A·N·N·U·A·L E·D·I·T·I·O·N·S

HEALTH

97/98

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Members of the Advisory Board are instrumental in the final selection of articles for each edition of ANNUAL EDITIONS. Their review of articles for content, level, currentness, and appropriateness provides critical direction to the editor and staff. We think that you will find their careful consideration well reflected in this volume.

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To the Reader

In publishing ANNUAL EDITIONS we recognize the enormous role played by the magazines, newspapers, and journals of the *public press* in providing current, first-rate educational information in a broad spectrum of interest areas. Many of these articles are appropriate for students, researchers, and professionals seeking accurate, current material to help bridge the gap between principles and theories and the real world. These articles, however, become more useful for study when those of lasting value are carefully *collected, organized, indexed,* and *reproduced* in a *low-cost format,* which provides easy and permanent access when the material is needed. That is the role played by ANNUAL EDITIONS. Under the direction of each volume's *academic editor,* who is an expert in the subject area, and with the guidance of an *Advisory Board,* each year we seek to provide in each ANNUAL EDITION a current, well-balanced, carefully selected collection of the best of the public press for your study and enjoyment. We think that you will find this volume useful, and we hope that you will take a moment to let us know what you think.

America is in the midst of a revolution that is changing the way millions of people view their health. Traditionally, most people delegated responsibility for their health to their physicians and hoped that medical science would be able to cure whatever ailed them. This approach to health care emphasized the role of medical technology and funneled billions of dollars into medical research. The net result of all this spending is the most technically advanced and expensive health care system in the world. Unfortunately, health care costs have risen so high that millions of Americans can no longer afford health care, and even those who can, have limited access to many of the new technologies because the cost is prohibitive. Despite all the technological advances, the medical community has been unable to reverse the damage associated with society's unhealthy lifestyle. This fact, coupled with rapidly rising health care costs, has prompted millions of individuals to assume a more active role in safeguarding their own health. Evidence of this change in attitude can be seen in the growing interest in nutrition, physical fitness, and stress management. If we as a nation are to capitalize on this new health consciousness, we must devote more time and energy to educating Americans in the health sciences so they will be better able to make informed choices about their health.

Health is such a complex and dynamic subject that it is practically impossible for anyone to stay abreast of all the current research findings. For this reason Americans have generally come to rely on the public press for information on major health issues. Unfortunately, the information presented in some health articles is questionable at best and, in many cases, it is totally inaccurate. If consumers are to make wise decisions about their health based on such information, they must have the skills necessary to sort out fact from conjecture. *Annual Editions: Health 97/98* was designed to aid in this task. It offers a sampling of quality articles that represent current thinking on a variety of health issues and serves as a tool for developing critical thinking skills.

The articles selected for this volume were carefully chosen on the basis of their quality and timeliness. Because this book is revised and updated annually, it contains information that is not currently available in any standard textbook. As such, it serves as a valuable resource for both teachers and students. In an attempt to stay current with the field of health education, this edition has been reorganized and expanded to include a chapter on health behavior and decision making. The content areas presented in this edition generally mirror those that are covered in introductory health courses. The 10 topic areas covered are: Health Behavior and Decision Making; Stress and Mental Health; Nutritional Health; Exercise and Weight Control; Drugs and Health; Human Sexuality; Current Killers; America's Health and the Health Care System; Consumer Health; and Contemporary Health Hazards. Because of the interdependence of the various elements that constitute health, the articles selected were written by naturalists, environmentalists, psychologists, economists, sociologists, nutritionists, consumer advocates, and traditional health practitioners. The diversity of these selections provides the reader with a variety of points of view regarding health and the complexity of the issues involved.

Annual Editions: Health 97/98 is one of the most useful and up-to-date publications currently available in the area of health. Please let us know what you think of it by filling out and returning the postage-paid article rating form on the last page of this book. Any anthology can be improved. This one will be—annually.

Richard Yarian
Editor

The concepts in bold italics are developed in the article. For further expansion please refer to the Topic Guide and the Index.

Topic Guide

This topic guide suggests how the selections in this book relate to topics of traditional concern to health students and professionals. It is useful for locating articles that relate to each other for reading and research. The guide is arranged alphabetically according to topic. Articles may, of course, treat topics that do not appear in the topic guide. In turn, entries in the topic guide do not necessarily constitute a comprehensive listing of all the contents of each selection.

