypertension. *See* blood pressure
hyperthyroidism, 34
hypochlorite, 178
hypoglycemia, 315
hyponatremia, 183
hypothyroidism, 34

• I •

IFIC (International Food Information
Council)
 genetically engineered foods, 297–298
 Web site, 342
ileum, 27
immunoglobulin E (IgE), 303
incidence of food poisoning, 264
incomplete protein, 75–76
Indian tobacco (lobelia), 61
ingredients lists, 235
inheritance of food allergies, 304
insects, edible, 201
insoluble fiber, 106–107
insulin, 34, 189, 314
International Food Information Council
(IFIC)
 genetically engineered foods, 297–298
 Web site, 342
intestinal alcohol dehydrogenase, 24
intestinal enzymes, 24
intestines
 large intestine, 26
 small intestine, 24–27
intolerance to food, 303, 307–308
intracellular fluid, 176
intravenous feeding, 193
iodine
 deficiencies, 162, 165–166, 349–350
 goiter, 162, 165
 health benefits, 155
 natural sources of, 155
 overdoses, 164
 Recommended Dietary Allowances
 (RDAs), 53–54
ions, 176
iron
 deficiencies, 9, 162, 165
 health benefits, 154
 natural sources of, 154, 159–160
 overdoses, 163
 Recommended Dietary Allowances
 (RDAs), 53, 159–160
 supplements, 58–59, 165
iron cookware, 274–275

irradiation, 253, 286–288
 ischemic stroke, 87, 350
 isoascorbate, 293
 isoflavones, 171–172
 isoleucine, 72

• J •

jejunum, 27
 jerky (*chaqui*), 251

• K •

keratin, 69
 Keshan disease, 155
 ketosis, 83
 KFC (Kentucky Fried Chicken) ingredient guide, 245
 kilocalories, 29
 Kombucha tea, 61
 kwashiorkor (protein-deficiency disease), 12

• L •

labels
 food labels, 228–236, 288
 health claims, 232–234
 ingredients lists, 235
 Nutrition Education and Labeling Act, 228, 238–239
 Nutrition Facts, 228–236
 restaurant menus, 238–239
 supplement labels, 62–63
 lactase deficient, 352
 lactose
 defined, 99
 intolerance, 103–104
 lard, 90, 96
 large intestine, 26
 LDLs (low-density lipoproteins), 93–94
 lead, 10
 leptin, 190–191
 leucine, 72
 lignans, 171

limiting protein, 75
 lingonberries, 347
 lingual lipases, 22
 linoleic acid, 84–85
 linolenic acid, 84–85
 lipases, 82–83
 lipids, 81
 lipoproteins, 70–71, 92–94
Listeria monocytogenes, 253, 264, 266
 lithium, 311
 liver, 21, 24
 living with food allergies, 306–307
Living Gluten-Free For Dummies (Wiley Publishing), 15
 lobelia (Indian tobacco), 61
 Logue, Alexandra W. (*The Psychology of Eating and Drinking*), 203
 losing weight, 42–43
 loss of taste (ageusia), 199
 low- or no-fat dairy products, 355–356
 low-cholesterol, low-saturated-fat diet, 326–327
 low-density lipoproteins (LDLs), 93–94
Lowfat Cooking For Dummies (Fisher and Brown), 261
 low-fat desserts, 356
 low-fat foods, cancer-fighting properties, 329
 low-protein diet, 79, 327
 lunch meats
 Listeria monocytogenes, 253, 264, 266
 storage of, 280–281
 lycopene, 171
 lysine, 72

• M •

macronutrients, 11
 magnesium, 53, 153–154, 159, 163
 magnolia (*stephania*), 61
 major minerals, 150–154
 malnutrition
 causes of, 14–15
 celiac disease, 15

