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You've seen it. I've seen it. We've all seen it. This diet. That diet. The other diet.

It gets old. At least it does to me.

And that's not to take away anything from people who have succeeded and reached their goals while adhering to certain diets. I'm not going to bash them. If their lives were changed in a positive way, then that is truly awesome!

Yet, here is something you won't see in many personal success stories surrounding the latest "fad" diets: controls and variables.

If you remember from middle school science class (and no, not the baking soda and vinegar volcanoes), when scientific laboratories do research, they include controls and variables (factors that stay the same and factors that change throughout the course of the experiment). Therefore, scientists know that if any changes are documented in the research statistics over time, it can reasonably be concluded that the changing variable, not the static control, influenced the change.

Why does this matter to the world of diets and nutrition? It's for the simple fact that we don't know the controls and variables that are involved in most fad diet testimonials by just simply accepting the personal success stories attached to them.

If someone claims, "I lost 35 pounds on a _____ diet," follow up with the question, "How were your eating habits before you started this diet?" Almost 99% of the time, they will say a combination of fast food and candy canes.

A pastor friend of mine, who went through a weight loss transformation, may have said it best: "What is the best way to lose weight? … First, gain 100 pounds."

Here's the good news… The nutritional research studies are in (and have been in for some time), and across the board the research concludes the same results time after time after time. And that is this: no matter what diet you have ever read or heard about – weight loss (or gain) can be encapsulated down to one thing: **Calories.**

Food makes for more than a tasty meal. Food is an essential and vital way for our bodies to get the nutrition and energy it needs to perform its daily functions. "Calories" is the measurement of the total amount of energy that comes from your food. "Calories" is also the measurement of the total amount of energy that happens inside YOUR body.

Nutrition can get as super complex as you want it to get, but in the end, if you consume less calories than your body uses to perform each day, you will lose weight. If you consume more calories than it uses, you will gain weight. If you consume around the same as your body uses, you will stay around the same weight. This is a fact.

The trick is knowing how many calories your body uses throughout the day to function (a.k.a. your **"caloric expenditure"**). There are mathematical equations based on your age, weight, and activity level that estimate this number of calories. There is also rising technology such as the Fitbit™ and similar devices/apps that attempt to track the calories you burn by counting the number of steps you take each day and assessing your heart rate.

Some users claim that these devices come close to accurately calculating their calorie expenditure. Other people, however, say these devices aren't accurate at

all. If these devices work for you, then that is fantastic. If these devices don't work for you or you'd rather circumvent the effort/hassle, then the mathematical equations come fairly close, as a general rule.

However, before you go and grab a sheet of paper and that crusty ballpoint pen you've had in the drawer since 2002, keep reading…

Estimating how many calories you should consume per day and then tracking foods when you eat them once involved a pen, a notebook, and a considerable amount of time. Now, with a wide assortment of meal-tracking apps you can download at your fingertips, tracking meals is easy!

Personally, when it comes to a food tracking app, my favorite is **"MyNetDiary."** The app is attractive, the food logging is simple, and if you eat similar foods from time to time (like I do), you can save them as favorites to easily access them when logging again in a future meal. This can be a major step towards your fitness goals!

Carbohydrates ("Carbs")

Carbohydrates are an important source of energy for the body (by default). There are four (4) Calories per gram of carbohydrate. All digestible carbs are eventually broken down in the body to glucose, a simple sugar, which is used for energy.

Simple Carbs

Monosaccharides (found naturally, in most cases, joined together creating di-saccharides)

Glucose, Fructose, Galactose

Disaccharides

Sucrose (Table Sugar) – The sugar from the grocery store we normally call "sugar"

Lactose – Found mostly in dairy products

Maltose – (Least common) Found in cereals, grains, fruits, and vegetables

Complex Carbs

Polysaccharides

Starches – Contain complex sugars from many plant tissues, naturally found in rice, corn, wheat, beans, potatoes, and other vegetables.

Fiber – A dietary material in food resistant to the action of digestive enzymes. There are two types: Soluble and Insoluble.

A) Soluble Fiber – Dissolved by water and forms a gel-like substance in the digestive tract.

Benefits: Moderating blood sugar levels and insulin response (by slowing food digestion and absorption) and lowering LDL "bad" cholesterol (by binding with cholesterol particles in your digestive system and moving them out of the body before they're absorbed)

Good sources of soluble fiber include: Oats, legumes, barley, fruits/veggies (especially if they are uncooked)

B) Insoluble Fiber – Passes through digestive tract close to its original form.

Benefits: Intestinal health

Good sources of insoluble fiber include: Bran layers of cereal grains

* A great recommended amount of daily fiber intake is around 38 grams for men and around 25 grams for women *

Top 3 Dangers of Carbs

Issue #1: Simple sugars can damage your teeth. Don't eat all of your Halloween candy in one night. That's kind of a joke, but for real, sugars eat away at your tooth enamel and can be detrimental to your oral health.

