CHAPTER 1

INTRODUCTION: A DIET BOOK FOR PEOPLE WHO AREN'T FAT

YOU'RE NOT OVERWEIGHT; you're normal. But there's an itsy-bitsy secret, a painful part you keep to yourself because nobody will believe you. Well, I'm onto you. I won't blab, but *I* know, because I'm a professional body confidante. The hush-hush is this — you're *still fat*! Now relax. That was the worst news. The good news is that you're not crazy.

You and I both know that you've been the good diet soldier — graduated from Weight Watchers, rotated your diet and embraced fit over fat. Perhaps you've even dabbled in *Life Extension's* powders and pills. Your doctor, looking over your weight, cholesterol and various blood tests, proclaims you marvelously healthy. Your nutritionist is upbeat; you're on course. All those food labels at the supermarket are now memorized. (Alas, poor yogurt, I knew him well.)

And finally, your clothes. Your trousers or your dress size — they're the same sizes that the models wear (But Floyd, *lose* the Jockey shorts. They spoil the lines of the dress.)

Victory! You're not obese, not overweight — you've finally arrived. You're — ah, well — normal. Happy at last? No? Of

course not. Deep down in your heart of hearts, you know that normal is just ... normal. But let me gently remind you, you're still not fat. You're trim, toned, fit and in shape.

I'm here to present you with ways of *realizing your dreams*, the so-called physically impossible ones, by using a revolutionary new way of coordinating your diet and exercise to achieve an optimal metabolism. It doesn't require much time, just 3 days of exercise, a total of 5 hours per week. You need a moderate amount of eating discipline, but you can "let loose" on the weekends. Interested? Read on, and I'll show you a *wild* new diet system and a host of secret, insider body(building) tricks. This system will allow you to become exceptional — beyond normal — with the ability to ascend to a higher standard, perhaps to the highest standard: an optimized metabolism. If your ideal is to be a Wonderman or Wonderwoman comic book hero from your childhood, or a body model, triathlete or bodybuilder, you can set your own standard. And you can finally attain it.

It's important for you to understand the entire title of this most unusual book: *[UNDERGROUND] BODYOPUS [militant] Weight Loss and Recomposition*. Each word is significant. *[UNDERGROUND]* means not generally known, hidden. Many techniques and shortcuts that you will learn in BODYOPUS are secrets that even doctors don't know yet. Although they're not buried like pirate treasure, these powerful metabolic adjusters are not known to ordinary dieters and GPs. The secrets? I happen to know *all of them*. I discovered many of them while solving bodybuilding problems (which I do for a living). All of these "dirty tricks" are scientifically valid and researched — no body voodoo here. The result? Supra-healthy, long-lasting, vigorous, athletic and, in my mind, *beautiful* bodies.

Next word: *BODYOPUS*. Flat out, I made this word up. An "opus" is a numbered musical composition. Changing your body is more than just diet and exercise, biology and physiology. It is also body art and aesthetic decisions. What good is an ultra-lean athletic body if your face looks like death sucking on a cracker? Your hair, skin, face and even (yes) toenails, are all part of your body sculpture. Let's be realistic. Most people will be looking at those areas first, not immediately at your keester (shame on you). BODYOPUS is shape, art balanced with metabolism, optimized chemistry reactions. I hope you'll accrue enough body wisdom to understand that leaner or bigger or more impressive is not necessarily better. BODYOPUS is optimized aesthetic body *balance*.

Militant is a word people are touchy about, but it is particularly applicable to this book. Diet and exercise should be rooted in science and biology, but they are often swayed by trends, fads and public charisma. Diets, exercise programs and even nutrients are often victims of fashion. I hope that all of the products that are touted as metabolic miracles will fulfill their claims. Unfortunately, the creation of most diet books, health foods and sports paraphernalia is not inspired by the desire for optimal health. It's naked (and sexy) consumerism. Buy my book, my vitamin, my exercise gear. Subtext: I want your money. Oh, by the way, some of this stuff might help you out.

In BODYOPUS, I'll present techniques and chemicals (over-the-counter, prescription and non-FDA-approved) that may go against accepted public opinion, but you won't have to break any laws. Remember, the medical profession in the United States is designed to maintain your normalcy. Optimizing your body, metabolism and health is considered quackery to the FDA-AMA status quo.

However, lean wanna-be's, there's a complex and diverse world out there. There are exciting studies, medications and nutrients from Europe, the Orient and the Third World. You can't totally dismiss their medical contributions as backward or ignorant. The people who live and work in these countries have the same desires and problems that we do. To disregard their scientists' work, considering it invalid, ineffective or dangerous just because it doesn't have an FDA blessing, is a socially repugnant attitude on a global scale.

We have to be somewhat militant about our nutrients, drugs and dieting techniques. In order to ascend past the AMA-FDA-approved normalcy, we need the whole world as our supermarket, health food store and drug store. Many worthwhile (but not mandatory) shortcuts in BODYOPUS involve personal importation, gray market buyers' clubs and research chemicals — not mainstream nutrition. You won't break any laws; BODYOPUS doesn't require guerrilla medicine. But you might be considered ... ***militant***.

The phrase ***weight loss*** is deceiving. BODYOPUS goes beyond the usual diets, which are concerned with only one thing: losing weight by lowering your food intake. BODYOPUS, on the other hand, is a complete system. Of course, some calorie restriction is necessary. Beyond that, BODYOPUS' efficient system of fat loss coordinates with other things. Gee, is it ... *exercise*?

BODYOPUS' training program is complemented by the *type* and *amount* of food you eat. BODYOPUS will also teach you to trick your metabolism into burning more calories than you can with the "calories in/calories out" dogma that you read in mainstream periodicals and the latest self-help books. I've raided the obesity, diabetic, life extension and geriatric research. I've pulled

tricks out of the professional bodybuilders' grab bag of dieting goodies. I've also included most of my personal body secrets, perfected over 15 years of solving body problems. Some solutions are from cutting edge research. Others are techniques that have been forgotten or have fallen out of favor. The really special ones, which I call "Guru's booty," are gems beyond accepted science. Until we figure out how the trick works, it will look like *magic*.

The last word in the title is ***Recomposition***. The dirty little aspect of weight loss that diets have to address is muscle loss. Whenever you reduce calories to lose body fat, you also sacrifice muscle. Sometimes it's a significant amount; other times, it can be measured in mere ounces or grams. However, the status of your lean body mass directly affects both your metabolism and your ultimate shape. Replace, maintain and increase muscle — Recomposition accomplishes all three.

Sure, most diet books or exercise programs will stoke your hopes and dreams. The whole self-help genre is a wish-fulfillment-instant-gratification-come-on. Certainly, I seem to be promising something unattainable.

Why use BODYOPUS? Because it works spectacularly well. I won't lie — it's not an easy, walk-in-the-park program — but it is effective.

Why me? I have the reputation of being the best at what I do.

Why now? Well, after 12 years, BODYOPUS is finally ready. So let's go! It will be the adventure of your life!

CHAPTER 2

WHAT WE'LL ACCOMPLISH IN BODYOPUS

LOTS ACTUALLY, probably too much. Although this book has a bodybuilder on the cover, BODYOPUS is intended for *any* healthy person who is not classically obese. You will be expected to diet for 5 days out of 7, and you must commit to 3 days of working out (a total of about 5 hours a week) with a weight-training program.