- diabetes, 15
- empty calories, 32
- school lunch program, 31
- maltose, 99
- managing moods with food, 315–316
- manganese, 53–54, 157
- mania, 310
- MAO inhibitors (monoamine oxidase inhibitors), 311
- margarine, 86, 358
- mast cells, 302–303
- mayonnaise, storage, 280
- McDonald's (ingredient guide), 245
- mcg (micrograms), 50
- meals, 191
- measurements used in Recommended Dietary Allowances (RDAs), 50
- measuring the number of calories, 31
- meat. *See also* beef, pork, poultry
 - bison, 347
 - cholesterol, 94–95
 - chopped meat, 358
 - cooked temperature guidelines, 266–267
 - defatting, 358
 - red meat, 347, 356
 - storage tips, 280–282
 - USDA Meat and Poultry Hotline, 265
- mechanical digestion, 21
- medicinal foods
 - blood-pressure–lowering foods, 329–330
 - cancer-fighting foods, 173, 328–329
 - cataracts, 332
 - for common cold, 326, 330–332
 - deficiency diseases, 328
 - defined, 325–326
 - delivering medicines through food, 333–334
 - memory enhancers, 332–333
 - mood-altering substances, 326
 - skin protectors, 332
 - studies, 327–328
- medicines. *See also* drug interactions
 - antidepressants, 310–311
 - appetite, 193–194
 - delivering through food, 333–334
 - diet pills, 42
 - taking on a full stomach, 322–323
 - water, 183
- megadoses of vitamins, 142–144
- memory, effect of diet on, 332–333
- men
 - body's percentage of water, fat, and protein, 13–14
 - mineral needs, 166
- menopause, special nutritional needs, 147–148, 168
- Men's Fitness* magazine, 38
- menstrual cycle, effect on appetite, 34
- mercury in fish, 88, 350
- metabolic disorders, 15
- metabolism
 - anabolism, 26
 - basal metabolism, 33
 - catabolism, 26
 - defined, 26
 - metabolites, 56
- methionine, 72
- methods of cooking, 261–263
- mg (milligrams), 50
- microbes, 279
- micrograms (mcg), 50
- micronutrients, 11
- microorganisms. *See* contaminants
- microvilli, 24
- microwave oven, 262–263, 276
- milk
 - alcohol beverage, 116
 - allergic reactions to, 304–305
 - amino acid score, 74
 - cholesterol, 95
 - galactose, 99
 - lactose, 99
 - lactose intolerance, 103–104
 - predigested milk products, 104
- Miller, Bryan (*Cooking Basics For Dummies*, 3rd Edition), 261
- milligrams (mg), 50
- mineral water, 184

- minerals
 - arsenic, 10
 - breast-feeding, 167
 - cadmium, 10
 - calcium, 9, 34, 53, 59, 151–153, 158, 162–163, 167, 326, 355–356
 - chloride, 178, 181
 - chromium, 53–54, 157
 - cooked foods, 277
 - copper, 53, 156, 160–161
 - deficiencies, 161–162
 - defined, 10
 - Dietary Reference Intake (DRI), 49–50
 - fluoride, 53–54, 157, 164, 177
 - iodine, 53–54, 155, 162, 164–166, 349–350
 - iron, 9, 53, 58–59, 154, 159–160, 162–163
 - lead, 10
 - magnesium, 53, 153–154, 159, 163
 - major minerals, 150–154
 - manganese, 53–54, 157
 - men, 166
 - menopause, 168
 - molybdenum, 53–54, 157, 164
 - nickel, 10
 - overdoses, 163–164
 - phosphorus, 53, 153, 163
 - potassium, 178, 181
 - pregnancy, 166
 - Recommended Dietary Allowances (RDAs), 46, 53–54
 - selenium, 53–54, 155–156, 163–164
 - silicon, 10
 - sodium, 178, 180–181
 - supplements, 55–56
 - tin, 10
 - trace minerals, 150, 154
 - vanadium, 10
 - vegetarians, 164–165
 - water, 184
 - women, 166–167
 - zinc, 53, 155, 160, 162–163
 - moderate drinking, 119–120, 124, 218–219
 - modified citrus pectin, 106–107
 - mold spores, 279
 - molybdenum, 53–54, 157, 164
 - monoamine oxidase inhibitors (MAO inhibitors), 311
 - monosodium glutamate (MSG), 198–199, 291, 308
 - monounsaturated fat, 86, 89–90
 - mood
 - alcohol, 312
 - anandamide, 312
 - caffeine, 312–314
 - chocolate, 312
 - defined, 309–310
 - dopamine, 310–311
 - glucose, 314
 - managing with food, 315–316
 - mood disorders, 310–311
 - mood-altering substances in food, 326
 - neurotransmitters, 310–311
 - norepinephrine, 310–311
 - phenylethylamine (PEA), 315
 - serotonin, 310–311, 315
 - sugar, 314–315
 - tryptophan, 314
 - motor skills and alcohol, 122
 - mouth, role in digestive system, 22
 - MSG (monosodium glutamate), 198–199, 291, 308
 - muscle, 35, 69, 213
 - mushrooms, 331
 - mutans streptococci*, 177
 - myelin, 82
 - myoinositol, 10
 - MyPyramid food pyramid, 225–228
- N •
- NAD (nicotinamide adenine dinucleotide), 118
 - National Cholesterol Education Program (NCEP), 91
 - National Eating Disorders Association, 196
 - natural coloring agents, 291
 - natural food additives, 290
 - Naturlose artificial sweetener, 257
 - neoglucobrassicin, 173
 - neomycin, 183
 - neotame, 257–258
 - nerves
 - electrolytes, 178
 - fat (myelin), 82
 - water, 176
 - neural tube defects, 59
 - neurotransmitters, 70, 310–311
 - neutral spirits, 115