Issue #2: Some carbs – particularly simple sugars – can raise insulin levels, sometimes dramatically. If you've been physically inactive and then consume these carbs, insulin will simply shuttle these broken down sugars to "fat storage land," a magical land we try to avoid. A way to be vigilant and avoid this is to seek out a glycemic index chart or a glycemic load chart. However, there is a simpler, easier-to-remember solution…

Solution: Eat fibrous vegetables with your carbs. The fiber will slow down food digestion and absorption, and it will result in less insulin spikes and less bodyfat over time.

Issue #3: You can eat A LOT of carbs. Protein is high in "satiety," meaning you feel full by eating foods high in protein. Fat is also fairly moderate in satiety. But carbs are low in satiety. THIS may be the main reason many people gain weight and eat excessive amounts of carbs, and why many people succeed on low-carb diets for weight loss. Think of the Lays potato chips commercials from the '90's … "You can't eat just one." They weren't kidding. You can probably eat the whole bag, and a few pop tarts, and a couple donuts for breakfast. The great news is that the solution to this issue is the <u>same</u> solution to issue #2 -> eat fibrous vegetables with your carbs and, in turn, you will get full quicker and likely won't overeat them.

Protein

Close your eyes for a second and imagine this... Proteins are amino acids linked together by peptide bonds (see illustration)...
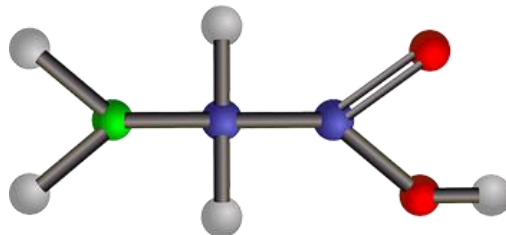
There are over 20 different types of amino acids found in protein, but only nine of them are "essential," meaning that the body cannot produce them on its own and they must consumed from food.

Amino acids, after being broken down by the body, are formed into other protein molecules and are used to build and repair body tissues and structures (muscle, connective tissue, skin, hair, nails, bones), and are involved in the making of hormones, enzymes (for food digestion), and antibodies (for healing).

Protein is the second most abundant substance in the body, next to water. 65% of protein in the body is in skeletal muscles. As part of food, there are 4 Calories per gram of protein.

However, not all food proteins are created equally. A basic way that proteins can be categorized is by their **biological value (BV)**. The BV is a measurement of the quality of protein – or how well its amino acid profile satisfies the body's needs. Generally, high-BV food sources have a broader spectrum of the nine essential amino acids. If an individual consumes high-BV proteins, their protein requirements are met with less food.

Complete sources of protein

(containing _all_ nine essential amino acids)

Meat and dairy foods, soybeans

Incomplete sources of protein

Grains, legumes, nuts, seeds, other vegetables

The missing amino acids in an incomplete source are called the food's "limiting factors." However, these incomplete source foods can be combined with other incomplete source foods, or with complete sources, to make up complete proteins. (i.e. Rice and beans combine to make a complete protein.)

Because of its prevalence in the body and all the benefits it provides, protein is well-agreed upon in fitness circles as the macro-nutrient most necessary to build muscle and repair tissues. The age-old argument, however, is "how much protein do you need to eat each day?" This manual will avoid that argument and defer you to your favorite meal tracking app for the answer. 😊

Fats

After entering the body, fats help the body absorb vitamins A/D/E/K, they keep skin healthy, assist with blood sugar stabilization, and have many other health benefits. Yet, they can be a problem if eaten in excess. That is because foods that contain fats are the highest in "caloric density" (meaning, they contain a lot of calories in a little space).

Unlike protein and carbs, which are 4 Calories per gram each, fats provide the body 9 Calories per gram. Meaning foods higher in fat content also contain a higher amount of overall Calories.

"Good" Fats (meaning, they help raise HDL "good" cholesterol levels)

Monounsaturated fats - Contain one double-bond in carbon chain

Examples: Olive oil, canola oil, peanut butter, almonds, avocados

Polyunsaturated fats - Contain two or more double-bonds in carbon chain

Examples: Fish oil, vegetable oils, nuts and seeds

"Bad" Fats (meaning, many of them assist in raising LDL "bad" cholesterol)

Saturated fats - Contain zero double-bonds in carbon chain

Examples: Meat, dairy, tropical oils – palm/coconut

Trans-fats!

Trans-fats are the result of hydrogenation (adding hydrogen to unsaturated fats to make them harder at room temperature to increase their shelf life). They became popular to use in food manufacturing over the last several decades because this type of processing keeps the fats in food from going rancid. Trans-fats raise LDL "bad" cholesterol considerably, and researchers claim that this is not simply correlative, but causative. Examples of foods with trans-fats include many fast food items, baked goods, and pastries.

