



YOUR MATCHING DIET



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Response To Polyunsaturated Fats p. 11	INCREASED BENEFIT
Omega-6 And Omega-3 Levels p. 12	TYPICAL

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EATING BEHAVIOR TRAITS SNACKING

Snacking can be a healthy or unhealthy behavior. Snacking on balanced foods, containing healthy fats, lean protein, fiber and low glycemic index carbohydrates, in small portions, throughout the day can help control hunger cravings and reduce total caloric intake, while snacking on junk food can have negative health effects. Genetic markers associated with snacking behavior include variants in the receptor for leptin, an essential hormone for the regulation of food intake. The possible results in this report are "Typical" and "Increased." If you receive the "Increased" result, you may want to curtail the negative effects of snacking by choosing healthy snacks, eating slowly and reducing the size or calories of snacks. People with the G/G genotype in a leptin receptor (LEPR) genetic marker were more likely to show "Increased" snacking behavior¹⁷. "Typical" genotypes were not associated with "Increased" snacking behavior in the same study. This association has not been studied in men.

► YOUR RESULT ◀

TYPICAL

Your genotype is not associated with extreme snacking behavior.

► YOUR RELATED GENES ◀

Gene Tested	Your Genotype	Scientific Strength
LEPR-rs2025804	A/G	★★★☆☆



EATING BEHAVIOR TRAITS HUNGER



While most of us know the feeling of hunger, some people feel hunger more intensely and more often than others. Susceptibility to hunger can now be partially explained by genetics. A variation in the NMB gene has been associated with increased feelings of hunger¹⁸. When asked about their own eating behaviors on a questionnaire, people with a T/T genotype were more likely to report an "Increased" susceptibility to hunger, while others were likely to have a "Typical" hunger response. This preliminary information is based on a study rated with one star of scientific strength.

► YOUR RESULT ◀

INCREASED

People with your genotype are more likely to exhibit high levels of susceptibility to hunger.

► YOUR RELATED GENES ◀

Gene Tested	Your Genotype	Scientific Strength
NMB-rs1051168	T/T	★☆☆☆☆



EATING BEHAVIOR TRAITS SATIETY - FEELING FULL

Satiety can be described as the feeling of fullness after you eat. The FTO (fat mass and obesity-associated) gene is known to be an important factor that predisposes a person to a healthy or unhealthy level of body weight¹⁹. The two possible outcomes in this report are "Difficulty in Feeling Full" and "Typical." People who experience "Difficulty in Feeling Full" tend to eat more without feeling satisfied. To help manage this outcome, you could increase the amount of fiber in your diet and balance meals and snacks throughout the day. Examples of foods high in fiber include whole wheat bread, oatmeal, barley, lentils, black beans, artichokes, raspberries, and peas. In a 2008 study, the A/A genotype at rs9939609 in the FTO gene was associated with "Difficulty in Feeling Full"²⁰. Although this study was done in children, there is preliminary data to support that the association also holds true in adults²¹.

► YOUR RESULT ◀

TYPICAL

People with your genotype tend to feel full after a meal.

► YOUR RELATED GENES ◀

Gene Tested	Your Genotype	Scientific Strength
FTO-rs9939609	A/T	★★★☆☆



EATING BEHAVIOR TRAITS EATING DISINHIBITION

Eating disinhibition describes the tendency to eat more than normal in response to a stimulus, such as a tasty food or in situations that trigger overeating (e.g., emotional stress or specific social situations). In a 2010 study, the T allele of rs1726866 was "More Likely" to be associated with eating disinhibition in women²². The C/C genotype at the same marker was "Less Likely" to be associated with eating disinhibition. There is not enough scientific evidence yet to determine if this association also holds for men.



► YOUR RESULT ◀

LESS LIKELY

Your genotype is not associated with an increase in susceptibility for eating disinhibition.