- The New England Journal of Medicine*, 42
- niacin
 health benefits, 132
 natural sources of, 132, 138
 overdose effects, 144
 Recommended Dietary Allowances (RDAs), 52, 132, 138
 signs of deficiency, 142
- nickel, 10
- nicotinamide adenine dinucleotide (NAD), 118
- nitrites, 294
- nitrogen, 26
- nitrosamines, 294
- nonessential proteins, 72
- nonstick cookware, 275
- norepinephrine, 310–311
- norleucine, 72
- nose, role in digestive system, 21–22, 199
- nucleic acids, 71
- nucleoproteins, 70–71
- NutraSweet artificial sweetener, 257
- nutrients. *See also nutrients by name*
 Adequate Intake (AI), 45, 48
 alcohol, 116
 cooked foods, 277–278
 defined, 10–11
 Dietary Reference Intake (DRI), 45, 48–50
 drug interactions, 319–322
 essential nutrients, 12
 Estimated Safe and Adequate Daily Dietary Intakes (ESADDIs), 48
 food additives, 290–291
 food processing, 254
 lead, 10
 macronutrients, 11
 metabolic processes, 26
 micronutrients, 11
 Recommended Dietary Allowances (RDAs), 11, 45–52
 subclinical deficiency, 141
 supplements versus food, 64–65
- nutrition
 facts about, 16–17
 studies, 17–18, 327–328
- Nutrition Facts label, 228–236
- Nutrition Labeling and Education Act, 228, 238–239
- nutrition reporters and writers, 16
- nutrition researchers, 16
- nutrition scientists, 16, 31
- nutrition Web sites
 American Cancer Society, 341
 American Council on Science and Health (ACSH), 342–343
 American Dietetic Association, 340
 American Heart Association, 340
 Center for Science in the Public Interest (CSPi), 342–343
 Food Allergy and Anaphylaxis Network (FAAN), 341–342
 International Food Information Council (IFIC), 342
 Tufts University Nutrition Navigator, 343
 U.S. Food and Drug Administration, 339
 USDA Food and Nutrition Information Center (FNIC), 338–339
 USDA Nutrient Database, 337–338
- nutritional status, 14–15
- nutritionists, 16
- nuts
 allergic reactions to, 304–305
 health benefits of, 350–351
- 0 •
- oats and oat bran, health benefits of, 112, 346
- obesity, 40–42, 194
- oils, 81, 90, 357–358
- Olestra/Olean fat substitutes, 18, 255–256
- olive oil, 90
- omega-3 fatty acids, 87–88, 350
- onions, 331
- organ tissue, 56
- organic chemicals, 125
- organic compounds, 10
- organic food, 234
- organisms. *See* contaminants
- osmosis, 180
- osteoporosis, 34
- osteosarcoma (bone cancer), 177
- overdoses
 of minerals, 163–164
 of vitamins, 143–145
- ovo-lacto vegetarians, 330