Who am I looking for? Who is the ideal BODYOPUS candidate, and why? If you are a man, your body fat percentage should be no more than 15 percent. For women, it should be no more than 20 percent. I don't want to deal with the typical, *normal* fatty. Is that so wrong? No. I expect higher quality material. These figures are average for young, healthy, semi-active adults. Although researchers and doctors adjust their range of ideal body fat percentages upward as people age, this is unnecessary. They are forgiving their patients' slack habits, lack of discipline and inactivity. Well, you'll find no sympathy here. Your body doesn't automatically get fatter as you age. Some metabolic processes change (always for the worse), but the usual culprits are sloth, gluttony and comfort. Am I a pain in the ass, or

what? Of course I am. It's part of my job. Besides, I never promised to be nice.

Men and women with 15 and 20 percent body fat, respectively, are considered by medical professionals to be normal, non-overweight and healthy. This is because most doctors are not very healthy, lean or active themselves. Most athletes consider 15 or 20 percent body fat to be out of shape. Zealot dieters consider 15 or 20 percent body fat obese. In a few sports — swimming, football, sumo wrestling — athletes tend to be heftier. Usually, however, extra body fat is unnecessary and aesthetically unappealing (fetishists excepted). Fat is not healthy, and will probably be shown to be an impediment to long life. The averageness around you has made you too complacent. You accept "pretty good" as normal. I'd like to show you *great!*

The BODYOPUS goals are: men, 6 percent body fat; women, 10 to 12 percent. Below 10 to 12 percent body fat, many women have problems producing estrogen, which is necessary to maintain ovulation and bone density. Many women can maintain estrogen production at 12 percent body fat, but only a few can achieve 10 percent body fat year-round with no ill effects.

These figures, 6 percent for men and 10 to 12 percent for women, were not chosen arbitrarily. I arrived at these ideals while working with hundreds of athletes over the last 15 years. At these percentages, there is a balance between leanness, vigor, energy and a socially acceptable non-gaunt face. You will banish the jiggle in your backside and love handles, while retaining a happy, non-suffering face.

You may wonder why I don't use BODYOPUS for the obese. If it works, wouldn't it work for all fat people? Fat is fat, right?

There are lots of diets in America — in books, at weight-loss centers, even in the magazines at the supermarket checkout

line. It doesn't take a Rhodes Scholar to know that all of these diets work. They will all help you lose weight. They push all of the buttons: low fat, high carbohydrate, high fiber and moderate exercise. As long as you have a decent amount of discipline and actually follow the diet, you will lose fat. For most overweight or obese people, these safe and sane diet plans are the logical way to go. Why fight it? Big business dieting is backed up with group support and individual counseling; the food is trendy and palatable.

Most overweight people should follow a sensible, easy-to-follow, medically approved diet that includes some kind of pleasant calorie-burning activity. Overweight and obese dieters need to lose a tremendous amount of weight, which can take months, perhaps even years. Until your body fat is 15 or 20 percent, find a diet plan that you can live with. You'll have access to a zillion diet foods and snappy pep-talk magazines to get you through the deprivation.

All of the popular diet and exercise programs (we don't need to name names) are designed to get you back to normal, to ordinary. But what if you want to become *extra*ordinary? What do you do then? Let me point out a few problems that most post-graduate dieters encounter.

The biggest impediment to your ascent beyond normalcy will be psychological pressure from friends, peers and the medical profession. Most athletes *do* understand a quest for leanness. But everybody else will say, "You're fine," or "You're too thin," or "Why? You look great as you are." Doctors can really quash your spirit with the testy response of "totally unnecessary and probably unhealthy."

Is the doctor wrong? Well, I think so. Excessive body fat, even at so-called normal levels, is not always caused by eating

too damn much. Many "normal" individuals have undiscovered metabolic problems. To maintain a lean body, especially as you age, you must make adjustments to your nutritional habits and exercise routines. Too much body fat is a symptom of a problem in one of these areas. The goal of idealizing your metabolism is not just pure cosmetic vanity; optimal health and vigor go along with that flashy exterior. As we age, our bodies don't just take care of themselves. However, most people continue to ignore their bodies for far too long. Don't take their platitudes too seriously. Look beyond the words and judge *their* bodies.

What's wrong continuing to use traditional diets? I've tried them all, and even the most medically and athletically correct diets allow much too much muscle loss. On your typical low-fat, high-carbohydrate, lose-a-pound-a-week diet, you will *lose one pound of muscle for every three pounds of fat!* No lie!

I find this unacceptable. BODYOPUS, of course, minimizes the dreaded muscle disappearing act. The safe and sane diets just can't keep up. BODYOPUS is elegant; it doesn't just "minimize." *It puts the muscle back on.* Think of it as an anabolic diet.

The quest for leanness turns maddening when your body won't respond the way you'd like it to. It's frustrating to try to chase down *stubborn fat*. Some truly gifted individuals have fat evenly distributed over their bodies. Their fat is really sneaky: no love handles, stomach rolls, saddlebags, droopy backsides or piano legs. On these homogenous fatties, the damned fat looks like it's defying gravity! Stubborn fat is not the same as regular fat. Sure, it's uglier and there's more of it, but this is because these fat cells have different types and amounts of hormone receptors. Stubborn fat is the last of the fat. It usually stops diets dead in their tracks. When you try to eliminate it, your muscles shrink and your face collapses into gauntness. Most diet damage (and

make no mistake, it is body *damage*) happens when chasing down the stubborn fat. Creams and injections don't work. Should you throw in the diet towel and use liposuction? I'll warn you: Liposuction leaves some funky honeycomb ridges under the skin that never smooth out.

BODYOPUS aims directly at stubborn fat from the beginning. BODYOPUS tricks your metabolism into releasing fatty acids more quickly and completely. It's not hocus-pocus, just metabolic sleight-of-hand. It's not primarily a drug trick, but I've included information on drugs and herbs too. (I couldn't resist.) Remember, I'll keep no secrets from you.

Are you having trouble believing that BODYOPUS is both fantastically effective and terribly different from all other diets? Is it unsafe and insane? No. Instead of just restricting calories, BODYOPUS manipulates nutrition and exercise to trick the body into burning fat in a very unusual way. BODYOPUS was not originally a weight-loss diet, but an anabolic system that (as a happy coincidence) happened to reduce body fat. Now, years later, I've refined it into the best diet I've ever used.

CHAPTER 3

WHO AM I?

PERHAPS YOU ARE FAMILIAR with my name and what I do. Notice that I'm not an MD, and I don't have any PhDs, either. Many athletes and news reporters call me the "Steroid Guru." It's a part I've played (and quite brazenly) on many talk shows and interviews. Stories on drugs in athletics in the American news media usually follow a good guy/bad guy/victim dramatic formula. There's no shortage of good guys and victims. As an authority on steroid use, I take the bad guy part. I happen to be the *only one* who will tell the truth and play the villain. It seems that there are no grey hats, just black and white.