YOUR RELATED GENES

Gene Tested	Your Genotype	Scientific Strength
TAS2R38-rs1726866	C/C	★★★☆☆



EATING BEHAVIOR TRAITS FOOD DESIRE

Although there is no objective method to quantify someone's feeling of hunger or liking for a particular type of food, behavioral scientists have devised techniques to measure an individual's motivation to consume food and compare it with that of others. This measurement, called the reinforcing value of food²³, describes how much effort an individual is willing to put forth to get access to food. The reinforcing value can be determined through a series of tests in a laboratory setting. In each of those tests, the individual being tested is asked to complete a task in exchange for a small portion of his or her favorite foods. The task of the initial test is easy, so the food is not difficult to win. As the tests continue, the task gets more and more difficult until, at some point, the participant feels that the food is no longer worth the effort and decides to quit. This experiment tells us that early quitters, when compared with late quitters, are low in food reinforcement. Using this technique, a 2007 study¹⁴ identified a genetic component in food reinforcement. Among people who were considered obese, those who had a specific variant (T allele) of the genetic marker rs1800497 had an "Increased" likelihood to make more effort to obtain their favorite foods and eat more of them. In contrast, the C/C genotype was associated with "Typical" levels of food reinforcement.

► YOUR RESULT ◀

TYPICAL

Your genotype is not associated with an increased desire or willingness to put forth additional effort to obtain your favorite foods.

YOUR RELATED GENES

Gene Tested	Your Genotype	Scientific Strength
ANKK1/ DRD2-rs1800497	C/C	★★★☆☆



**METABOLIC HEALTH FACTORS
ELEVATED TRIGLYCERIDES**

Triglyceride is the chemical term for fat as it is stored in your body. People with elevated triglycerides are at risk of conditions, such as coronary artery disease or type 2 diabetes. Having higher triglycerides is often associated with poor lifestyle choices, such as lack of exercise, excessive alcohol consumption, cigarette smoking, excessive refined carbohydrate consumption and being overweight. A normal triglyceride score is under 150 mg/dl. Triglyceride levels in the range of 150 to 199 mg/dl are defined as borderline high, with over 200 mg/dl considered high and over 500 mg/dl very high. Your triglyceride levels can be monitored by your physician.

A result of "High" or "Above Average" does not mean you have elevated triglyceride levels, but tells you that you may have a propensity for elevated triglycerides levels. On the other hand, a genetic test result of "Low" or "Below Average," tells you that you have a lower than average likelihood for elevated triglyceride levels. The genetic test is based on genetic variants studied in over 19,000 individuals. A genetic result of "High" means that you share a similar genetic profile with individuals from the Framingham Heart Study who had elevated triglyceride levels measuring on average above 150 mg/dl with approximately 31% of individuals measuring above 200 mg/dl⁸.



► YOUR PROBABILITY ◀

ABOVE AVERAGE

You share a similar genetic profile with individuals who exhibit borderline-high triglyceride levels. Therefore, you have a higher than average likelihood for elevated triglyceride levels.

🧬 YOUR RELATED GENES

Gene Tested	Your Genotype	Scientific Strength
ANGPTL3-rs10889353	A/C	★★★★★
APOB-rs7557067	A/A	★★★★★
FADS1-rs174547	T/T	★★★★★
GCKR-rs1260326	C/T	★★★★★
LPL-rs12678919	A/A	★★★★★
MLXIPL-rs714052	T/T	★★★★★
NCAN-rs17216525	C/C	★★★★★
PLTP-rs7679	C/T	★★★★★
TRIB1-rs2954029	A/A	★★★★★
XKR6-rs7819412	A/A	★★★★★
ZNF259-rs964184	C/G	★★★★★



**METABOLIC HEALTH FACTORS
ELEVATED BLOOD SUGAR**



Elevated blood sugar is a health condition that results from higher than normal levels of the sugar (glucose) in the blood plasma. High blood sugar levels are measured as a reading greater than 140 mg/dl or a fasting plasma glucose level of greater than 100 mg/dl. High blood sugar levels often indicate a condition called insulin resistance and can lead to type 2 diabetes. Your physician can directly measure blood sugar or you can use a blood test at home to check your blood sugar.

A genetic result of "High" or "Above Average" does not mean you have elevated blood sugar levels, but tells you that you may have a genetic propensity for elevated blood sugar levels. On the other hand, a result of "Low" or "Below Average," tells you that you have a lower than average genetic likelihood for elevated blood sugar levels. This report is based on genetic variants identified in a study of more than 100,000 individuals^{9,98}.