oxidation, 171
oysters, 331

• p •

packaging
 paper, 276
 plastic, 276
 vacuum-packaging, 252, 280
packing date, 288
palm oil, 90
pancreas
 alkaline pancreatic juices, 24
 enzymes, 24
 insulin, 34, 189
pans for cooking, 272–276
pantothenic acid, 52, 134
paper packaging, 276
pathogens. *See* contaminants
Pavlov, Ivan Petrovich (Russian physiologist), 188
PEA (phenylethylamine), 315, 349
peanut allergies, 304–305
peanut oil, 90
peanuts, anticancer effects of, 124
pectin, 100, 346
pemmican, 251
pennyroyal, 61
peptides, 70
Percent Daily Value, 230–231
peristalsis, 23, 189
Phen-Fen, 42
phenylalanine, 72
phenylethylamine (PEA), 315, 349
phenylketonuria (PKU), 257
phenylthiocarbamide (PTC), 203
phospholipids, 83–84
phosphoproteins, 71
phosphorus, 53, 153, 158, 163
photosynthesis, 97
physical reactions to food allergies, 302–304
physical work, energy required for, 35–36
phytochemicals
 antioxidants, 170–171
 carotenoids, 170–171
 daidzein, 170–172
 defined, 13, 169
 fiber, 170, 173
 genistein, 170–172
 thiocyanates, 170, 172–173
phytoestrogens, 13, 171–172
phytosterols, 348
pituitary gland, 34
Pizza Hut (ingredient guide), 245
PKU (phenylketonuria), 257
plaques, 93
plastic, 276
polymer fume fever, 275
polyunsaturated fat, 86, 89–90
pork
 cholesterol, 94
 cooked temperature guidelines, 267
 storage tips, 281
 Trichinella, 253, 286
portions. *See* serving sizes
potassium, 178, 181, 183, 327
pots for cooking, 272–276
poultry
 cholesterol, 95
 cooked temperature guidelines, 267
 defatting, 356
 removing the skin, 356
 salmonella, 286
 storage tips, 282
 USDA Meat and Poultry Hotline, 265
PQQ (pyrroloquinoline quinone), 130
predigested milk products, 104
preformed vitamin A (retinol), 50
pregnancy, special nutritional needs, 146–147, 166
preservatives, 252, 290, 292–296
processing. *See* food processing
progesterone, 34
proline, 72
proof (alcohol), 117
protein
 amino acid scores, 74
 amino acids, 69–72
 anemia (protein-deficiency disease), 78
 animal protein, 73–74
 beans, 74

bugs, 201
calories, 30
complementarity, 75–76
complete protein, 75
cooking, 267
defined, 69
digestion of, 22–25
eggs, 74
enzymes, 70–71
essential, 72
gelatin, 76
glycoproteins, 71
grams, 50
hemoglobin, 70
high-protein diet, 32, 183
in the human body, 13–14, 69–70
incomplete protein, 75–76
kwashiorkor (protein-deficiency disease), 12
limiting protein, 75
lipoproteins, 70–71
low-protein diet, 79, 327
neurotransmitters, 70
nonessential, 72
nucleoproteins, 70–71
phosphoproteins, 71
protein synthesis, 70–71
Recommended Dietary Allowances (RDAs), 46–47, 77–79
soybean-based products, 73–74
The Psychology of Eating and Drinking (Logue), 203
PTC (phenylthiocarbamide), 203
pterostilbene, 347
Puck, Wolfgang (*Cooking Basics For Dummies*, 3rd Edition), 261
pyridoxine (vitamin B6)
health benefits, 132–133
natural sources of, 138–139
overdose effects, 144
Recommended Dietary Allowances (RDAs), 52, 138–139
signs of deficiency, 142
pyrroloquinoline quinone (PQQ), 130