Steroids are now, in my mind, passé. Does that make me, the "Steroid Guru," some pathetic throwback? I think not. I've created my own job description. Under "occupation," let's put: Human Performance Theorist.

I solve body problems, problems beyond maintenance of simple health. I work with athletes to increase muscle mass, decrease body fat, improve strength and speed recuperation. You might be surprised to know that I am apathetic toward most sports. I don't participate or view any of them. Athletes just happen to have some interesting body problems. Bodybuilders

have been especially interesting to work with because they are both technical-minded and fearless. I also work with actors and models who have a financial incentive to lose fat without destroying their salable camera-perfect face. I'm a body doctor, but it's not life or death, so I don't have to do house calls. I'm a specialist and theorist, tackling situations that most MDs and medical researchers don't even consider.

What I do, I do well. Some say that I'm the best at getting results. It helps that I have no sport scruples. I delve into areas that others are too sensitive to pursue — like beating drug tests. Sports ethics are up to the athlete and his particular sport. I just fix the body problem. As you can imagine, the solution is often against the rules or philosophy of a particular sports organization. They call it immoral or unfair. So? As I said, I don't read the sports pages in the morning newspaper. My job is to solve interesting body problems that other (sometimes more qualified) people can't or won't tackle.

As a result, I'm an obvious target for sport authorities. I also butt heads with the FDA, and now that steroids are Scheduled drugs, the DEA. Crotchety MDs, the AMA and mainstream PhD researchers don't like me either. It sure would be easier for all of them if I was just plumb crazy. Unfortunately for them, I happen to be, according to some people, brilliant and charismatic. Most of the time it's been impossible to dismiss me as "that Duchaine crackpot," because I'm usually right. I've broken a few laws; I've never been shy in pointing that out. I've been in Federal prison twice so far. Am I a criminal? That depends on whom you ask. However, I've never lied to athletes or the public. Even the Government always got a straight answer out of me. I'll never try to damage your health or shorten your life span. You will always get the brutal, honest truth, as I know it.

Am I believable? Sure. I have demonstrated my dedication, honesty and proficiency over the past 15 years. Like many coaches, I sometimes had to spring for groceries or hotel rooms for my athletes. I've helped thousands who have sent me letters. I have their trust, I think.

BODYOPUS makes extraordinary demands of you. To follow it, you will need more than just perceptible results or provable science. You need trust. Accept this, and welcome to BODYOPUS.

CHAPTER 5

BODY FAT AND FAT PERCENTAGES

HOW FAT ARE YOU? To classify how fat a person is (or isn't), we call them: obese, overweight, normal, trim, skinny, underweight and anorectic, in order of fatness to *un*fatness. Many doctors and insurance companies use height and weight charts to classify body types. However, for BODYOPUS, more precision is needed.

From our exercise-conscious American culture, you've probably learned that "muscle weighs more than fat." Scientifically, it's a matter of densities. Muscle, bone and blood are more dense than fat. Your mother skimmed the fat off the top of the chicken soup for the same reason that the grouchy next-door neighbor drained the water out of his gasoline tank after the Halloween prank — oil and water don't mix. Body fat is just a very thick oil.

To express how much of your body is composed of this oil, we use body fat percentages. Your body weight, divided into the weight of all of the fat in the body will result in a decimal number; the figure agreed on is in hundredths or percentages. Let's say your total body weight is 200 pounds. Next, we magically or scientifically weigh *just* the fat and all this yellow lumpiness is 20 pounds. We divide 200 pounds into 20 pounds and we get

.10, or 10 percent. This ratio is a much better way to show the difference between 200-pound Joe Bodybuilder and 200-pound Joe Couch Potato.

The whole point of body fat percentages is, other than morbid curiosity, to have a general idea of how *healthy* the person is. High fat percentages often correlate to disease. Overweight and obese people have heart disease, diabetes and ambulatory problems. These ailments either arise from or exacerbate the staggering burden that the live (but not lively) fat cells place on their metabolism. Yes, fat is a necessary and efficient fuel. In some parts of the body, mostly around the internal organs, fat is an essential shock absorber. Socially, some degree of fat is considered attractive; extra flesh is justified as a sign of glowing health.

This book focuses on an unusually narrow range of fat percentages. Somewhere between skinny and normal, there is an *ideal* body fat percentage. There is no consensus on it; this ideal (like all ideals) is constantly being debated and changed, dictated by both science and fashion. I've thrown out some figures; 15 or 20 percent get you inside the BODYOPUS clubhouse. I've suggested ideals of 6 percent for men and 10 to 12 percent for women. These are the ideals I arrived at after working with healthy bodies for 15 years. To remind you, I have not worked exclusively with bodybuilders; I have also helped other athletes, actors, models and dancers who wish to keep their body fat low, for cosmetic or performance purposes. Superior health, for them, is a happy coincidence.

For the longest time, scientists and doctors advocated normal fat levels, maintaining that less than normal fat percentages were unnecessary and probably unhealthy. Over the last decade, the life extensionists have accrued some credible research showing increased life spans, or at least more vigorous and active life spans, from reduced body fat levels — at least with easily measured laboratory rats and the like.

If you're looking for a written-in-stone ideal body fat percentage, you'll never find it. A regular physician who sees a broad spectrum of patients will probably recommend the traditional ratios. Sports medicine specialists are used to much lower body fat levels. Life extensionists will advocate one level, while geriatricians will quote another set of ideals for the aging body. Gynecologists are particularly adamant about the minimum body fat allowed for women. Take your pick. MDs and specialists aren't complete idiots. Each recommendation has some kind of scientific research and clinical studies to bolster it.

Let's integrate all this conjecture and apply it to healthy, athletic people. In working with the real zealots of body fat, bodybuilders, I have experienced the advantages and disadvantages of maintaining very low body fat numbers. Modern bodybuilding competitions are ultimately judged on the "nth" degree of leanness, usually well below 6 percent for both men and women. As I've mentioned, beyond a certain point, extreme leanness is not healthy.

Below 10 to 12 percent body fat, women have problems with estrogen production, ovulation and osteoporosis. Fat is intimately connected with estrogen storage, and it has the ability to convert other hormones into estrogen. The 10 to 12 percent ideal is not an unalterable rule. Some women have problems at slightly higher body fat levels. Others can maintain normal "female health" at even lower levels. Young endurance-type female athletes can have the same kinds of problems that middle-aged post-menopausal women encounter.

Of course, some women *do* drop below the 10 percent

threshold. Female bodybuilders can't usually compete (and place) unless their body fat percentage is between 6 to 8 percent at contest time. Marathoners also measure that low, although they don't look as lean as bodybuilders. Below 10 percent body fat, the body changes in ways that are considered unattractive by most. Breast tissue, bereft of estrogen and fat, shrinks — make that *collapses*. The face loses its fat sacs, becoming angular and bony. This "hard" look is viewed by most of society as "masculine." After losing even more weight, the face goes from angular to gaunt. The jaw muscles develop into a sinewy, otherworldly mask that will flex and pose with the simplest facial expressions. It's not necessarily unhealthy, but it's certainly not very calming to most of our well-fed populace. It's considered unattractive except to the odd fetishist.