TOPIC AREA	TREATED IN
Addiction	24. Kicking Butts 25. Alcohol and Tobacco: A Deadly Duo
AIDS (Acquired Immune Deficiency Syndrome)	6. Critical Life Events and the Onset of Illness 37. Mutant Gene Can Slow AIDS Virus 38. Disease Detective 54. Prevent Sexually Transmitted Diseases
Alcohol	25. Alcohol and Tobacco: A Deadly Duo 26. Alcohol: Spirit of Health? 33. Rating Your Risks for Heart Disease 35. Strategies for Minimizing Cancer Risk
Birth Control/ Contraception	29. Choosing a Contraceptive 30. Preventing STDs 35. Strategies for Minimizing Cancer Risk
Cancer	6. Critical Life Events and the Onset of Illness 12. Food for Thought about Dietary Supplements 13. Food Pyramid 25. Alcohol and Tobacco: A Deadly Duo 26. Alcohol: Spirit of Health? 31. Family History 34. Heart of the Matter 35. Strategies for Minimizing Cancer Risk 36. Cancer-Fighting Foods 42. Examining the Routine Examination 45. How Health Savvy Are You? 51. Quiz: Are You Ready for the Sun?
Cardiovascular Disease	6. Critical Life Events and the Onset of Illness 11. Dietary Gospel—or Phony Baloney? 12. Food for Thought about Dietary Supplements 14. Fast Food: Fatter than Ever 16. Fitness Fiction 18. Fat Times 26. Alcohol: Spirit of Health? 32. Cholesterol 33. Rating Your Risks for Heart Disease 34. Heart of the Matter 42. Examining the Routine Examination
Consumer Health	12. Food for Thought about Dietary Supplements 18. Fat Times 22. How To Pick a Pain Reliever 23. OTC Drugs: Prescription for Danger? 30. Preventing STDs 40. Medical Savings Accounts 41. Can HMOs Help Solve Health-Care Crisis? 42. Examining the Routine Examination 43. Your Hospital Stay 44. New Doctors of Natural Medicine 45. How Health Savvy Are You? 46. Nutrition in the News 47. Switch to OTC
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Depression	9. Out of the Blues 10. Depression: Way beyond the Blues 24. Kicking Butts
Dietary Fat	2. Healthy Habits: Why Bother? 11. Dietary Gospel—or Phony Baloney? 13. Food Pyramid 14. Fast Food: Fatter than Ever 15. Snack Attack 19. Test Your Weight-Loss IQ 20. Gaining on Fat 32. Cholesterol 45. How Health Savvy Are You?
Dietary Fiber	12. Food for Thought about Dietary Supplements 13. Food Pyramid
Dietary Minerals	12. Food for Thought about Dietary Supplements 36. Cancer-Fighting Foods
Drugs	10. Depression: Way beyond the Blues 20. Gaining on Fat 22. How to Pick a Pain Reliever 23. OTC Drugs 24. Kicking Butts 25. Alcohol and Tobacco: A Deadly Duo 47. Switch to OTC 53. 'Wonder Drugs'
Environmental Health Hazards	35. Strategies for Minimizing Cancer Risk 51. Quiz: Are You Ready for the Sun? 52. Bad News Bugs 53. 'Wonder Drugs' 55. How Much Are Pesticides Hurting Your Health?
Exercise and Fitness	16. Fitness Fiction 17. Which Exercise Is Best for You? 18. Fat Times 19. Test Your Weight-Loss IQ 32. Cholesterol 33. Rating Your Risks for Heart Disease 34. Heart of the Matter 35. Strategies for Minimizing Cancer Risk 45. How Health Savvy Are You?
Food and Disease Prevention	12. Food for Thought about Dietary Supplements 32. Cholesterol 35. Strategies for Minimizing Cancer Risk 36. Cancer-Fighting Foods

TOPIC AREA	TREATED IN
Genetics	3. Risk: What It Means to You 10. Depression: Way beyond the Blues 12. Food for Thought about Dietary Supplements 18. Fat Times 19. Test Your Weight-Loss IQ 20. Gaining on Fat 31. Family History 33. Rating Your Risks for Heart Disease 35. Strategies for Minimizing Cancer Risk 37. Mutant Gene Can Slow AIDS Virus
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Health Risk Analysis	2. Healthy Habits: Why Bother? 3. Risk: What It Means to You 5. Challenging America's Inverted Health Priorities 31. Family History 33. Rating Your Risks for Heart Disease 55. How Much Are Pesticides Hurting Your Health?
Hypertension	11. Dietary Gospel—or Phony Baloney? 17. Which Exercise Is Best for You? 26. Alcohol: Spirit of Health? 32. Cholesterol 33. Rating Your Risks for Heart Disease 45. How Health Savvy Are You?
Immunity	7. Can You Laugh Your Stress Away? 12. Food for Thought about Dietary Supplements 36. Cancer-Fighting Foods 34. Heart of the Matter 37. Mutant Gene Can Slow AIDS Virus 38. Disease Detective 53. 'Wonder Drugs'
Infectious Illness	30. Preventing STDs 34. Heart of the Matter 37. Mutant Gene Can Slow AIDS Virus 38. Disease Detective 43. Your Hospital Stay 52. Bad News Bugs 53. 'Wonder Drugs' 54. Prevent Sexually Transmitted Diseases
Longevity	5. Challenging America's Inverted Health Priorities 31. Family History 35. Strategies for Minimizing Cancer Risk 37. Mutant Gene Can Slow AIDS Virus
Medical Concerns and Ethics	23. OTC Drugs 39. Health Unlimited 43. Your Hospital Stay 47. Switch to OTC 48. The Doctor Is On 49. Health Insurance Hazards
Mental Health and Depression	7. Can You Laugh Your Stress Away? 8. Good Mood Foods 9. Out of the Blues 10. Depression: Way beyond the Blues 24. Kicking Butts 49. Health Insurance Hazards
Nutrition	11. Dietary Gospel—or Phony Baloney? 12. Food for Thought about Dietary Supplements 13. Food Pyramid 14. Fast Food: Fatter than Ever 15. Snack Attack 18. Fat Times 32. Cholesterol 35. Strategies for Minimizing Cancer Risk 36. Cancer-Fighting Foods 45. How Health Savvy Are You? 46. Nutrition in the News
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Sexually Transmitted Diseases (STDs)	29. Choosing a Contraceptive 54. Prevent Sexually Transmitted Diseases
Stress	6. Critical Life Events and the Onset of Illness 7. Can You Laugh Your Stress Away? 8. Good Mood Foods 17. Which Exercise Is Best for You? 21. Body Mania 32. Cholesterol 43. Your Hospital Stay
Tobacco and Health	5. Challenging America's Inverted Health Priorities 24. Kicking Butts 25. Alcohol and Tobacco: A Deadly Duo 32. Cholesterol 33. Rating Your Risks for Heart Disease
Violence and Rape	56. Why Is Date Rape So Hard to Prove? 57. What Every Woman Needs to Know about Personal Safety
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Weight Control/Obesity	11. Dietary Gospel—or Phony Baloney? 15. Snack Attack 16. Fitness Fiction 17. Which Exercise Is Best for You? 18. Fat Times 19. Test Your Weight-Loss IQ 20. Gaining on Fat 21. Body Mania 32. Cholesterol 33. Rating Your Risks for Heart Disease 35. Strategies for Minimizing Cancer Risk

Health Behavior and Decision Making

Those of us who protect our health daily and those of us who put our health in constant jeopardy have exactly the same mortality: 100 percent. The difference, of course, is the timing." This quote from Elizabeth M. Whelan reminds us that we must all face the fact that we are going to die sometime. This book, and especially this unit, are designed to assist students in the development of cognitive skills and knowledge that, when put to use, can postpone the moment of death as long as possible. While we cannot control all of the things that happen to us, we must all strive to make informed decisions about things we can control.