• R •

radioallergosorbent test (RAST), 303, 306
radiolytic products, 286–287
raffinose, 99, 346
Rama, Marie (*Cooking Basics For Dummies*, 3rd Edition), 261
rating nutritional status, 15
RE (retinol equivalents), 50
Recommended Dietary Allowances (RDAs)
by age and by gender, 47–48
alcohol, 46–47
calcium, 158
carbohydrates, 46–47
choline, 46, 53–54, 134, 140
copper, 160–161
defined, 45
Dietary Reference Intake (DRI), 49
elements, 46, 53–54
fats, 46–47, 84
folate, 139
history of, 45–46
iodine, 53–54
iron, 159–160
macronutrients, 11
magnesium, 159
measurements, 50
micronutrients, 11
niacin, 52, 132, 138
phosphorus, 53, 158
protein, 46–47, 77–79
vitamin A, 128, 135–136
vitamin B1 (thiamin), 137–138
vitamin B2 (riboflavin), 138
vitamin B6 (pyridoxine), 138–139
vitamin B12 (cyanocobalamin), 139–140
vitamin C, 136–137
vitamin D, 129, 136
vitamin E, 129, 136
vitamins, in general, 46, 51–52
zinc, 160
red meat, 347, 356
red wine, 124, 346
reduced urination, 178–179

- REE (resting energy expenditure), 33–35
 - refreezing frozen foods, 283
 - refrigerating foods
 - safety guidelines, 279–282
 - storage tips, 279–282
 - regional foods, 205–206
 - rejection reaction to food, 22
 - removing the skin from poultry, 356
 - respondent conditioning, 188
 - restaurants
 - bread, 240
 - Chinese restaurant syndrome, 198
 - choosing menu items, 239–242
 - desserts, 242
 - fast-food restaurants, 242–245
 - health claims on menu items, 238–239
 - Nutrition Education and Labeling Act, 238–239
 - portions, 237–238
 - vegetables, 240–241
 - resting energy expenditure (REE), 33–35
 - resveratrol, 124
 - retinoids, 127
 - retinol equivalents (RE), 50
 - retinol (preformed vitamin A), 50
 - retort pouch, 283
 - riboflavin (vitamin B2)
 - health benefits, 131
 - natural sources of, 132, 138
 - Recommended Dietary Allowances (RDAs), 52, 138
 - signs of deficiency, 142
 - ribonucleic acid (RNA), 71
 - Roosevelt, Franklin Delano (U.S. president), 31
 - Rubin, Alan L., M.D. (*High Blood Pressure For Dummies*), 180, 329
 - rumbling stomach, 189
- S •**
- saccharin, 256–258, 294
 - safety of foods
 - canned foods, 284–285
 - cooked food temperature guidelines, 266–267
 - Dietary Guidelines for Americans 2005*, 219
 - food additives, 293–295
 - frozen foods, 279–282
 - refrigerated foods, 279–282
 - spoiled or contaminated foods, 219
 - supplements, 59–61
 - Two-Hour Rule, 265
 - safflower oil, 90
 - salad dressing, 357
 - saliva, 22–23
 - Salmonella* bacteria, 129, 264, 266, 286
 - salty flavor, 198, 201
 - satiety, 190
 - saturated fats, 86, 89–90
 - school lunch program, 31
 - scurvy (vitamin C–deficiency disease), 12, 328
 - seasonal changes in cholesterol levels, 92
 - seasoning vegetables, 358
 - selective serotonin reuptake inhibitors (SSRIs), 310–311
 - selenium, 53–54, 155–156, 163–164
 - sell-by date, 288
 - senna, 61
 - serine, 72
 - serotonin, 310–311, 315
 - serving sizes
 - MyPyramid food pyramid, 225–226
 - Nutrition Facts label, 229–230
 - reference guide, 238
 - restaurants, 237–238
 - USDA Food Guide Pyramid, 222–224
 - sex glands, 34
 - SGSD (sulforaphane glucosinolate), 173
 - shelf life of foods, 250
 - shellfish
 - allergic reactions to, 304–305
 - FDA Seafood Hotline, 265
 - Shugr artificial sweetener, 257
 - silicon, 10
 - simple carbohydrates, 97–98
 - Simplese fat substitute, 256
 - sinigrin, 173
 - skin, effect of diet on, 332
 - small intestine, 24–27
 - smokers, 145