At 3 to 4 percent bodyfat, the organ, marrow and spinal cord fat are all that's left. Healthy, active people rarely reach this level, although male bodybuilders will dip down this low for a few weeks during the year. Damage does happen at this level: easy bruising, blood in the urine or feces from what used to be everyday jarring and heel pounding. You certainly wouldn't drive an automobile with bad shocks for very long! You experience lethargy, anemia, hypotension and depression. Testosterone and other hormones will be suppressed. Serum cholesterol raises briefly, then plummets. Of course, if the bodybuilder is supplementing with exogenous hormones like anabolic steroids, growth hormone, thyroid, insulin (do I need to continue?), almost all of the damage is forestalled. However, it is probably dangerous to take drugs intended to improve metabolism solely to mask symptoms of poor health.

The BODYOPUS ideal is this: to maintain good health without props at the lowest possible body fat percentages year-

round. As a body techno-tweaker, I will discuss drug-like substances that I think will enhance or extend your vigorous life. However, even the most benign drugs can be used to mask a health problem. From bodybuilders to bicycle racers, all athletes have health problems that can be fixed with methods other than the politically correct proper training, nutrition and rest. Remember, BODYOPUS includes chemical additions intended to enhance your body, not just make it normal.

Over the years I haven't kept written records, files or statistics, but I've looked at an array of bodies and read numerous blood tests. I've pinched skin (in sometimes sensitive areas), dunked clients under water, painted vast expanses of skin with oils, dyes and cosmetics, shaved hairy backs (on both men and women) and even popped a pimple or two — actually, too many of those. I've read thermometers and dipped urine sticks. My clients lifted weights, ran ultra-marathons, climbed rocks or slammed violently into other bodies. From these experiences, I've arrived at my ideal figures — 6 percent for men and 10 to 12 percent for women. These percentages are healthy to maintain year round — make that *supra-healthy*. These are *not* bodybuilder competition-ready numbers, but they are damn close, and you can certainly attain a winning body fat percentage with a month of two of additional BODYOPUSizing. Most athletes will find that the 6 percent or 10 to 12 percent figures are ideal.

Keep in mind that these are my ideals, not yours. If you are modifying your life to get *my* approval, then there's something terribly wrong with your life that has nothing to do with your body or metabolism. Find an ideal that meets your *own* approval. BODYOPUS is not a raison d'être, nor a Zen-like body state. It's a collection of methods, processes, shortcuts and fast and dirty tricks — no miracles, just solutions to body problems.

Some of you might ask: "What's the point?" Why spend the time and energy to pursue an absurdly low body fat percentage? Most people won't see it; you'll be covered up with clothes in public. Friends, family and spouses may not understand or even care. For this reason, I'm going to briefly discuss the reasons why you would want to lower your body fat to BODYOPUS levels. I'm not trying to convert you to my way of viewing bodies, but to arm you with an arsenal of plausible excuses that you can use to defuse a tense social situation over your peculiar new hobby.

A prosaic one is: it's nice to know how the professionals do it. Most of the information in this book is arcane and technical. Much of the esoterica of fat loss used and guarded by the bodybuilding community has been called chemical warfare, and that's not exactly false. This book contains secrets that even coaches, nutritionists and doctors aren't privy to. Even if you never use BODYOPUS, you'll know the really cool stuff. And knowledge allows you greater possibilities ...

Of course, lowering body fat increases performance. Fat cells are beyond deadbeat cells; they're dead weight, too. Yes, fat is an efficient and necessary fuel source for aerobic muscular activity. Rudimentary arithmetic will tell you that the 3500 calories in a pound of fat is about a whole day's energy requirement. Even an ultra-marathoner who "burns up" 10,000 calories over twenty-four hours would need less than three pounds of body fat as fuel. Most athletes need much less fat fuel than this. In the modern Western world, we don't have to wait out a monsoon or drought. Extra baggage should be left at the airline counter; leave it behind (especially big behinds) or get charged for it. Bodybuilders don't even try to think of arguments — a single-digit fat percentage is part of the pursuit.

In addition, low body fat percentages are probably healthier. Scientists believe that you will live longer with less body fat. A fact is still a fact, even if it's not proven yet. You could call it "faith," acceptance without proof. Beyond normal health, we're into a new non-fat faith.

Leanness is a cosmetic necessity in many professions. Actors, models, dancers, and diet and exercise gurus are expected to be lean for the jobs that they do.

Low body fat levels allow your body to grow old more gracefully. Fat is connected to skin and neither can be toned by exercise. The only thing that holds all that fat up against gravity is the elasticity of young skin. Youth's soft and cherubic fat seems to defy gravity. Eventually, though, fat and skin sag. You *can* tone muscle all of the way into old age. Fat, however, will droop and drop. Beyond a precious jiggle, it becomes pendulous. As you age, your skin doesn't tighten. Keeping body fat low is prudent cosmetic insurance.

Personally, I like the shape of lean bodies. I'm "conditioned" to them. I find them aesthetically pleasing, and it's a longer lasting shape over the long run. Since childhood, my body type ideal, for both men and women, has been athletic and lean. I argue for health, but I admit that deep down the supreme motivation for me is plain personal vanity.

I renounce "normal" and "just good enough." Aging bodies lose muscle and gradually accumulate fat. Your overall body weight may not change from high school to middle and old age, but the quality will.

You'll have less muscle, bone and hair (with men, it will migrate, too), and more fat. Aging fleshiness is more than too much food and a more sedentary life. It's a hormonal disappearing act. BODYOPUS creates positive metabolically induced

changes through both nutritional sleights-of-hand *and* drugs. The goal is an optimized metabolism, period. This is not just good enough for à middle-aged person, or optimal for the elderly. Left to its own devices, the aging metabolism is not an efficient or vigorous or pretty thing. Without outside help, the best one can do with just good nutrition and exercise is a nice, normal, natural old body. Instead, let's flip back the metabolic calendar to an earlier time.

These are my personal motivations. I've spent a good part of my life chasing down the most inconsequential problems — balancing the bloom on the face with the tautness of 5 centimeters of skin over the navel. Foolish things, perhaps. I've failed many times. When inventing the light bulb, Edison took many years to find the brightest and longest lasting filament. During his quest, he is claimed to have said, "I don't have the right material yet, but I do know about ten thousand materials that *won't* work."

CHAPTER 6

MEASURING BODY FAT PERCENTAGES: THE AWFUL, AWFUL TRUTH

NOW THAT YOU HAVE an understanding of body fat percentages and (I hope) the urge to pursue the BODYOPUS ideal, the practical question is: How do you actually measure body fat? How close are you to the ideal now? And when will you have achieved it?

Good bodybuilding coaches don't need hard numbers. A trained eye and a smart mouth will say, "You're too far out. You're behind schedule. You're not going to make it because you're not lean enough, and you're losing too much muscle." Coaches don't need devices because they have an astute awareness of size, shape, and leanness. Ultimately, a bodybuilding contest is judged visually, not with body fat percentages. In fact, competitors sometimes mistakenly trust body fat percentages, when the mirror reflects a more accurate picture.

Eventually, I hope that by correlating what you are feeling with what you see (and understanding chemically and hormonally why), body fat percentages will become irrelevant.