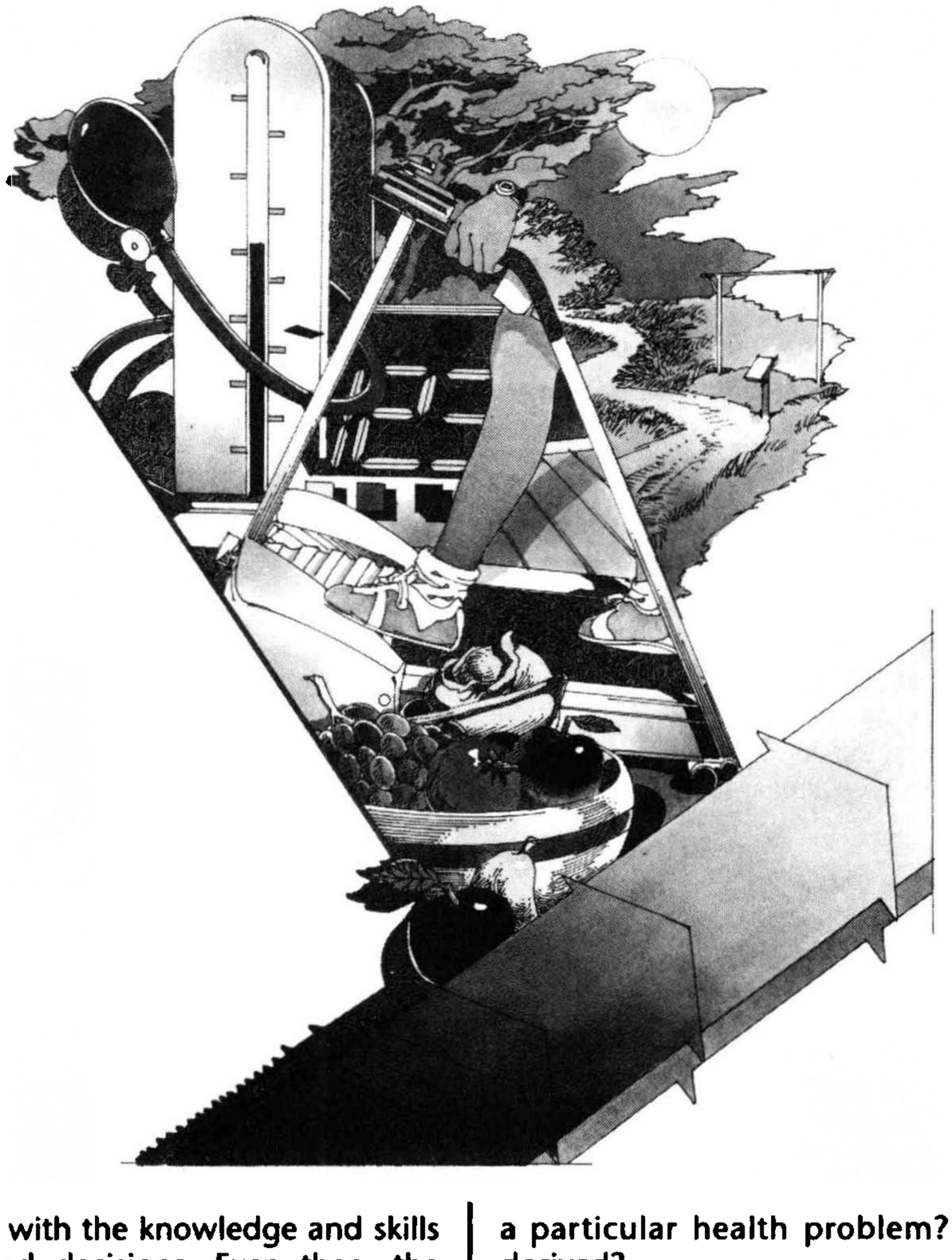
To consider the issue of decision making in the proper perspective, let us first address the issue of risk taking. Everything we do in life involves risk, from taking a bath to bungee jumping. The question we must all address is whether any specific behavior is worth the risk. Answering such questions requires accurate information and active choice. The goal of health education is to assist students in learning the skills necessary to make informed decisions. We cannot predict what knowledge the future will bring, but we can acquire skills that can be used to evaluate the validity and significance of new information as it becomes available. The article "Challenging America's Inverted Health Priorities" argues that we have a tendency to minimize the dangers of known hazards such as tobacco and alcohol and focus our attention on potentially minor health hazards. The author argues that this situation is the result of economic and political forces.

Health-related articles fill our newspapers, magazines, and television broadcasts. Rather than inform and enlighten the public on significant new medical discoveries, much of this coverage does little more than add to the level of public confusion. At least two major factors lead to such confusion. The first is that, along with keeping the public informed, these media have the additional goal of increasing circulation and viewership. That is, they are dedicated to selling copies and advertising space and time. In their quest to create interest, then, the media often try to capitalize on medical discoveries by overstating their significance before all the facts are known. The second factor that contributes to confusion is ignorance on behalf of the American public regarding how scientific investigations are conducted. If we as health educators and students wish to reduce the confusion and hyperbole surrounding health matters, we must identify criteria for consumers' use in assessing news stories. The article "Risk: What It Means to You" is included in this unit because it discusses the strengths and weaknesses of the scientific methods being used to study health problems. The report "Healthy Habits: Why Bother?" demonstrates how scientific investigations can come to faulty conclusions if the statistical analysis does not include relevant variables. That is, numbers can be manipulated so that they are misleading. This article also addresses the influence that our health behaviors can have on both our longevity and the quality of our lives.

While the scientific community is in general agreement that certain behaviors promote health and others are damaging, experience has taught us that information alone is not enough to bring about behavioral change in many people. A good example of such resistance is discussed in "A Picture of Health." How can health educators assist people to change their behavior? In " 'Just Do It' Isn't Enough: Change Comes in Stages," Dr. James Prochaska is interviewed about the stages of change that most people go through when they are successful in making a lasting behavior change.

While the goal of health education is to promote healthy lifestyles, this objective cannot be reached unless

UNIT 1



or until the public is armed with the knowledge and skills necessary to make informed decisions. Even then, the choice is, and must remain, up to each individual.

