



# Boulder Natural Medicine Clinic, LLC

## Nutrient Density

How do you decide which foods you want to eat? Flavor? Texture? Convenience? Comfort? Many people choose the foods they eat based on immediate gratification, without much thought about the long-term effects of their selections. That often results in choosing foods that taste good, but are not good for you.

What about the nutritional value of the foods you eat? When you choose your foods, be sure to consider the *nutrient density* of the foods. Nutrient density refers to the amount of nutrients for the given volume of food. Nutrient-dense foods have lots of nutrients, generally with fewer calories. *Energy-dense* foods have more calories for the volume of food and generally fewer nutrients.

### **What is nutrient density and why is it so important?**

Like anything involving "density," "nutrient density" means how much you get of one thing, given the presence of something else. In the case of nutrient density, the "things" you receive, the nutrients, are analyzed in relationship to how much they "cost" you, in terms of calories. Simply stated, nutrient density means how many nutrients you get from a food, given the number of calories it contains. Nutrient density is a simple way to connect nutrients with calories.

### **More nutrients for less calories**

Nutrient dense foods give you the most nutrients for the fewest amount of calories. In other words, nutrient dense foods give you the "biggest bang for the buck." You get lots of nutrients, and it doesn't cost you much in terms of calories.

### **Eating nutrient dense foods is one of the healthiest ways to eat**

Eating nutrient dense foods is one of the healthiest ways that anyone can eat. No principle is more likely to support healthy eating than the principle of nutrient density. Why is nutrient density so helpful? Because it gives you concentrated amount of valuable nutrients such as vitamins, minerals, fiber, essential fatty acids and phytonutrients, to name a few.

### **Nutrient density - an example**

Let's take a quick example. Let's say you're low on vitamin E, and decide to eat a food that is not nutrient dense. A slice of run-of-the-mill white bread will give you about 1/10th of a milligram of vitamin E. This 1/10th of a milligram will cost you about 80 calories (the number of calories in a slice of many white breads). Now let's compare this number and amount to a slice of 100% whole wheat bread.

Whole grain products, like most whole foods, are nutrient dense. A slice of 100% whole wheat bread will cost you approximately the same number of calories (about 70-75 calories) but the vitamin E content will be substantially different. Instead of getting only 100 micrograms of vitamin E in exchange for your 70-80 calories, with 100% whole grain bread, you will get



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between 250 and 500 micrograms. Or, to put it somewhat differently, you would have to eat between 2-1/2 and 5 slices of run-of-the-mill white bread in order to get the same amount of vitamin E as is found in one slice of 100% whole wheat bread. And those extra 1-1/2 to 4 slices would cost you as much as 320 additional calories.

Getting your nutrients from nutrient dense foods is clearly the way to go! Why? Because in this example, it would save you about 320 calories. While that amount might not sound like a lot, in terms of average walking, it would mean an additional 45 minutes of walking just to break even. It would also be the equivalent of a 33-pound weight gain every year if it happened on a daily basis.

## Summary

No foods are more nutrient dense than whole, organically-grown foods. The reason is simple: nothing is contained in a fresh, whole organic food that doesn't need to be there. Keep in mind that nutrient density scoring is not the only factor that determines good health. For example, if we only ate foods with a high nutrient density score our diet would be too low in fat. So we have to pick some foods with lower nutrient density scores (but preferably the ones with the healthier fats) to include in our high nutrient diet. Additionally, if a thin person or highly physically active individual ate only the highest nutrient foods they would become so full from all of the fiber and nutrients that would keep them from meeting their caloric needs and they would eventually become too thin. This of course gives you a hint at the secret to permanent weight control. Happy Eating! ☺

## Nutrient Density Scores

Kale	1000	Tofu	86	Bananas	30
Collards	1000	Sweet Potatoes	83	Chicken Breast	27
Bok Choy	824	Apples	76	Eggs	27
Spinach	739	Peaches	73	Low Fat Yogurt, plain	26
Cabbage	481	Kidney Beans	71	Corn	25
Red Pepper	420	Green Peas	70	Almonds	25
Romaine Lettuce	389	Lentils	68	Whole Wheat Bread	25
Broccoli	342	Pineapple	64	Feta Cheese	21
Cauliflower	295	Avocado	64	Whole Milk	20
Green Peppers	258	Oatmeal	53	Ground Beef	20
Artichoke	244	Mangoes	51	White Pasta	18
Carrots	240	Cucumbers	50	White Bread	18
Asparagus	234	Soybeans	48	Peanut Butter	18
Strawberries	212	Sunflower Seeds	45	Apple Juice	16
Tomatoes	164	Brown Rice	41	Swiss Cheese	15
Plums	157	Salmon	39	Potato Chips	11
Blueberries	130	Shrimp	38	American Cheese	10
Iceberg Lettuce	110	Skim Milk	36	Vanilla Ice Cream	9
Orange	109	White Potatoes	31	French Fries	7
Cantaloupe	100	Grapes	31	Olive Oil	2
Flax Seeds	44	Walnuts	29	Cola	1