

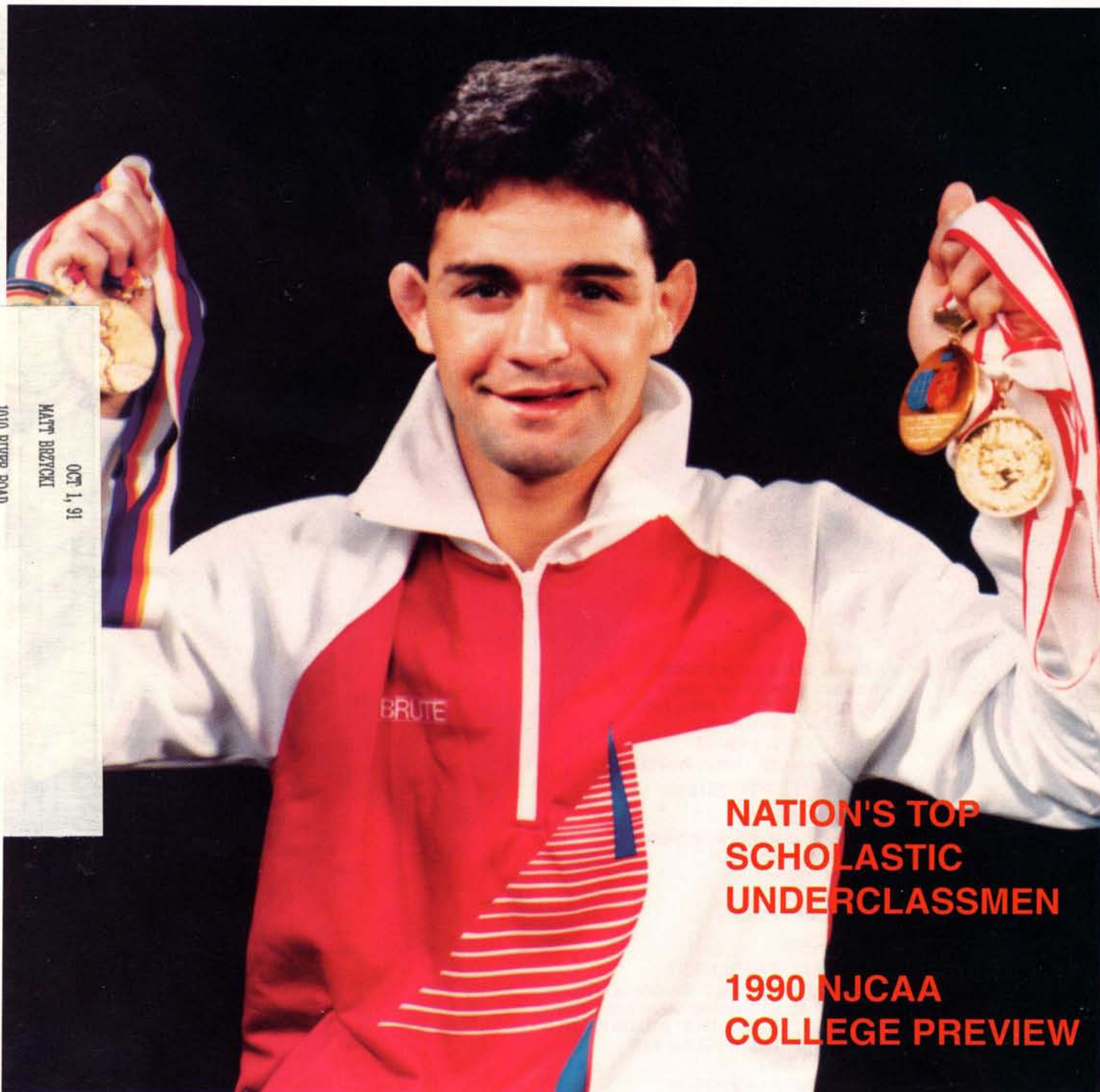


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**NATION'S TOP
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**1990 NJCAA
COLLEGE PREVIEW**



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Understanding The Difference Between Fat and Muscle

In order to compete at an optimum level of performance, a wrestler should strive to maintain a desirable level of body fat and muscle tissue. Indeed, if he carries too much body fat (or adipose tissue) it can adversely affect his performance.