- sodium, 178, 180–181, 216–218
- sodium ascorbate, 293
- sodium benzoate, 293
- sodium pump, 178
- sodium-restricted diet, 327
- soft water, 184
- soluble fiber, 106–107
- sore throat, 331
- sour flavor, 198
- soybean oil, 90
- soybean-based products
 - allergic reactions to, 304–305
 - amino acid score, 74
 - cholesterol levels, 172
 - daidzein, 171
 - genistein, 171
 - isoflavones, 172
 - protein, 73–74
- soybean-cottonseed oil, 90
- sparkling water, 184
- spicy foods, 326, 332
- Splenda artificial sweetener, 257
- spoiled or contaminated foods, 219
- spray drying, 285
- spring water, 184
- SSRIs (selective serotonin reuptake inhibitors), 310–311
- stabilizers, 293
- stachyose, 99, 346
- Stage 1 Diet, 326–327
- stainless steel cookware, 275–276
- standard (healthy) weights, 37, 39
- stanols, 87
- Staphylococcus aureus*, 266
- starch, 99
- stearic acid, 348
- stephania (magnolia), 61
- sterols, 83–84, 87
- still water, 184
- stomach
 - chyme, 24
 - enzymes, 23
 - growing, 189
 - hydrochloric acid, 21, 23
 - peristalsis, 23
 - role in digestive system, 22–24
 - rumbling, 189
 - taking medicines on a full stomach, 322–323
 - upset stomach, 182, 353
- stomach juices, 23
- storage tips, 280–282
- stroke
 - chocolate, 348
 - coffee, 349
 - fish, 350
 - ischemic stroke, 87, 350
 - plaques, 93
 - whole grains, 352
- studies about nutrition, 17–18, 327–328
- subclinical deficiency, 141
- suboptimal vitamin levels, 56–57
- substitute foods
 - artificial sweeteners, 256–258, 294
 - fat substitutes, 18, 255–256
- Subway (ingredient guide), 245
- sucralose, 257–258
- sucrose, 99
- sugar
 - alcohol, 116
 - carbohydrates, 99–100
 - cellulose, 99
 - effect on mood, 314–315
 - empty calories, 30–31
 - fructose (fruit sugar), 99
 - galactose, 99
 - glucose, 99, 189, 314
 - gums, 100
 - hemicellulose, 99
 - hypoglycemia, 315
 - lactose, 99
 - maltose, 99
 - pectin, 100
 - raffinose, 99
 - soothing properties for a sore throat, 331
 - stachyose, 99
 - starch, 99
 - substitutes, 256–258, 294, 356
 - sucrose, 99
- sulfites, 286, 295–296
- sulforaphane glucosinolate (SGSD), 173
- sulfur compounds, 172–173