Destructive effects of trans-fat:

Raises LDL (bad cholesterol)

Lowers HDL (good cholesterol)

Increases triglycerides in the bloodstream

Decreases insulin sensitivity

Hampers immune system function

Interferes with liver's detoxification processes

May cause cancer

Increases risk of type-2 Diabetes

Causes inflammation

Interferes with the functions of the "good" fats

Makes platelets stickier for delayed healing

In the last several years, more fast food restaurants and manufacturers of processed foods have moved away from using trans-fats in their products. That doesn't mean their solution is a healthy one, however.

Many fast food restaurants are now using soybean oil, which is prevalent in **Omega-6** fatty acids. Omega 6's are essential fats for the body, but the diet in many western countries (including the United States) is already typically high in Omega-6's. So, consuming foods with more of them can lead to increased inflammation in the body – which can then bring forth a wide array of sicknesses and negative consequences.

In fact, **Omega-3** fatty acids (found in coldwater fish, fish or algal oils, flaxseeds, chia seeds, and walnuts) and Omega-6's play a sort-of competitive game in the body to see who can capture the most flags (they battle for space inside your cells). Both fatty acids are good for our bodies, but again, if we consume too many Omega-6's, the Omega-3's (which help lower inflammation in the body) get crowded out and don't get any flags. They go home, and you get sick.

The moral of this story is to treat your body right by – not only looking for "good" fats – but also looking to consume more foods that contain Omega-3's and try to limit foods high in Omega-6's.

*** Avoiding fast foods and baked pastry items will give you a huge leap in everything related to the negative effects of fatty foods in the body. ***

Water

The body is 60%-70% water. Blood is 90% water. Muscles are 70% water. Bones are 20% water. Need any more reasons why proper hydration is important for the body? Good, because here is a list of them…

Ways that consuming adequate amounts of water benefits the body:

Helps build bodily tissues

Fluid and sodium (salt) retention are alleviated

Helps lubricate joints

Brain functions improve

Digestion improves

Natural thirst returns

Metabolic functions improve

Blood volume and circulation is improved/maintained

Helps remove waste from cells

Helps bodily excretion

Body temperature regulation improves

Opinions will differ on how much aqua you need to drink per day, but the general consensus is that most people don't hydrate enough. On top of that, many people also consume drinks that go to promote dehydration in the body (teas, coffee, alcohol, etc.). Therefore, drinking water is even more of a concern for those who consume these drinks.

There are several complex calculations on how much water is optimal for you to drink each day, but let's go simple. Simple works…

Minimum Hydration: Your bodyweight x 50% in ounces. Meaning that if you weigh 150 pounds, you would aim for 75 ounces of water intake per day.

Optimal Suggestion: Your bodyweight x 70% in ounces. Meaning that if you weigh 150 pounds, you should aim for 105 ounces of water intake per day. This is the calculation I recommend for you.

A deeper question may be this:

how can you implement proper hydration into your day?

Because what works for someone else may not work for you… but it may. Everyone who eventually succeeds at drinking optimal amounts of water usually has some stories of failure before they found what worked for them. Some people have found success by filling a gallon with water each morning and marking on the outside correlating times of the day where the water should be at on the inside. Some people have found success by setting alarms "drink water now!" on their phones. Find out what works for you. If something doesn't work, keep trying. Buy an awesome water bottle. Squeeze the handle of a garden hose and open your mouth. Don't give up. Water is literally the most important fuel for your body.

Recommended Apps
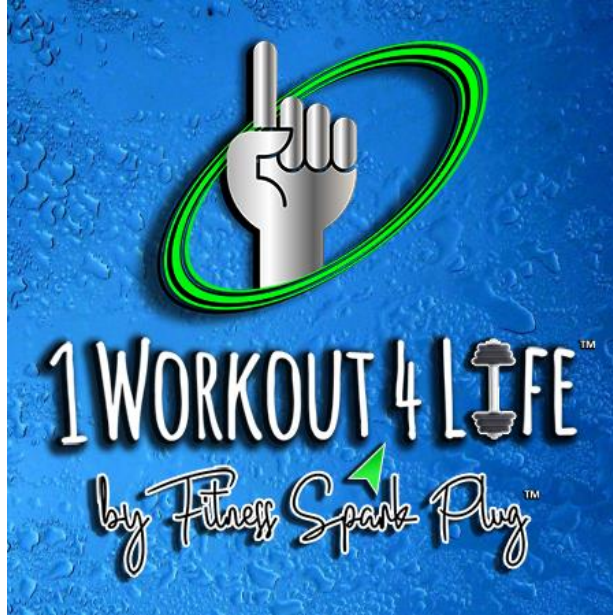
www.1Workout4Life.com

www.MyNetDiary.com

Grocery shopping checklist

Veggies of many different colors

Fruits of many different colors

Almonds, Brazil nuts, and walnuts

Sunflower seeds, flaxseeds, and chia seeds

Beans and legumes

Whole grain cereals

Brown rice

Eggs or egg whites

Turkey, chicken, and other lean meats

Low-fat dairy foods (depending on who you ask)

Vegan and vegetarian options

Plant-based milk

Olive oil

Avocados

Coldwater fish: Salmon, mackerel, tuna, trout, oysters