Fat Facts

While muscle cells are quite active, fat cells are fairly inactive. Body fat supplies a concentrated form of energy, protects vital organs and provides insulation in cold weather. Other than that, body fat really doesn't serve any other important functions. To the best of my knowledge there are only two sports in which an individual would benefit from having a higher percentage of body fat. One is long-distance swimming in cold water . . . and we're talking a very long distance in very cold water. The other is Sumo wrestling. So it's not desirable to increase your body fat — unless, of course, you plan on swimming the English Channel (in December) or wrestling in Japan.

Types of Fat

Basically there are three types of fat, subcutaneous, essential and depot.

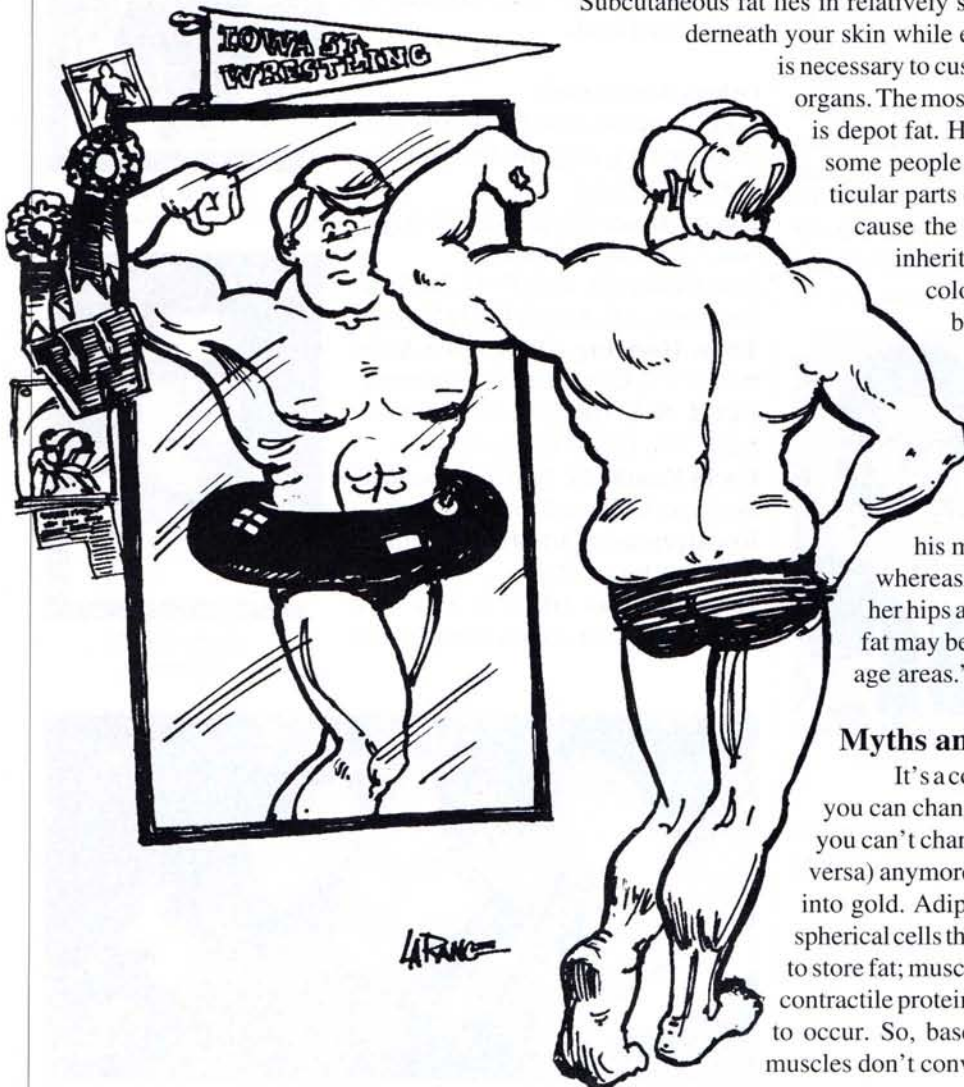
Subcutaneous fat lies in relatively small amounts directly underneath your skin while essential fat is internal and is necessary to cushion and protect your vital organs. The most interesting type, however,