As you become more in tune with your energy levels and strength, you will notice muscle loss without having to measure

or weigh anything. Until then, I suggest you use body fat percentages as a starting, ending and in-between gauge for muscle loss.

Be forewarned: once you understand how body fat percentages work, I'll do my best to bury them. When you grind downward to the last few pounds of visible fat, percentages become inaccurate. Most stubborn fat is not considered in the body fat percentage formulas.

Many methods of measuring body fat have been invented since the unpleasant Danish studies in which scientists dissected, weighed and tape-measured cadavers. Modern estimating systems range from crude to amazingly complicated, high-tech and expensive. As we discuss the methods used to measure body fat, you'll find that the more modern and precise the apparatus seems, the less accurate it really is.

Circumference measurement is the most commonly used method. It's fast, simple, and cheap — and *wrong*. It is used most often for overweight and obese people, to get a general idea of how much fat they are carrying around. It's simply the old height and weight charts, with the addition of taped circumferences (with an extra-jumbo sized tape) at various points at the body — w-a-i-s-t, lower arm, sometimes wrist. Add the weight and height and look up in the magic chart to find the body fat percentage. The circumference method is a kinder way to break the bad news to the obloid. Instead of brutally saying, "You're *too damn fat!*" they simply say, "You're 77 percent fat," and get the same effect — sinking panic and increased motivation. It's not an accurate way of doing it, but that's not the point. Circumference measurement is just a way of sounding the alarm. The only advantage is that the measurements are done — thankfully, oh thankfully — clothed.

If a person is in the 40 percent body fat panic range, hydrostatic weighing is more accurate. It's also a fair (but not simple nor compact) way for normals (15 percent and up) to measure their fat. Underwater weighing involves an unwieldy apparatus that fills a small room: a tank filled with tepid water, a swing-like scale, a regular land scale, a computer and software to extrapolate the data, and (finally) another device to measure the amount of air in the lungs. Punch all of these different values into the computer — dry weight, dunked weight, vestigial air; the result is an estimate of body density, which is then converted to a fat percentage.

Yes, it's awkward, uncomfortable, kind of embarrassing and relatively expensive. And lately, hydrostatic weigh stations have been hard to find. When I first found a tank back in 1980, I had to drive 45 miles in rush hour traffic in Los Angeles to get to it. Tanks became more plentiful during the 1980s; some companies would actually truck out the equipment to gyms and offices. These enterprises turned out to be money-losing endeavors; most went (ha-ha) under. It's a moot point, though, because if you look past the gee-whiz techno-glitter, there are simpler, more convenient and more accurate ways to measure body fat.

In a moment, we'll discuss my preferred method of body fat measurement, but before we do, haven't you ever wondered where all of the fat is? I don't mean the fat in the food — where is it in your body? The fat attached just beneath the skin, called subcutaneous fat, is the most obvious. If you think about it, you'll notice that this fat is not uniformly thick. Women store their fat in different areas than men do. Different races have different fat distribution. And, of course, your fat will migrate south as you age.

Interorgan fat, which cushions the internal organs, is usu-

ally about 3 percent of your body weight, although fatter people will have more of it. Oddly enough, some men with steroid receptors in their abdominal fat develop a pot-bellied look from the fat *under* the muscle, in the peritoneal cavity. Recent research has concluded that the existence of excessive fat in this area correlates to cardiovascular disease. It's sneaky, too. Many male bodybuilders who don't accumulate much subcutaneous fat, *do* build up abdominal fat until they almost look pregnant.

Most people don't develop significant amounts of intramuscular fat. Only the truly obese have muscles marbled with fat like the expensive beefsteaks at the supermarket. Research has pointed out that middle-aged and older men store more fat intramuscularly than subcutaneously. This fat is not visible, and it is hard to determine with hydrostatic weighing, which is not very accurate below 15 percent body fat.

We've discussed subcutaneous, interorgan and intramuscular fat. Is there any fat left? Some organs, notably the brain, are partially fat. And don't forget the fat traveling in the blood, lymph, bone marrow and spinal column. In most dieting situations, however, we are concerned with subcutaneous fat.

Subcutaneous fat is easy to measure with calipers, handheld mechanical devices that are used to pinch certain areas. The measurements of skin and fat thickness are plugged into one of several mathematical formulas that take total body weight, sex, age and estimated organ fat into account. Voilà! Out pops a nifty and damn close body fat percentage.

Calipers are much more convenient and inexpensive than hydrostatic weighing. I've seen calipers advertised as inexpensively as $7, although these were cheesy, plastic and inaccurate. Professional, medical quality models vary between $150 and $450. The top Skyndex caliper has a cool built-in computer to

do all of the math for you.

I don't know why calipers are so accurate. Although you can find more glamorous contraptions, a skilled "pincher" can get a better estimate than with any other method except dissection. After testing caliper measurements against extremely accurate and expensive techniques like Nuclear Magnetic Resonance scans, they were found to be more accurate than hydrostatic weighing, infrared and electronic inductance. In addition, hydrostatic weighing doesn't measure black people very accurately, because the density assumptions are wrong. All electronic devices assume that 73 percent of lean body weight is water, which is not always true. The only drawback to calipers is the possibility for operator error; practice does make perfect.

Most chiropractors, nutritionists and weight-loss specialists can take caliper measurements. Eventually, you will not need to measure your body fat percentage. Until then, I'd advise those who are serious about BODYOPUS to buy medical-quality calipers. They don't have to be computerized, because eventually we won't be using the formulas. As for the bargain basement plastic ones, well, *a* caliper is better than *no* caliper. The difference between junk and precision is only about a hundred dollars. The body fat percentage equations themselves were created with data from a $139 Lange caliper.

Let's discuss a few delusions that many people keep believing, even though deep down they know the truth. First, there's no such thing as thick skin. Skin thickness is usually the same in both sexes and all races. Of course, the soles of your feet and palms of your hands have thicker skin (and thicker fat, too). However, what looks like thick or loose skin, or water in the skin, is usually just plain, ugly fat unless you have an odd disease.

Women, who have more body fat, have slightly thinner skin than men. Orientals, who are generally less fat, have slightly thicker skin. Growth hormone increases the size of skin cells, and some minerals and hormones allow more water into the skin. However, these factors cause only a millimeter or so of difference. Please, let's banish the "I just have thick skin" excuse.

When dieting, fat cells shrink, but they are *still there.* Genetically gifted people who are born with fewer fat cells will usually win the thinnest-skin contest.

The appearance of thin skin, which bodybuilders call the "shredded" look, is caused by the elasticity, tautness and age of the skin, in addition to the fullness of the muscles underneath. Among athletes, only contest bodybuilders desire thin skin. Skin tautness is a two-edged sword: such tightness is always accompanied by stretch marks. Do you really want drum-tight skin?

Liposuction would seem to be an attractive alternative. It completely removes fat cells. It is condoned by society, the AMA and the business-doctors. However, the few instances of liposuction on lean individuals that I've seen have an unusual look. After the swelling dissipates, the area looks ripply, like a dip potato chip. Liposuction *does not* tighten up the loose skin where the fat used to be. BODYOPUS should work well enough on stubborn fat areas that you won't need to consider liposuction.