- sulfur-based compounds, 170
 - Sunett artificial sweetener, 257
 - sunlight, 148
 - supplements
 - aging adults, 58–59
 - amino acids, 56
 - AussieBum “Essence” underwear, 64
 - benefits of taking, 58
 - candy-like taste and appearance of supplements, dangers of, 60
 - choosing, 61–64
 - defined, 55
 - Dietary Supplement Health and Education Act, 60
 - enzymes, 56
 - Food and Drug Administration (FDA), 59–61
 - versus food as a nutrient source, 64–65
 - herbs, 56, 60–61
 - hormones, 56
 - labels, 62–63
 - metabolites, 56
 - minerals, 55–56
 - organ tissue, 56
 - safety of, 59–61
 - suboptimal vitamin levels, 56–57
 - vitamins, 55–56
 - why people take them, 56–58
 - women, 58–59
 - sweet flavor, 198, 200
 - Sweet’N Low artificial sweetener, 256–257
 - synthetic coloring agents, 291–292
 - synthetic food additives, 290
 - systolic pressure, 330
- **T** ●
- table sugar. *See* sugar
 - tagatose, 257–258
 - taking medicines on a full stomach, 322–323
 - taste buds, 197–200
 - taste preferences and geography, 201–203
 - taurine, 10
 - tea
 - black tea, 351–352
 - green tea, 351–352
 - Kombucha tea, 61
 - white tea, 351–352
 - teeth
 - dental cavities, 177
 - fluoridated water, 177
 - role in digestive system, 22
 - temperature
 - cooked food, 266–267
 - effect on hunger and appetite, 192
 - frozen food, 251, 280–282
 - killing contaminants, 251
 - refrigerated food, 251, 280–282
 - testing for food allergies, 303, 306
 - testosterone, 34–35
 - texture of food
 - effect of cooking, 267–268
 - texturizers, 293
 - thalidomide, 17
 - theobromine, 349
 - thiamin (vitamin B1)
 - beriberi (vitamin B1–deficiency disease), 15, 30
 - health benefits, 131
 - natural sources of, 131, 137–138
 - Recommended Dietary Allowances (RDAs), 137–138
 - signs of deficiency, 142
 - thickeners, 293
 - thiocyanates, 170, 172–173
 - thirst, 178
 - threonine, 72
 - thyroid gland, 34
 - tin, 10
 - tocopherols, 50, 129
 - tocotrienols, 50, 129
 - Tolerable Upper Intake Level (UL), 49
 - toxins, 294
 - trace minerals, 150, 154
 - tree nuts, 304–305
 - Trichinella*, 253, 286
 - tricyclic antidepressants, 310
 - triglycerides, 83
 - trivalent chromium, 157
 - truffles, 331
 - tryptophan, 72, 76, 314
 - Tufts University Nutrition Navigator Web site, 343

TV dinners, storage, 280
 Two-Hour Rule for food safety, 265
 tyrosine, 72, 314

• U •

umami flavor, 198
 unipolar disorder, 310
 unique radiolytic products (URPs), 287
 Upper Intake Level (UL), 49
 upset stomach
 causes of, 353
 dehydration, 182
 uremic poisoning, 79
 urination
 alcohol, 119
 antidiuretic hormones (ADH), 119
 diuretics, 180, 320
 reduced urination, 178–179
 URPs (unique radiolytic products), 287
 urticaria (hives), 303
 U.S. Food and Drug Administration. *See*
 Food and Drug Administration
 USDA
 Food and Nutrition Information Center
 (FNIC), 338–339
 Food Guide Pyramid, 222–224, 227
 Meat and Poultry Hotline, 265
 MyPyramid food pyramid, 225–228
 Nutrient Database, 337–338
 use by date, 288

• V •

vaccines, 333–334
 vacuum-packaging, 252, 280
 valerian, 61
 valine, 72
 vanadium, 10
 vasoconstrictors, 332
 vegans, 74, 146, 165, 330
 vegetables
 cancer-fighting properties, 328
 cruciferous vegetables, 173, 271
 Dietary Approaches to Stop Hypertension
 (DASH), 330

dietary fiber, 111
 isoflavones, 171
 phytochemicals, 170–171
 restaurant meals, 240–241
 seasoning, 358
 vegetarianism, 57–58, 74, 146, 164–165, 330
 very low-density lipoproteins (VLDLs), 93
 villi, 24
 vitamin A
 carotenoids, 50
 health benefits, 127
 natural sources of, 135–136
 overdose effects, 143–144
 Recommended Dietary Allowances
 (RDAs), 51, 128, 135–136
 retinol equivalents (RE), 50
 retinol (preformed vitamin A), 50
 signs of deficiency, 141
 vitamin B1 (thiamin)
 beriberi (vitamin B1–deficiency disease),
 15, 30
 health benefits, 131
 natural sources of, 131, 137–138
 Recommended Dietary Allowances
 (RDAs), 137–138
 signs of deficiency, 142
 vitamin B2 (riboflavin)
 health benefits, 131
 natural sources of, 132, 138
 Recommended Dietary Allowances
 (RDAs), 52, 138
 signs of deficiency, 142
 vitamin B6 (pyridoxine)
 health benefits, 132–133
 natural sources of, 138–139
 overdose effects, 144
 Recommended Dietary Allowances
 (RDAs), 52, 138–139
 signs of deficiency, 142
 vitamin B12 (cyanocobalamin)
 body's production of, 26
 health benefits, 133
 natural sources of, 133, 139–140
 Recommended Dietary Allowances
 (RDAs), 52, 139–140
 signs of deficiency, 142