Looking Ahead: Challenge Questions

Why do people continue to engage in specific behaviors that they know will have a negative impact on their health?

How successfully are Americans moving toward the goals set forth by the "Healthy People 2000" initiative?

What is the difference between absolute risk and relative risk as it applies to the likelihood of developing a particular health problem? How are these statistics derived?

Explain how the improper use of statistical methods can yield misleading results to an otherwise sound research design.

Discuss the six stages of change and the role each plays in bringing about a permanent behavioral change.

Explain the statement that America has inverted its national health priorities.

Which of your health behaviors would you like to change? What prevents you from making these changes?

A PICTURE OF HEALTH

Last year, as part of its Healthy People 2000 program, the U.S. Public Health Service gave a "midterm exam" to see whether we're becoming a nation of healthier people. The results were mixed. Some trends are clearly headed in the right direction; in other areas, many Americans are losing ground. The table on page 8 lists baseline data collected mostly in the 1980s, midterm results mostly from the first half of the 1990s, and the goals for the year 2000. The final column shows how our readers stack up against the average American, based on the results of a random survey of some 900 subscribers.

Overall, our readers are a healthy lot—or at least a health-conscious lot, as you might expect. In most of the 19 areas covered by our quiz, they appear to have quite a head start toward the national goals; in fact, they've surpassed many of those goals. But there's room for improvement in several other areas.

There's room for improvement in several areas.

See how you compare—what you're doing right, and where you fall short.

Weight control

Your answer to **question #1**, body mass index, indicates whether you are officially overweight. A BMI of 27.8 or higher for men or 27.3 or higher for women qualifies.

The nation as a whole has put on quite a bit of weight since the Public Health Service set its objective of no more than 20 percent of all adults overweight by decade's end. But our readers seem to be on target for meeting that goal.

Maintaining a healthy weight is one of the most important things you can do to protect your overall health and longevity. In addition to the personal cost, overweight also costs society a bundle—as much as $52-billion a year, according to some estimates. (Note that the need to lose weight depends not just on your body mass index, but other factors as well. See *Consumer Reports on Health*'s September 1995 issue.)

Here's a look at the health of the nation—and a chance to evaluate your own habits.

Fitness

In response to **question #2**, roughly one-quarter of our readers reported getting physical activity at least as intense as sustained walking for at least half an hour a day. Another third said they "usually" did.

Such light-to-moderate exertion is what fitness authorities now recommend—having backed off from an earlier, more demanding prescription that probably scared away more people than it attracted. That change of heart came in response to studies showing that exercise's ability to prevent disease depends more on the total amount of activity people get than on how hard they work out. Best of all, you don't have to put in your half hour all at once; you can piece it together in brief bursts throughout the day.

Just because light exercise is good for you doesn't mean that more vigorous exercise isn't better. The traditional prescription of at least a 20-minute hard workout three times a week still gives the heart and lungs a boost you can't get from gentler exercise. Twenty percent of our readers report "always" getting that much exercise (**question #3**)—which exactly matches the national goal set for the year 2000.

On the other hand, our survey sample—and the rest of the nation—falls far short of the goal set for regular strength-training exercise (**question #4**), which includes weight lifting, resistance training, and other muscle-building activities. Even adding the 12 percent who "usually" perform strength training at least twice a week to the 15 percent who "always" do,

our readers still don't approach the ambitious 40 percent participation level that the Public Health Service dreams of. That's unfortunate—since, as we reported last month, muscle-building exercise provides many important benefits, most of which you won't get from other types of exercise.

Diet

Reliable dietary data are notoriously difficult to collect. You really can't rely on off-hand self-reports of how much fat or how many servings of a particular food group are in the diet. That said, our readers' *impressions* of their typical diet make interesting reading.

Roughly one-third claimed that they "always" follow a diet that gets no more than 30 percent of its total calories from fat (**question #5**). Nearly as many believe their saturated-fat intake doesn't exceed the recommended maximum of 10 percent of calories (**question #6**). The latest Government data show that the average American's fat intake hovers around 34 percent of total calories, with saturated fat at about 12 percent.

Fewer readers put as much effort into getting at least six daily servings of grains, including bread, cereal, pasta, and rice (**question #7**). While the national average intake has nearly reached that Healthy People goal, the recommended intake is actually 6 to 11 servings of grains. That may sound like an awful lot, but it's actually quite doable when you consider what constitutes a single serving. Some examples:

- 1 slice of bread.
- 1/2 cup cooked cereal, rice, or pasta.
- 1/2 bagel, muffin, or bun.
- 1 small tortilla.
- 5 saltine crackers.
- 1 ounce, by weight, of ready-to-eat cereal.

Whenever possible, choose whole-grain products, which retain the nutrient-rich bran and germ. (Look for the words "100 percent whole grain" on the label, or check to see that "whole wheat flour" is the first ingredient listed.)

If it's true that 28 percent of our readers always eat at least five daily servings of fruits and vegetables (**question #8**), they are to be commended. The national average is about four servings—but at least one of those servings comes from white potatoes, half the time in the form of french fries. As we have reported many times, nothing beats the health benefits of a diet rich in produce. (But french fries don't count as a healthy vegetable.)

Compared with the national average, our readers report a somewhat higher intake of calcium-rich foods (**question #9**): 27 percent "always" eat at least two servings a day, versus 21 percent nationally. (Pregnant and lactating women should have at least three daily servings.) But that's still nowhere near the Healthy People goal of 50 percent.

It's worth noting that, on each of the above dietary questions, an additional 41 to 48 percent of our survey respondents reported that they "usually" achieved the goal.

Safety, stress, smoking, and shots

Thanks to legislation as well as education, the proportion of the motoring public that wears seat belts has increased substantially in recent years—from 42 percent to 67 percent. According to our survey (**question #10**), our readers have already reached the national goal of 85 percent compliance (93 percent, if you count the "usually's").