is depot fat. Have you ever noticed how some people tend to deposit fat in particular parts of their bodies? That's because the accumulation of fat is an inherited characteristic, like eye color, nose shape, hair distribution and skeletal height.

People are very similar to their ancestors when it comes to storing body fat. Although there are individual differences, a male tends to store body fat in his midsection and upper back, whereas a female tends to store it in her hips and thighs. In a sense, depot fat may be viewed as "inherited storage areas."

Myths and Misconceptions

It's a common misconception that you can change fat into muscle. In truth you can't change fat into muscle (or vice versa) anymore than you can change lead into gold. Adipose tissue is composed of spherical cells that are specifically designed to store fat; muscle tissue consists of special contractile proteins that allow for movement to occur. So, based upon these facts, your muscles don't convert into fat during periods



of extended inactivity because fat and muscle are two different and distinct types of biological tissue. And your fat doesn't change into muscle from rigorous exercise for the same reason. Your muscles atrophy (or get smaller) from prolonged disuse; your muscles hypertrophy (or get larger) from physical activity.

Another misconception is that you can lose fat from specific areas of your body. Unfortunately this isn't true, either. Let's use the abdominal area as an example. Believe it or not, everyone has a well-developed abdomen. However, whether these muscles are seen or not depends upon the thickness of the fat covering the stomach area. If your abdominal region has little or no fat, your "abs" will appear very muscularly defined. On the other hand, if your midsection has a relatively high amount of adipose tissue, it's not likely that you'll show much muscular development. This doesn't mean that your abdominal muscles aren't developed — it's just that they're camouflaged by a pesky layer of fat. Every day thousands of people perform hundreds of sit-ups, leg lifts and

other abdominal exercises in the belief that this will give them the highly sought after "washboard abs." Although this will certainly tone the underlying muscles, such Herculean efforts have little effect on the overlaying fatty tissue. (As a matter of fact, I know one well-meaning individual who regularly performs fifteen hundred sit-ups during each workout, yet he looks as if he just swallowed a Volkswagen!) The reason for this is that when you exercise, you are pulling fat stores from all over your body — not just from one specific area. In exercise physiology parlance, this belief is known as "spot reducing." So, you can do sit-ups until you pass out but it won't necessarily trim your mid-section. Quite simply, spot reducing is physiologically impossible.

Weight Gain/Weight Loss

Gaining or losing weight is a simple matter of mathematics. If a person consumes more calories than he uses up, he will gain weight. Keep in mind that if the weight gain is more than about two pounds per week, it's likely that some excess calories will be stored

in the form of fat. However, if the weight gain is less than two pounds per week and is the result of a demanding weight training program in conjunction with a well-balanced nutritional intake, then it will probably be in the form of muscle tissue.

Conversely, if a person uses up more calories than he consumes, then he will lose weight. Once again, the rate of weight-loss will determine whether the caloric expenditure actually came from fat or muscle. If an individual loses more than about two pounds per week, this weight reduction will likely be the result of lost muscle tissue and/or water.

As you can see, losing weight (or gaining weight) too rapidly isn't very desirable . . . nor is it very healthy. Keep this in mind when you (or your wrestlers) are cutting weight for weigh-ins.

Once again remember that in order to wrestle at your best, you shouldn't carry too much body fat. This can best be accomplished by working within the guidelines of a program that emphasizes common sense. ○

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