- vitamin C
 - citrus fruits, 332
 - as a food additive, 291
 - health benefits, 131
 - health consequences of a deficiency, 9, 12
 - natural sources of, 136–137
 - overdose effects, 145
 - Recommended Dietary Allowances (RDAs), 46, 51, 136–137
 - scurvy (vitamin C–deficiency disease), 12, 328
 - signs of deficiency, 142
 - vitamin D
 - cholesterol, 91
 - health benefits, 128–129
 - natural sources of, 136
 - overdose effects, 143
 - Recommended Dietary Allowances (RDAs), 51, 129, 136
 - sunlight, 148
 - vitamin D1, 50
 - vitamin D2, 50
 - vitamin D3 (cholecalciferol), 50
 - vitamin E
 - health benefits, 129
 - natural sources of, 130, 136
 - overdose effects, 144
 - Recommended Dietary Allowances (RDAs), 51, 129, 136
 - signs of deficiency, 142
 - tocopherols, 50, 129
 - tocotrienols, 50, 129
 - vitamin K
 - body's production of, 26
 - health benefits, 130
 - natural sources of, 130
 - Recommended Dietary Allowances (RDAs), 51
 - signs of deficiency, 142
 - vitamins
 - breast-feeding, 147
 - cooked foods, 277–278
 - deficiencies, 141–142
 - defined, 125
 - Dietary Reference Intake (DRI), 49–50
 - digestion of, 25
 - discovery of, 126
 - drug interactions, 145
 - 11 essential vitamins, 125
 - exercise, 146
 - fat-soluble, 126–130
 - megadoses, 142–144
 - menopause, 147–148
 - micrograms (mcg), 50
 - milligrams (mg), 50
 - overdose effects, 143–145
 - pregnancy, 146–147
 - Recommended Dietary Allowances (RDAs), 46, 51–52
 - smokers, 145
 - suboptimal vitamin levels, 56–57
 - supplements, 55–56
 - vegetarians, 146
 - water-soluble, 126, 130–134
 - VLDLs (very low-density lipoproteins), 93
 - vomiting, 182, 195
- *W* ●
- walnuts, 351
 - washing chopped meat, 358
 - water
 - blood pressure, 183
 - body's percentage of, 13–14
 - boiling, 263
 - dehydration, 179, 181–182
 - digestive system, 175–176
 - distilled water, 184
 - diuretics, 180, 183
 - electrolytes, 176, 178, 180–183
 - elements, 184
 - exercise, 182–183
 - extracellular fluid, 176
 - fluid balance, 176
 - fluoridated water, 177
 - hard water, 184
 - high-protein diet, 183
 - how much do you need, 179–180
 - hyponatremia, 183
 - intracellular fluid, 176
 - medications, 183
 - mineral water, 184
 - osmosis, 180
 - reduced urination, 178–179

soft water, 184
sparkling water, 184
spring water, 184
still water, 184
thirst, 178
why you need it, 175–176
water-soluble vitamins, 126, 130–134
weight
 Body Mass Index (BMI), 39–41
 obesity, 40–42
 recommendations for controlling in
 Dietary Guidelines for Americans 2005,
 37–39, 211–212
 standard (healthy) weights, 38–39
weight loss
 cutting calories, 42–43
 energy-in, energy-out theory, 212
 ephedra, 60–61
 exercise, 43, 212
 Phen-Fen, 42
Wendy's (ingredient guide), 245
wheat
 allergic reactions to, 304–305
 amino acid score, 74
white tea, 351–352

whole grains
 cooking, 269
 dietary fiber, 110
 health benefits of, 352
 heart disease, 352
 lignans, 171
wine, 124, 346
women
 body's percentage of water, fat, and
 protein, 13–14
 breast-feeding, 147, 167
 menopause, 147–148, 168
 menstrual cycle, effect on appetite, 34
 mineral needs, 166–167
 pregnancy, 146–147, 166
 supplements, 58–59

• **Y** •

yogurt, 352–353

• **Z** •

zinc, 53, 155, 160, 162–163