Eventually, we will stop using fat percentages because they can blind you to the persistence of stubborn fat. Liposuction is popular because it is used to vacuum out the fat from areas that are resistant to dieting. Most of the stubborn fat areas — the lower glutes, hamstrings, inner thighs, lower thighs or that

really stubborn place between the calf and the ankle — are not used in the body fat percentage formulas. These kicking-and-screaming, I'm-not-moving, fat cells from hell are the first to get fat and the last to reduce, if they ever do.

Although most doctors don't think it's worthwhile to try to eradicate stubborn fat because it doesn't correlate to specific health risks, our problem is that fixating on body fat percentages can obscure metabolic damage. Calipers will not measure your gaunt face, stick-like upper body or loss of muscle.

Individuals with a compulsion to move their body fat percentage downward whatever the cost forget that calipers cannot measure everything. The last-of-the-fat will still hang on (well, down). Overall aesthetic shape should be a priority over "in shape." You should try to balance aesthetics and biology. I've often said to bodybuilding competitors: "Yes, we could get your body leaner, but it won't be better."

Later, calipers will still be useful, but not for figuring your body fat percentage. We can pinch areas that aren't used in the formula. At the end of a diet, a loss of 2 pounds of body weight results in a small decrease in body fat percentage, but a great decrease in energy and strength. Of course, the stubborn fat will not shrink at all. After the initial measurements, you will never quote percentages, but "millimeters of thickness."

CHAPTER 7

THE EASY STUFF: DIETING BY THE (POPULAR) NUMBERS

MOST OF THE DIETING ADVICE in popular books, magazines, television shows and videos has the same ideology. If discoveries in obesity, diabetes, geriatrics, heart disease, longevity, and sports medicine research generate advice that is palatable (psychologically speaking) it will be incorporated into the public's current diet personae.

Dieting has trends and fashions, just like clothing, hairstyles and political opinions. As long as people become bored or unhappy, change — even just to have something new to do — will always be in the forecast. However, fashions in dieting are unique because virtually all diets work. If you follow *any* plan, you will lose weight. Even a cursory glance at the people you meet will reveal many overweight, unhealthy and (if you look closer) unhappy people. Many of them have attempted to lose weight. They often succeed temporarily, but ultimately fail to make a major change. Dieting becomes an ongoing hobby.

Most weight loss failures have nothing to do with glands, large bones, genetics or bad diets. When trying to change their eating habits, most people have trouble developing the disci-

pline to overcome two key problems: hunger and anxiety.

I'm not going to discuss hunger and anxiety in BODYOPUS. I'm assuming that you have this under control. I'm not interested in being a parent, psychologist or baby-sitter. I'm a body problem-solver, not a head fix-it man.

Although all diets "work," people jump from diet to diet for the most whimsical of reasons. The weak-willed ones switch because of failure, guilt or denial. Semi-successful dieters usually change their plans to match some idea of correctness, either scientific or philosophical.

Because of these factors, there are a great number of diets. There's the Rotation Diet, the non-fat diet, the (pick one or all) oat, rice or pectin fiber diet, the (see above) olive, canola or nut oil healthy heart diet. Diet fashions are championed by the segments of the dieting population that find them most acceptable. Athletes embrace high-complex-carbohydrate diets; the elderly pursue the healthy heart ones. It does have some sense to it, doesn't it?

Aside from specific diets, there are two primitive ways that people reduce the amount of food they eat. The least complex is to remove one or more items: dessert, bread, soda pop, alcohol or dairy. It works extremely well because most people have a lurking suspicion that some foods they eat are *bad* for them, and that those foods are the culprit behind the fat accumulation. Scientists would debate against this simplistic prescription, but it often works. Even a dog can understand the word "NO!" With people and food, "BAD! NO!" works too.

The extension of this "BAD! NO!" plan is just as simple — eat less food. If you make a semi-conscious effort to eat fewer meals or smaller portions, you will lose weight without counting, balancing or ratios. It's just plain rationing.

This is primitive dieting, but it does have its charms. It doesn't cause much angst or intrude into your thinking. Eat less and presto, you will lose weight. Many primitive dieters don't own a bathroom scale, nor want one.

This is fine as long as you don't have any concern over the quality of the weight loss. When you want to lose only fat, not muscle, or are concerned with energy levels and physical performance, you will need to abandon simple diets and move into mainstream Modern Dieting. Modern Dieting involves counting calories, weighing foods and considering nutritional ratios. Virtually all popular diets that you read about consist of calorie restriction with a few embellishments.

The biggest advantage of calorie restriction diets over the "just eating less" strategy is *control*. By tracking calories and nutrient ratios, you can predict the amount and quality of the weight lost.

This book is not a typical diet book. I expect that most of you have progressed past elementary and secondary school dieting. There's already a plethora of A-B-C diet textbooks and primers on basic nutrition. I am not a traditional nutritionist. I don't fill in all of the blanks. For most people, choosing a nutrition plan is like choosing a religion. After watching the bickering of MDs, PhDs, the FDA, the life extensionists, athletes and vegetarians (have I left some group out?), many nutrition-shoppers just pick the least irksome one, or surrender to the comfort of the FDA's views.

I have nothing against nutritionists. I simply find them uninteresting and docile. Many of them are wanna-be MDs pining for membership in the Good Old Boy Medical Club. Since I'm not a nutritionist, don't think I've missed something and say: "Aha! What about *zinc*?" or "You haven't addressed my colon

and pectin!" I'm telling you now that I'm leaving the minor (easily solvable) problems for the traditional nutritional hoi polloi.

BODYOPUS is far, far removed from mainstream dieting, but it's not just a capricious exercise. BODYOPUS is a pick-up diet; use it to solve problems that other diets can't address.

Believe it or not, I *do* endorse regular diets. I have even advised clients to start out with the rudimentary "BAD! NO!" diet. The tried and true calorie restriction diet is a valuable tool much of the time. It's easy to follow and most people can stick to it for a long time. Why don't we pursue this diet initially? Actually, we will. In the next chapters, I will present a typical Modern Diet that will work fine until problems arise that it can't fix.

I've met a few genetically gifted people who don't get fat. They are usually born with fewer fat cells and have naturally optimized metabolism. It looks like a sideshow trick, as they eat an enormous amount of food and never get fat. If they do gain any fat, it's evenly distributed over their body, not in paunches, love handles, or saddlebags. Some bodybuilders who have put 50 pounds of fat or more on their frames at worst have chipmunk cheeks. *I* know they're fat, but to other people they only look bulky.

For the gifted, dieting is effortless. They don't count calories, weigh foods, or balance portions; they tell me: "Oh yeah, I cut down on my ice cream, butter and soda pop." They don't even have to cut these foods out — just down. Damn, the fat seems to melt away almost overnight. It's freaky.

These ideal people are both blessed and cursed. Of course, they always look lean and can eat whatever they want. Their easy success entices others into fantasizing that they are the same way. Who wants to think about or suffer over food? The curse of the gifted, of course, is that they usually don't develop

any diet discipline. They're used to eating a lot of food, and not used to hunger or anxiety.

There are many such perfect people in bodybuilding because body fat levels of near 3 percent are required for men to win major competitions. In sports which don't require low body fat percentages, these gifted, undisciplined folks do fine. However, to get caliper measurements between 2 and 4 millimeters at any visible point on the body, you need discipline in addition to genetics.