Half our readers "always" observe safe-sun practices to prevent sunburn, wrinkles, and skin cancer. **Question #11** notes the main strategies: Minimize your sun exposure, wear protective clothing, and use sunscreen. In tests of 38 sunscreens published last May, Consumer Reports found three brands that offer sufficient protection for well under a dollar an ounce: *Solace Sunblock* (from Kmart), *Eckerd Sunblock*, and *Rite Aid Sunblock*. If you need extended waterproofing, consider *Bain de Soleil All Day Waterproof*, which provides good "broad-spectrum" ultraviolet protection, or *Vaseline Intensive Care Moisturizing*, the least expensive brand in this category at about $1.75 an ounce.

French fries don't count as a healthy vegetable.

Considerable research has shown that unchecked stress can wreak havoc with emotional and physical health. In fact, as we reported last July, chronic stress can be deadly. Recognizing those hazards, the Public Health Service hopes that virtually all people who experience "significant" stress will take steps to reduce or control it. According to the response to **question #12**, some four out of five stressed-out readers currently take such steps. Meanwhile, the general public has been more or less holding steady at about three out of four.

The response to **question #13** shows that no one who subscribes to a health newsletter needs to be told not to smoke. Only 6 percent of our readers are smokers—and more than half of them have recently tried to quit. The total number of American smokers, though not yet down to the goal of 15 percent, continues to shrink and now stands at about 25 percent.

Apparently, the vast majority of our older readers have heeded public-health exhortations—including ours—to get an annual flu shot (**question #14**). Fully 80 percent of those aged 65 and older got one last year, which tops the national goal of 60 percent. New research shows that even healthy young adults can benefit from the vaccination. But it's critically important for older people and others at high risk

(and their caregivers), since influenza can lead to deadly pneumonia in those people. People at high risk should also be vaccinated against pneumonia directly; a single shot should last a lifetime in healthy people, but some high-risk people will need to be revaccinated. Most of our older readers have had the pneumonia vaccine, though not as many as have had an annual flu shot. Nationally, vaccination rates among older adults are considerably lower for both shots.

Blood cholesterol and blood pressure

If there's one word that best reflects the popular preoccupation with health these days, it's cholesterol. Probably not a single issue of Consumer Reports on Health has ever been entirely "cholesterol free." So it's no surprise that virtually all of our readers have had their cholesterol levels checked (**question 15**). Only 13 percent have highly elevated total-cholesterol levels of 240 mg/dl or more, and the nation as a whole has already achieved the goal of 20 percent. (An additional 32 percent of our respondents have moderately elevated cholesterol levels between 200 and 240 mg/dl.) Of those readers who do have dangerously high cholesterol levels, 87 percent are doing something about it (diet, drugs, or both), well above the national goal of 60 percent.

HEALTHY PEOPLE 2000

Objective	Public Health Service data: Baseline	Midterm	Goal	Our readers
WEIGHT CONTROL				
Overweight (Q1)	26%	34%	20%	23%
FITNESS				
Regular light-to-moderate physical activity (Q2)	22%	24%	30%	27%
Regular vigorous physical activity (Q3)	12%	14%	20%	20%
Regular strength-training activities (Q4)	11%	16%	40%	15%
DIET				
Low-fat diet (Q5)	36% [1]	34% [1]	≤30% [1]	34% [2]
Low-saturated-fat diet (Q6)	13% [1]	12% [1]	<10% [1]	30% [2]
Diet rich in grains (Q7)	3.5 [3]	5.8 [3]	≥6 [3]	20% [2]
Fruit- and vegetable-rich diet (Q8)	3.0 [3]	4.1 [3]	≥5 [3]	28% [2]
Calcium-rich diet (Q9)	19% [4]	21% [4]	50% [4]	27% [2]
SAFETY, STRESS, SMOKING, AND SHOTS				
Motor-vehicle safety restraints (Q10)	42%	67%	85%	85%
Safe sun exposure (Q11)	[5]	NA	60%	50%
Stress management (Q12)	76%	72%	95%	80%
Smokers (Q13)	29%	25%	15%	6%
Tried to quit in past year (Q13a)	34%	38%	50%	54%
Men and women aged 65 and older				
Annual flu shot (Q14a)	30%	52%	60%	80%
Pneumonia vaccine (Q14b)	14%	28%	60%	56%
BLOOD CHOLESTEROL AND BLOOD PRESSURE				
Blood cholesterol checked in past five years (Q15)	55%	60%	75%	94%
High total cholesterol of ≥240 mg/dl (Q15a)	27%	20%	20%	13%
Diet or drug therapy for high total cholesterol of ≥240 mg/dl (Q15b)	NA	NA	60%	87%
HEART DISEASE AND STROKE PREVENTION				
Blood pressure measured in past two years (Q16)	61%	76%	90%	98%
High blood pressure diagnosed (Q16a)	NA	NA	NA	22%
Drug/nondrug therapy for high blood pressure (Q16b)	79%	80%	90%	95%
High blood pressure under control (Q16c)	11%	21%	50%	83%
CANCER SCREENING				
All women				
Pap test in past three years (Q17)	75%	78%	85%	88%
Women aged 50 and older				
Professional breast exam and mammogram in past two years (Q18)	25%	55%	60%	89%
Men and women aged 50 and older				
Fecal occult-blood test in past two years (Q19a)	27%	30%	50%	62%
Sigmoidoscopy (Q19b)	25%	33%	40%	67%

[1] Percentage of total calories from fat or from saturated fat in average U.S. adult diet.

[2] Percentage of our survey respondents whose diet "always" meets the goal for that dietary habit.

[3] Number of servings of each type of food in the average U.S. adult diet.

[4] Percentage of U.S. adults who eat two or more daily servings of calcium-rich foods.

[5] Baseline data available only for individual safe-sun behaviors (31% limit sun exposure, 28% use sunscreen, 28% wear protective clothing); national goal and reader survey combine all three behaviors.

Last year, a widely publicized study suggested that cholesterol levels don't matter much in older people. We disputed that notion in a report last August and we follow up this month.

Our readers also appear to be fully aware of the importance of controlling blood pressure (**question #16**); 98 percent have had their blood pressure measured in the past two years. Among the 22 percent who have been diagnosed with hypertension (defined as 140/90 mm Hg or higher), 95 percent are treating their condition, through drug or nondrug therapy. And 83 percent of those readers have their high blood pressure under control, compared with the national goal of 50 percent and the national reality of just 21 percent. (For a complete guide to treatment of hypertension, see *CR on Health*'s May 1995 issue.)