► YOUR PROBABILITY ◀

AVERAGE

Based on your genetic profile you have an average likelihood for elevated blood sugar levels.

🧬 YOUR RELATED GENES

Gene Tested	Your Genotype	Scientific Strength
ADCY5-rs11708067	A/A	★★★★★
ADRA2A-rs10885122	G/G	★★★★★
CRY2-rs11605924	A/C	★★★★★
FADS1-rs174550	T/T	★★★★★
G6PC2-rs560887	G/G	★★★★★
GCK-rs4607517	A/G	★★★★★
GCKR-rs780094	G/A	★★★★★
GLIS3-rs7034200	A/C	★★★★★
MADD-rs7944584	A/T	★★★★★
MTNR1B-rs10830963	C/C	★★★★★
PROX1-rs340874	C/C	★★★★★
SLC2A2-rs11920090	T/T	★★★★★
TCF7L2-rs7903146	C/C	★★★★★

END OF REPORT

Balanced Dairy Free Diet ► 1500 Calories

Diet Overview

Lean Protein

20%

300 Calories Per Day

6 Protein Servings/Day

Healthy Fat

25%

375 Calories Per Day

7 Fat Servings/Day

Complex Carbohydrates

55%

825 Calories Per Day

9 Starch Servings/Day

2 Fruit Servings/Day

Non-Starchy Vegetables

5+ Eat as many servings as you want!
At least 5 servings per day

Snack Exchange

0-2 Snacks per day
See snack exchange sheet for more detail

Balanced Dairy Free Diet ► 1500 Calories

Snack Exchange

0-2 Snacks per day

Snack Exchanges:

- Use protein, fat, starch and fruit servings from the meal formulas to add a snack to your meal plan
- Example: 1 small sliced apple (1 fruit serving) with 1½ tsp almond or peanut butter (1 fat serving)
Subtract 1 fruit serving and 1 fat serving from the meal formula for the next meal of the day

Example: 1500-Calorie Balanced Dairy Free Diet Lunch Formula

- 2 protein servings
- 2 fat servings (becomes 1 fat serving for lunch)
- 3 starch servings
- 1 fruit serving (becomes 0 fruit serving for lunch)
- 2-3 vegetable servings

Healthy Snack Ideas:

- Baby carrots (FREE) and celery (FREE) with 2 Tbsp hummus (1 fat serving)
- Green lettuce leaf (FREE) rolled up with 2 oz sliced turkey (2 protein servings) and 2 Tbsp avocado (1 fat serving)
- Brown rice cake (¾ starch serving) topped with ½ cup tuna salad (2 protein servings)
- Celery (FREE) stuffed with 2 Tbsp guacamole (1 fat serving), 1½ tsp almond butter (1 fat serving), or ½ cup tuna salad (1 protein serving)
- 1¼ cup strawberries (1 fruit serving) topped with 4 chopped walnuts (1 fat serving) and cinnamon (FREE)
- 1 hard-boiled egg (1 protein serving) with 3 large, whole-wheat crackers (1 starch serving)
- 6 almonds or 4 walnuts (1 fat serving)
- ½ banana (1 fruit serving) and 1½ tsp peanut butter (1 fat serving)
- 1 oz dairy free cheese (1 protein serving) with 3 large, whole-wheat crackers (1 starch serving)
- Celery sticks (FREE) with egg salad made with 1 egg (1 protein serving) and 2 Tbsp avocado (1 fat serving)

Balanced Dairy Free Diet ► 1500 Calories

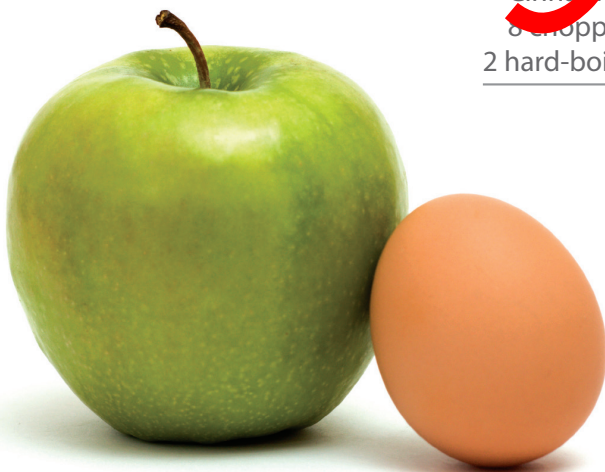
Meal Plan Ideas

Breakfast Ideas:

1500-Calorie Balanced Dairy Free Diet Breakfast Formula:

2 protein servings
2 fat servings
2-3 starch servings
1 fruit serving

■ Be sure to use the Serving Sizes table for your specific caloric guidelines and remember that you don't have to eat traditional breakfast foods for breakfast! Leftover chicken breast, salmon and turkey burgers all qualify as acceptable breakfast protein options.		
■ 2 scrambled egg whites or ¼ cup egg substitute With 1 oz dairy free shredded cheese On 2 slices rye toast Drizzled with 2 tsp extra-virgin olive oil ¾ cup blueberries	1 protein serving 1 protein serving 2 starch servings 2 fat servings 1 fruit serving	
■ 1 large whole-wheat tortilla Rolled up with 2 oz turkey 4 Tbsp avocado Chopped lettuce 1 cup cantaloupe	3 starch servings 2 protein servings 2 fat servings FREE 1 fruit serving	
■ Egg white omelet: 4 egg whites Cooked with chopped tomatoes, onions zucchini and mushrooms With 1 tsp extra-virgin olive oil 1 toasted whole wheat English muffin Topped with 2 Tbsp mashed avocado ½ large banana	2 protein servings FREE FREE 1 fat serving 2 starch servings 1 fat serving 1 fruit serving	
■ 6 oz flavored dairy-free Greek-style yogurt Topped with 1 cup chopped raspberries ½ whole wheat bagel thin With 1 Tbsp almond butter Sprinkle cinnamon	2 protein servings 1 fruit serving 1 starch serving 2 fat servings FREE	
■ ½ cup cooked steel-cut oats or 1 cup cooked oatmeal Topped with ¾ cup blueberries Cinnamon 8 chopped walnuts 2 hard-boiled eggs, seasoned with salt & pepper	2 starch servings 1 fruit serving FREE 2 fat servings 2 protein servings	



Balanced Dairy Free Diet ► 1500 Calories

Meal Plan Ideas

Lunch Ideas:

**1500-Calorie
Balanced Dairy Free Diet
Lunch Formula:**
2 protein servings
2 fat servings
3 starch servings
1 fruit serving
2-3 vegetable servings

■ 2-3 cups green salad tossed with Chopped non-starchy vegetables ½ cup black beans ½ cup corn 2 oz chopped chicken or turkey Drizzle with 2 Tbsp dairy free vinaigrette dressing 1 small, chopped pear 1 small whole-wheat roll	FREE FREE 1 starch serving 1 starch serving 2 protein servings 2 fat servings 1 fruit serving 1 starch serving
■ Grilled 2 oz veggie burger On large whole grain bun Topped with mustard, lettuce, tomato, onion 2 Tbsp avocado Served with ¾ oz pretzels Side of slaw: 1 cup cabbage 1 Tbsp dairy free vinaigrette dressing 1 small apple	2 protein servings 2 starch servings FREE 1 fat serving 1 starch serving FREE 1 fat serving 1 fruit serving
■ Turkey sandwich: 2 oz turkey 2 slices whole-wheat bread Mustard, lettuce, tomato and onion With side salad of lettuce and non-starchy vegetables 2 Tbsp dairy free dressing 1 small orange ½ cup split pea soup	2 protein servings 2 starch servings FREE FREE 2 fat servings 1 fruit serving 1 starch serving
■ Tofu and Vegetable Stir Fry: ⅔ cup tofu With 2-3 cups Chinese vegetables Cooked in 2 tsp sesame oil 1 cup brown rice 1¼ cup strawberries	2 protein servings FREE 2 fat servings 3 starch servings 1 fruit serving
■ 2 oz tuna With 2 tsp extra-virgin olive oil mixed with Green onions and garlic powder On bed of 2-3 cups lettuce 5 large whole-wheat crackers or 10 brown rice crackers 1 cup white bean soup 1 small nectarine	2 protein servings 2 fat servings FREE FREE 1 starch serving 2 starch servings 1 fruit serving