These genetically gifted bodybuilders expect me to come up with some slick, effortless trick to thin their skin out. They want to be dazzled with suggestions for a secret fat burning trick, thyroid hormone, growth hormone or a water rebalancer. (Hey, they ask for that one a lot.) They're sending me a covert message, which is: Don't ask me about my food.

At some point, disaster strikes, and they encounter *the obstacle*. I start by asking an innocuous question: How many calories do you eat every day? Most people, myself included, don't count calories when they're not dieting. However, if you want to lose fat and make sure you don't lose muscle, you need to look at the amount of food you're eating. Before you start manipulating calories and nutrient ratios, you must know how much you are eating (and yes, that's in calories).

My perfect clients usually eat too much and have no idea how much they're eating. Although counting calories is an alien concept for them (and may be for you), it must be done. It is necessary to know what you are currently doing to make any use of the help of a coach, trainer or nutritionist. In this chapter, we'll discuss the first step of Modern Dieting.

Step One: Establish maintenance calories. Before you make any changes, you need to know how much you are consuming

each day. Do not tolerate a "round figure" or an impromptu estimate; the amount should be as exact as possible. At maintenance calories, your weight will be pretty stable over a week's time. Although there will be day-to-day fluctuations, each once-a-week weigh-in should be within a couple of pounds.

Don't make adjustments to your eating patterns at first. Just buy a food scale, some measuring cups and spoons and a calorie counter book. Then chart out a typical day of eating. List how many meals (and snacks) you ingest over 24 hours. Don't forget things like the refrigerator raid at 3:00 a.m., the pastry with the mid-morning coffee or the banana before your workout. What about the Gatorade you drink during your workout, or the cream and sugar in your coffee or tea? I am no longer amazed at the amount of food that clients forget about during a day. Sometimes the only way to remember it all is to keep and a pad and pencil with you and write down everything you eat or drink. Eventually, you should not need this much precision, but by being careful in the beginning, you are establishing good nutritional habits. Is this routine a real pain in the ass? Probably so, but I've learned from my clients not to trust an estimate without questioning the veracity of the "claim." Most people's estimates are off, especially if their eating habits vary from day to day.

The wild card is restaurant food, which is usually uncountable and unweighable. Of course, I usually advise my clients not to eat out often. However, if you must do it, pick places that have calorie charts of the foods they serve. It's not that difficult these days, as even fast food restaurants have them available on request. As for gourmets — AARRGHH!

Constantly remind yourself to weigh or measure everything that is not pre-portioned. It's a common mistake to misjudge

maintenance calories by forgetting whole meals or snacks, or by "eyeballing" the amount of food you are eating. Even really smart clients do the damnedest things, such as misjudging how big a cup is or what looks like 4 ounces. Food will trick you; the stuff we like to eat doesn't have to take up much room to add up to a lot of calories. Sure, there are a lot of foods that look large but have virtually no calories, like lettuce and celery. But lettuce and celery are *not* the problems, are they?

Is it really important to get an exact (exact, exact) calorie count for the day? Of course not. People usually eat enough to maintain their weight. Even without tracking every calorie, a normal non-compulsive person will maintain their weight with moderate exercise and a varied non-fetish diet.

The point of learning your daily maintenance calorie count, besides being a starting point for an outside observer to make adjustments from, is to develop food awareness. People usually track calories in the specific areas they're concerned with. Endurance athletes are carb-conscious. Bodybuilders who may not know how many calories they're eating can tell you how many grams of protein they consume at each meal. Even sedentary people will carefully watch how many milligrams of sodium and cholesterol they are eating. Quite a number of people fixate on certain aspects of daily nutrition, but few measure it all. I hope that as you weigh, count and measure, and flip like a madman through the calorie counter book, you will start to judge the quality of the food, in addition to the quantity.

What have you accomplished with ***Step One***? Digits, four of them: the number of calories you consume over a 24-hour period. You should also be more conscious of the quality of the food you eat by knowing the number and frequency of your meals, when you eat solids versus liquids, what supplements

you take and rough ratios of the macronutrients in your diet. This is not a surprise quiz or passing in your homework — this is important information for real life.

It's no fun to count calories. Some people feel that it involves too much thinking and looking things up. Why bother? Lots of popular diets just start out with a pre-determined calorie amount. Why don't we just skip over all this busywork and start reducing calories? If you don't create a reference point now, you'll wish you had one later. Before we diet for fat loss, we'll start a pre-diet diet, an optimal maintenance diet. You're now ready for *Step Two:* Manipulate your maintenance food intake for best possible performance.

CHAPTER 8

MAINTENANCE MANIPULATION: THE PRE-DIET DIET

MANY OF THE IDEAS I'll present in this chapter are taken for granted by bodybuilders, the athletes most obsessed with the whats, hows and how muches of nutrition. To other athletes who don't understand their nutritional precision, this preoccupation with food seems obnoxious. Bodybuilders will, in the least likely place, in the middle of the most spirited conversation, interrupt with an abrupt, "I have to eat some protein and carbs *now!*" A pet cat is better mannered.

For the others, let me ease you into the pre-diet diet. The three macronutrients — protein, carbohydrates and fats — should be adjusted. Bodybuilders usually eat a diet that is 30 percent protein, 60 percent carbohydrates and 10 percent fat. Most mainstream health professionals say that 30 percent protein is excessive, and 20 percent is fine. Well, it isn't. I'll put it simply: 20 percent is too little protein for athletes. Although my ideal figure is 25 percent, I recommend 30 percent because most athletes don't eat the correct *types* of protein. Although quantity can compensate for quality in the pre-diet, the quality of protein becomes very important when you are trying to main-

tain muscle on reduced calories. This is true about many other aspects of nutrition; increasing performance and fine-tuning metabolism takes much more than just the RDAs. Quality bodies need quality nutrients.

The FDA has redefined its position on protein. The "gold" standard in protein has been abolished and "just good enough" (a nice phrase for fair) has peter-principled up: soybean protein is now considered a quality protein. This political, back-office decision involved hidden agendas, trade-tradeoffs and special interest pressures. Any scientist familiar with nutritional research could have recommended a better protein. The FDA has no concern for athletes or life extensionists. In fact, most of the expected changes in regulations for protein, vitamins, minerals, herbs and amino acids are to the detriment of the goals of performance and supra-health.

Succinctly put, if you don't consume quality proteins, 30 percent should allow you to maintain athletic performance. A ratio of 25 percent is correct only if the proteins are of the highest quality. I'll describe exactly which proteins to choose further on in this book.

There are three distinct metabolic phases: maintenance, fat loss and muscle acquisition. Each phase is nutritionally distinct, and causes different psychological states. Savvy coaches realize that athletes need a mental break, some time to stop thinking about food. I created the pre-diet diet for this reason. I hope that the nutritional discipline of the other phases would subliminally influence you to make correct nutritional choices during this "vacation" time.

You would think that scientists would at least agree on the ratio of fat calories. Most mainstream nutrition authorities suggest a maximum fat intake of 30 percent for normal, non-athletic people. Most sports nutritionists recommend only 10 percent. Because I haven't made my final decision yet, I tend to go along with the 10 percent figure just to shut everybody up.