Cancer screening

If all women had regular Pap smears, almost all of the nearly 5000 deaths from cervical cancer in the U.S. each year could be prevented. According to their response to **question #17**, almost 9 out of 10 of our female readers have had a Pap test within the past three years. (However, a study published last year in the Journal of the American Medical Association suggests that self-reported rates of such cancer screening tests may greatly exaggerate the true number.)

An equally high proportion of our female readers aged 40 and older report having a professional breast exam and a mammogram within the past two years (**question #18**). The Public Health Service goal of 60 percent kicks in only at age 50, but Consumers Union's medical consultants, like most public-health authorities, recommend mammography every one to two years from age 40 to 50, and annually thereafter.

Two other screening tests—sigmoidoscopy, in which the physician examines the rectum and lower intestine with a flexible lighted tube, and the fecal occult-blood test, which involves checking stool samples for hidden blood—can save lives by detecting early signs of colorectal cancer, the second leading cause of cancer death. (Lung cancer is first.) Everyone aged 50 and older should have a sigmoidoscopy every three to five years, but only one in three Americans has ever had one (**question #19**). Twice as many of our readers in that age range report the same. Nearly as many say they've had the occult-blood test within the past two years; actually, everyone should have that test each year after age 40. Squeamishness is certainly not a good reason to skip either test. Neither is fear of pain during sigmoidoscopy; the five-minute procedure causes only mild discomfort.

HEALTHY HABITS: WHY BOTHER?

The payoff is far greater than some stories and studies suggest.

Frenchwoman Jeanne Calment, the oldest person alive, stopped smoking three years ago at age 117. Conversely, heart attacks killed health-diet enthusiast Euell Gibbons at age 64 and running guru Jim Fixx at 52.

Last summer, a widely publicized Canadian study seemed to confirm the generalization suggested by those incidents—that self-discipline is a waste of time, since it won't really change how long you live. The study, based on a computer model, estimated that cutting consumption of fat and cholesterol roughly in half would lengthen the average man's life by a measly four months.

Is it all just a matter of fate? Not really.

Better than average

Scattered tales of smokers who live a long life or of health buffs who die young should come as no surprise. Health habits, good or bad, change the likelihood of living a long time; they don't guarantee a short or a long life.

That helps explain why expressing the effect of health habits on longevity as an average, as the Canadian computer study did, understates their potential importance. A low-fat, low-cholesterol diet may not, in fact, significantly reduce the risk of a heart attack in people who have little risk of an attack in the first place. Averaging in those low-risk people shrinks the apparent effect of diet on longevity—and obscures its potentially dramatic impact on more vulnerable individuals. Someone who dies, say, at age 65 due to a heart attack that could have been prevented by cutting down on fat consumption has typically lost 15 to 20 years of life.

Even in terms of averages, the Canadian study greatly understated the likely benefit of healthy living. First, the researchers considered only the effect of consuming less fat and cholesterol on heart-attack risk. But cutting fat consumption also reduces the risk of developing other potentially deadly conditions: obesity and certain cancers. Further, people who cut their intake of fat and cholesterol often boost their intake of fruits, vegetables, grains, and beans, which may also help fend off coronary disease and cancer. Indeed, data collected from the ongoing Framingham Heart Study, based on people's actual diets rather than a narrow computer projection, suggest that—on average—those who eat little fat will live almost two years longer than other people.

Most important, individuals who watch their diet typically practice other healthy habits that can further lengthen their lives. Researchers at Northwestern University combed through data from five large studies, lasting an average of 20 years, to identify two groups with contrasting risk factors for disease. One group, containing more than 130,000 people, smoked moderately; they also had marginally

elevated blood pressure and blood-cholesterol levels, both of which can often be prevented or eliminated by exercising, losing weight, or following a careful diet. The other group, containing more than 11,000 people, had none of those traits.

Extrapolating from death rates during the studies, the researchers calculated that the low-risk group, with its presumably healthier habits, would live an average of five to nine years longer than the other group. And again, such averages tend to understate the potential increase in longevity.

Other studies that looked mainly at habits, not risk factors, provide more direct evidence that a healthy lifestyle can lengthen life. Researchers at the University of California at Los Angeles studied some 7000 people for more than two decades. They looked at three clearly harmful habits—smoking, excessive drinking, and physical inactivity—as well as three habits thought to identify people who neglect their health: skipping breakfast, eating between meals, and sleeping fewer than seven or more than eight hours a night. They also included being overweight, which tends to reflect overeating and lack of exercise. The results indicated that a 45-year-old man who has fewer than four of those negative traits will live an average of 11 years longer than a similar man who has more than five traits. Women can expect to experience somewhat smaller but still substantial increases in longevity.

Another large, lengthy study did more than just compare people with different habits: It analyzed the effects of actually improving those habits. The researchers, from Stanford and Harvard Universities, calculated that starting to exercise and giving up cigarettes would each add an average of almost two years to the men's lives. The volunteers who started to improve their habits during their 30s or 40s benefited more than that. But those who did so in their 70s or 80s still lengthened their lives significantly.

A better life, too

Extending life wouldn't mean much if it simply meant living more years with more disease and more disability. But the same steps that can add years to your life can add life to your years. Healthy habits reduce the risk not only of fatal heart attacks and cancer but also of chronic ailments that can be physically, psychologically, and financially debilitating. Indeed, older people who have maintained such habits often possess the abilities and overall health of people years or even decades younger.

To document that benefit, researchers at the California Department of Health Services asked nearly 4000 people about the same seven unhealthy habits examined in the UCLA longevity study. Nine years later, the researchers assessed the volunteers' overall health, in part by simply counting their chronic disorders, including coronary disease, hypertension, arthritis, ulcers, and 11 other ailments. Those who started out with the fewest harmful habits ended up far healthier than those with the greatest number of bad habits.

In a second study of some 4300 people, the UCLA researchers found that only 12 percent of those who started out with few or no unhealthy habits became disabled over the next decade, compared with 19 percent of those who had many bad habits—nearly a 40 percent reduction in risk.