I am concerned that the intake of fat required to avoid health problems may be different than the amount required for performance. Most athletes *have* reduced the amount of fat they eat over the last few years. Weight training athletes used to eat (and some still do) copious amounts of whole eggs, whole milk and fatty red meat. It wasn't unusual to see a diet with 40 percent or even 50 percent fat. Times have changed. Now, most athletes are primarily concerned with carbohydrates (endurance athletes), and protein and carbohydrates (weight-lifters). Both camps have lowered dietary fats to 10 percent of total intake, and sometimes even less. There are many good arguments for eliminating meat and dairy fat, so if the 10 percent consists of essential oils, most nutritionists would say that it should be enough.

What's my problem with this persuasive advice? First, most of the big bodybuilders and powerlifters I've met have built most of their initial muscle mass while eating a diet that was about 30 percent fat. Bulgarian Olympic weight-lifters, who are rather avant-garde, explicitly abandoned 10 percent, and chose 30 percent because it increased their strength! What to do?

Mainstream nutritionists are happy with 30 percent. Athletic and life extensionist nutritionists have been hammering away with 10 percent for so long now that it's become a de facto standard. The Bulgarians, along with some fringe endurance coaches, recommend the "normal" 30 percent. I've yo-yoed myself. At times I've suggested 10 percent, and in other circumstances, 30 percent. (I believe that the new term for such vacillating is called "waffling.") And many of you might go bal-

listic to learn that the *core* of the BODYOPUS Diet requires a 70 percent dietary fat ratio!

What to do? In the pre-diet diet, somewhere between 10 and 30 percent is an ideal balance between supra-health and optimal performance. As with protein, the best fat ratio depends on what quality of fat you are eating. Some fats are essential for health.

At this time, I feel that 10 percent fat is too low, and 30 percent is probably used to overcompensate for lack of quality fats. Personally, I have trained myself to dislike even moderate amounts of any dietary fat, so 30 percent seems especially repugnant. BODYOPUS' 70 percent fat is acceptable to me only because I know what is happening to all that fat.

The nice thing about extra protein consumption is that the conversion to glucose or fat is not very efficient. I've never seen an athlete get fat from eating too much protein, and I've never had a protein binge myself.

So why do I still recommend 10 percent? Human nature. A 10 percent fat to calorie ratio is virtually a no-fat diet. Even if you try to eat a fat-free diet, the tag-along fats in meat, fish, and even oatmeal will add up to 10 percent. When I recommend a 10 percent dietary fat ratio, I specify that it is 10 percent *essential* fats (polyunsaturated and monounsaturated vegetable oils and fish oils). After adding the essential fats to the tag-along fats, the real total is usually more than 10 percent.

How about 30 percent? Well, many athletes are mentally conditioned to avoid fat. It's hard to sell them on a diet with more fat. Although some athletes would perform better with more fat in their diet, good advice not followed is no advice. For now, the pre-diet diet is 10 percent essential fat, for a total of about 18 percent fat.

If protein is 30 percent and fats are about 10 percent, about 60 percent of your calories should come from carbohydrates. Carbohydrates are the most important part of the pre-diet diet. Carbohydrates are important for energy, strength, endurance, recuperation and alertness. Bodybuilders usually reduce carbohydrates for fat loss, and add them for muscle growth. Even small alterations in quality and quantity will affect your mood. You will learn more about using carbohydrates scientifically in the Recomposition phase of the BODYOPUS Diet.

The sports nutrition media have attempted to educate the general public about eating "right" with two key words: fiber and complex. This isn't wrong, just incomplete. Humans can digest two forms of carbohydrates: starches and sugars. After digestion, all carbohydrates are turned into glucose, a simple sugar found in the blood, and glycogen, a starch found in the muscle and liver.

Many nutritionists would like to tell you that starchy, fibrous carbohydrates are preferable to simple sugars. In reality, all carbohydrates are fair game. Starch with or without fiber, and sugars such as sucrose, fructose, maltose and even lactose can be used by the body. Even evil white table sugar can be useful in some circumstances, such as glycogen replenishment. There are no bad (digestible) sugars, just mistimed applications.

In the pre-diet diet, we won't discuss carbohydrates at much length. When discussing the Modern Diet I'll go into more carbo-detail, but you'll learn the real tricks in the BODYOPUS Diet.

The pre-diet diet should be almost carefree. Too much thinking about eating leads to nutritional burnout and sugar and fat binges that last for weeks. In the pre-diet diet, use common sense. Eat a variety of carbohydrates — vegetables, grains,

fruit, even (gasp!) some nasty processed refined sugar things. The pre-diet is not sophisticated, but it should satiate any lurking potential binge fetishes. In the pre-diet diet, don't worry about carbohydrates too much.

Step Three: Set your feeding frequency. During the pre-diet, you won't need to wake up in the middle of the night and eat. You're probably comfortable with three meals per day. We both know that you also snack — between, after, whatever — but you don't really count snacks as meals, nor do you really plan them. However, smart athletes *do* count snacks.

I strongly recommend that you start eating 6 meals per day, especially when 60 percent of your calories come from carbohydrates. Six meals a day work out to a "feeding" every 2-1/2 waking hours. Dedicated bodybuilders have been eating 6 meals a day for years, and it should be the standard for everyone. Banish the 3 squares into a deep, round hole. Of course, I won't be calling anyone up to check, but you may want to set the alarm on your wristwatch to chime every 2-1/2 hours.

Eating 6 meals per day helps to modulate blood glucose and insulin levels. Insulin, the most anabolic hormone in the body, controls glucose and some amino acids. Too little insulin, too few carbohydrates or too much time between meals will make most people feel tired. Too much insulin will transport glucose into fat cells. Sedentary people need steady insulin levels. Athletes benefit from coordinating their carbohydrate intake with their physical activity. The more carbohydrates you eat, the more meals are needed to spread them out.

Muscles need the most carbohydrates within the first hour after exercise, even if you train late at night. Post-workout meals should be liquids containing glucose, fructose, sucrose and maltodextrins. Dietary fats and fibrous carbohydrates

should be eaten in other meals. The proteins in the post-workout meal should be easily assimilable, like egg, whey and milk. You should eat more calories in the post-exercise feedings. Your other meals can be more traditional: vegetable, starch or fiber with an animal protein (if you wish) and some essential fats.

Let's review the steps so far:

STEP ONE

Establish maintenance calories over a 24-hour period. Count, weigh and measure; look up the calorie amounts and write them down. Include everything: snacks, sleepwalk eating and coffee condiments. Within 3 or 4 days you'll find your personal maintenance calorie level. The total is often surprisingly different than an uncounted estimate.

STEP TWO

Divide your maintenance calories according to these macronutrient ratios:

Protein	30%
Fat	10%
Carbohydrate	60%

Be flexible with these ratios. Don't bother counting the extra fat in so called non-fat foods like grains and whitefish. Even if you don't get 30 percent of your calories from protein each day, you will probably achieve 25 percent.

STEP THREE

Arrange the frequency and number of your meals. Yes, that's 6 meals per day. Snacks are considered meals now, so plan