Exercise, the best medicine

Regular exercise and a sound diet can each reduce the risk of potentially debilitating conditions, including coronary disease, diabetes, obesity, and osteoporosis. But exercise can also help keep people active by maintaining their strength, aerobic capacity, endurance, and mobility, all of which tend to dwindle with advancing age.

Researchers at Stanford University followed some 450 runners and 330 nonrunners, aged 50 to 72, for eight years. After adjusting for the presence of disease or disability at the start of the study, the researchers found that those who didn't run developed three and a half times more disabling ailments than those who did run. Even those exercisers who ran the least—just one to five miles a week—reduced their risk of disability nearly as much as those who ran the most.

Exercise can further boost the quality of life by keeping people's spirits up as they age. It apparently does that not only by keeping them strong and healthy but also by improving mood directly. Another team of Stanford researchers randomly assigned some 360 people, aged 50 to 65, either to start working out or to remain inactive. After one year, the exercisers reported significantly less stress, anxiety, and depression than the inactive group. It didn't matter how hard they exercised, as long as they exercised regularly.

Sound habits, sharp mind

Good health habits may help older people preserve their mental faculties as well. A recently published 35-year study of some 5000 Seattle residents found that those who stayed physically healthy—in part, presumably, because they practiced healthy habits—were more likely to stay mentally sharp when they reached their 70s or 80s. One theory: Chronic conditions such as hypertension, coronary disease, and lung disease may reduce the delivery of oxygen to the brain or even cause tiny, unnoticed strokes.

But there's another possibility: People who feel sick may avoid mentally challenging activity. And mental exercise may help preserve the mind, just as physical exercise preserves the body. The Seattle study, for example, linked several signs of robust mental activity—ongoing education, an interesting job, extensive travel or reading, even being married to a smart spouse—with a sharper mind later in life.

Indeed, mental exercise may help reverse the mental decline that often accompanies aging. The same

researchers offered some 230 Seattle residents, aged 64 to 95, training in various mental skills, such as how to recognize and logically manipulate patterns of words, numbers, or shapes. Afterward, 40 percent of those whose mental abilities had declined regained the acuity they possessed 14 years earlier. And 47 percent of the rest, whose thinking had not slowed down, became sharper than ever. Seven years later, the researchers reinterviewed more than half the volunteers and found that they still solved mental problems better than similar people who had not been trained. One reason for that lasting improvement, the researchers concluded, is that the training encouraged the volunteers to keep using their mind.

HOW LONG WILL YOU LIVE?

If you were born before 1930, you've already lived at least several years longer than scientists back then expected you to live. The average life expectancy of infants born in 1930 was 62 years for girls, 58 for boys. Today, those same girls and boys, now in their mid-60s, can anticipate living until ages 84 and 80, respectively.

Some of that increased longevity is due simply to statistics: As you get older, your life expectancy automatically expands, since the possibility of dying young, which drags the average down, no longer applies. But the increased longevity also reflects a dramatic reduction in the risk of death from chronic diseases associated with aging, particularly coronary disease, due mainly to reductions in smoking and consumption of saturated fat and cholesterol. More encouraging, there's still lots of room for improvement: Researchers at Duke University project that if everyone born today took the steps needed to control the major risk factors for coronary disease and cancer, the average life span might soar as high as 100 years.

Numbering your days

The table at right shows how long you can expect to live, depending on your current age. Those numbers are based on averages for the entire population. Good or bad health habits—as well as hereditary factors beyond your control—can change them by as much as a decade or more.

Each of the factors listed below tends to push your life expectancy higher than average. The more factors you have and, in most cases, the longer you've had them, the longer your life expectancy.

- Regular exercise routine.
- Diet low in fat and high in fruits and vegetables.
- Blood level of low-density-lipoprotein (LDL) cholesterol significantly lower than average before age 65 or so. (In women, the average LDL level rises steadily from 110 mg/dl during early adulthood to about 145 mg/dl by age 60 or so. In men it rises from 120 mg/dl among young adults to more than 140 mg/dl by around age 60.)
- Blood level of high-density lipoprotein (HDL) cholesterol significantly higher than average before age 65. (Women's average HDL level holds fairly steady at 56 mg/dl; men's HDL averages 46 mg/dl.)
- Hormone replacement therapy if you're a postmenopausal woman.
- Family history of living to an old age.

In contrast, the following factors tend to drag life expectancy below the average:

- LDL level that's significantly higher than average or HDL level that's lower than average before age 65.
- Hypertension in a young person or severe hypertension in an older person.
- Smoking cigarettes.
- Obesity.
- Family history of early coronary disease, cancer, diabetes, or other deadly disease.
- Excessive alcohol consumption (more than two drinks a day for men, one a day for women).

LIFE EXPECTANCY BY CURRENT AGE

If your age now is...	You can expect to live to age...	
	Men	Women
0	72	79
20	74	80
25	74	80
30	75	80
35	75	81
40	76	81
45	76	81
50	77	82
55	78	82
60	79	83
65	80	84
70	82	86
75	85	87
80	87	89
85	90	92

Source: U.S. Department of Health and Human Services, 1995.

Risk: What it Means to You

Life is a risky business. We're born with a genetic legacy that puts us at risk for certain medical conditions, and many of the things we do as we go along—including simply getting older—compound our risk of illness and death.

Lest we lose sight of our mortality, we are constantly reminded of it by the media. By now we're well aware that the average woman's lifetime risk of being diagnosed with breast cancer is 1 in 8 and that we stand a 1 in 2 chance of developing cardiovascular disease eventually. Moreover, we're continually hearing of new ways that we may be raising those risks further—most recently, that long-term hormone-replacement therapy can increase the likelihood of breast cancer by 40% and that putting on 20 pounds in adulthood can elevate the chance of heart attack by 60%.

Not only are our brains awash in statistics, the numbers often succeed in heightening our anxiety as well as our awareness. Although these reports may be somewhat scary, they can be quite helpful if, when we read them, we keep in mind the nature of the studies mentioned, the magnitude of the risk the studies suggest, and our own personal risk profile.

The basis of risk

Epidemiologists—the scientists who search out causes of disease—coined the term risk factor to describe a specific practice or physical characteristic that increases the likelihood of illness or injury. Once it became obvious that we could stave off many diseases by changing our ways (in medical parlance, "modifying our risk factors"), increasing numbers of studies have been directed at identifying risk factors so that we might do away with—or at least reduce—them. These investigations commonly take one of two shapes—as an observational study or a clinical trial.

Epidemiologic studies

Epidemiologists accumulate extensive repositories of information by tracking large groups of people for several years, usually through interviews and questionnaires. These data bases are consulted periodically in search of answers to questions. For example, the researchers conducting the Nurses' Health Study, whose records include all sorts of information from 115,000 women over a 20-year period, have looked at wide-ranging assortment of suspected risk factors—from hair dye to high-fat diets to hormones.

When the Nurse's Health Study investigators looked into the possibility of a link between postmenopausal estrogen use and breast cancer they scanned the data base to assemble a group of women who had reported that they had used estrogen. They then put together a comparison group that mirrored the first group—except that its members said that they hadn't taken estrogen. The researchers assumed that if estrogen has no effect on breast-cancer risk, the breast-cancer rate in both groups would be about the same; that if estrogen raises breast-cancer risk, the group taking it would have a significantly higher breast-cancer rate; and if it reduces risk, the estrogen-takers group would have a significantly lower rate.

In epidemiologic investigations, the larger the number of people studied, the more reliable the results are considered to be. Having big numbers reduces the statistical probability that the events that occur—be they lymphoma among women who dye their hair or breast cancer among estrogen users—are due only to chance. When tens of thousands of people are enrolled in a study, it is almost certain that a wide array of characteristics will be represented in the study population, making it easier for the investigator to assemble groups with similar profiles for comparison.

Even well designed and brilliantly executed epidemiologic studies have built-in limitations. Most of the information comes from reports by the participants or from medical records and death certificates. Because human memory is fallible and record-keeping isn't standardized from place to place, the researchers can't be certain that the data are correct. Moreover, there may be confounding factors they haven't taken into account. For example, some experts have challenged the epidemiologic evidence that estrogen

prevents heart attack on the basis that women on estrogen are more likely to be health-conscious and to have frequent medical exams. Therefore, they contend, such women would be less prone to heart attack even if they weren't taking estrogen.

Clinical trials

Clinical trials are often used to verify risk factors suggested by observational investigations. In these studies, two or more groups are randomly selected from a pool of people with similar characteristics. Each group is instructed to follow a different regimen, and all are monitored, usually by periodic physical examinations and tests, for several years. For example, women in the HRT arm of the Women's Health Initiative will be assigned to one of three groups —two of which will take different HRT regimens, and one of which will take a placebo. Each group will be followed for several years to determine which group has the highest rate of heart disease.

In many instances, controlled trials aren't feasible for ethical or economic reasons. For example, there have been no such studies of the relationship of cigarette smoking to lung cancer because it is considered unethical to ask nonsmokers to adopt a practice that is generally considered to be harmful just so they can be studied. Moreover, to keep people coming for periodic examinations and tests for as long as it takes to develop a disease — often several decades— is often prohibitively expensive as well as impractical. Thus, many risk factors are often accepted on the weight of epidemiologic evidence alone, just as smoking has been.

Types of risk

The results of both observational investigations and clinical trials are reported in terms of *relative risk*, which is derived by comparing the outcomes of each group in a study. One group, usually the group made up of people without the suspected risk factor, is used as a reference point. For example, the Nurses' Health Study investigators divided the breast-cancer rate of each of the groups of women who took estrogen by the breast-cancer rate of the group not taking estrogen. They emerged with 1.4 for women ages 50–64 who took estrogen for more than 5 years, and 1.7 for those ages 65–69 who did the same. Thus, they reported that hormone use increased breast-cancer risk by 40% for the former group and by 70% for the latter group.

To put relative risk in perspective, it helps to look at the *absolute* risk as well. Absolute risk is based on incidence rates — the percentage of the population who develop a disease in a given year. For a woman between the ages of 55 and 59, the incidence of breast cancer is less than 0.3% — or, more precisely, her chances of being diagnosed with breast-cancer are 1 in 386. If the Nurses' Health Study's findings are applicable to most women, the risk for the average 57-year old woman with more than five years of hormone-replacement therapy is 40% higher, or about 0.4% (1 case in every 292 women).

What do these numbers mean to you?

It's not necessary to pick up the pocket calculator the next time you hear the words "increased risk" on the news. Despite the precision implied by decimal points, percentage signs, and odds ratios, knowing risk statistics won't help you to calculate the exact probability that *you* will develop — or escape — disease. However, they can serve as a general guide to more healthful living if you keep the following in mind:

• *Heredity.* Our genetic makeup — the hand fate dealt us — is usually the strongest single determinant of risk. The Human Genome Project — the major effort to identify and locate each of our 50,000 to 100,000 genes within the next decade — may make it possible for each of us to have our own genetic risk profile one day. In the meantime, for most of us, the best indicator of hereditary risk is family history.

• *Magnitude.* A slight elevation — 10 to 30% — in the risk of a given disease has about the same effect on our health as a minor increase in the price of a box of cereal on our grocery bill; it doesn't make a lot of difference unless our risk — or cereal consumption — is high to begin with. However, a marked increase — 100% or more — should serve as an alarm to all of us.

• *Repetition.* Anything pinpointed as a risk factor in several independent investigations — for example, smoking, excessive alcohol consumption, obesity, sedentary lifestyles, or diets high in saturated fats—is worth taking seriously. Conversely, multiple studies can clear some practices—like caffeine consumption—that were once suspect.

In the past few decades, identifying risk factors has done more than jangle our nerves. It has helped to drive down the death rate from heart attack and stroke, and may one day have a similar effect on breast cancer.

UPDATE

Taking too much vitamin A before or during pregnancy can dramatically increase the risk of bearing a child with birth defects, according to a study of 22,000 women. Researchers at Boston University determined that risk increased steadily in doses above 10,000 international units (IU) a day; women who took 20,000 IU or more had 480% the risk of those taking 5,000 IU, the approximate dose in prenatal vitamins.

The advice to women: If you are taking a supplement, choose beta-carotene — which the body converts to vitamin A on demand and is safe at most doses.