HEALTHY WEIGHT

ANALYSIS + REPORT

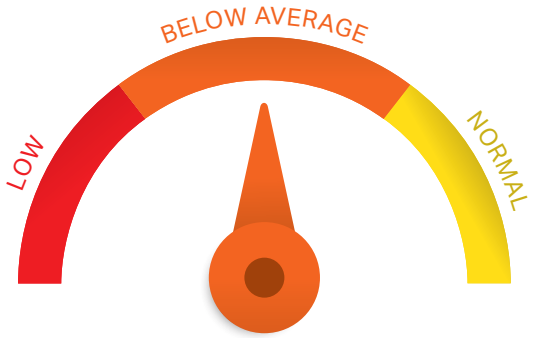
PERSON TESTED: Jane Doe
REFERENCE #: 123456
DATE OF BIRTH: 3/7/1998
REPORT DATE: 5/25/17

HomeDNA™

REPORT SUMMARY

CATEGORY	RATING	GENES
WEIGHT LOSS ABILITY		
Weight Loss Ability with Diet and Exercise	BELOW AVERAGE	FTO, TCF7L2, MTNR1B, PPARG, BDNF, ABCB11
FOOD		
Protein Utilization	SLIGHTLY ENHANCED	FTO
Fat Utilization	NORMAL	PPARG, TCF7L2, APOA5, CRY2, MTNR1B, PPM1K
Carb Utilization	ENHANCED	IRS1
NUTRIENTS		
Vitamin B9 – Folate Tendency	NORMAL	MTHFR
Vitamin A Tendency	NORMAL	BCMO1
Vitamin B6 Tendency	BELOW AVERAGE	NBPF3
Vitamin B12 Tendency	LOW	FUT2
Vitamin C Tendency	LOW	SLC23A1
Vitamin D Tendency	NORMAL	GC, NADSYN1, CYP2R1
EXERCISE		
Fat Loss Response to Cardio	LOW	ADRB2, LPL
Fitness Response To Cardio	NORMAL	AMPD1, APOE
Body Composition Response to Strength Training	ENHANCED	NRXN3, GNPDA2, LRRN6C, PRKD1, GPRC5B, SLC39A8, FTO, FLJ35779, MAP2K5, QPCTL-GIPR, NEGR1, LRP1B, MTCH2, MTIF3, RPL27A, EC16B, FAIM2, FANCL, ETV5, TFAP2B
HDL Response to Cardio	BELOW AVERAGE	APOE
Insulin Sensitivity Response to Cardio	ENHANCED	LIPC
Glucose Response To Cardio	NORMAL	PPARG

WEIGHT LOSS ABILITY



YOUR GENETIC PROFILE INDICATES THAT YOUR WEIGHT LOSS ABILITY IS BELOW AVERAGE

This does not mean that you cannot lose weight for a diet and exercise program. It just means that, compared to other people with a different genotype, you may lose slightly less weight or body fat than those with a more favorable genotype who are following a similar program.

WHAT YOUR GENES SAY ABOUT YOU

Your score reflects the fact that among the genes investigated, you had a few of the unfavorable gene combinations that could make you slightly resistant to both losing weight and keeping it off. This means that, compared to someone else with a more favorable genotype, *you might lose less weight than someone else with a different genotype when you make lifestyle changes by cutting calories in your diet and by burning extra calories when you exercise.* This result also suggests that you may be at a slightly higher risk of later regaining the weight you lose compared to someone else with a more favorable genotype.

Does this result mean that you cannot lose weight? Absolutely not! Remember that these results only indicate your **potential** based on genetic factors, but many other factors also affect the outcome. Even if you have the genotypes that may decrease your ability to lose weight, whether those genes are expressed or not depends upon diet, exercise and environmental influences. However, your results do suggest that it may be a good idea to employ strategies that will maximize your results.

SUCCESS STRATEGIES

Weight loss comes from reducing the number of calories you eat and increasing the number of calories that you burn from exercise. The most powerful—and permanent—weight loss comes when you do both. Choose a plan that is most likely to work for you. Following the Healthy Weight suggestions from the genetic analysis of your **FOOD CATEGORIES** and **EXERCISE** genes can help you identify foods and a fitness plan that may make it easier to lose weight. Different approaches work for different people. Here are some diet and exercise tips that may be helpful.

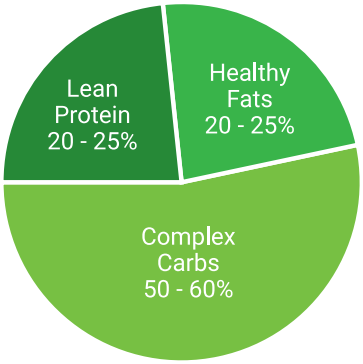
TIPS FOR EFFECTIVE DIETING

- *Choose a plan that you will enjoy and that you will be able to stick to. It should include foods that taste good to you and an approach that fits with your lifestyle*
- *Pay attention to influences that make it hard for you to choose the right foods or stick to a diet. For example, if you travel frequently and find it hard to eat well on the road, identify foods you can carry with you and the healthiest fast-food choices you might need to rely on*
- *Identify reasons why you didn't stick to past diets. Develop back-up plans so that you aren't derailed from your diet if the same, or similar, circumstances arise again*

FOOD

SUMMARY

WHAT FOODS DO YOU NEED TO EAT?



Your genotype suggests that you may have a better response to a weight-loss diet if daily calories come from the following proportions of fat, carbohydrates, and protein. You can monitor this with a diet log.

Based on your gender, age, height, current weight and current activity level, we recommend a diet of approximately 1,513 calories per day to lose weight. This number was calculated estimating your total energy expenditure, or the number of calories your body needs each day. Since you are interested in losing weight, you will need to eat fewer calories than your total energy expenditure. We suggest a modest calorie reduction of 20 percent. We have calculated this reduction into our calorie recommendation for you, so if you eat around 1,513 calories per day, you can expect to lose weight. This is not a drastic calorie reduction, so you should not feel hungry or like you are denying yourself food if you eat this many calories.

The amount of exercise you get can change your energy requirements. Therefore, you may need to eat more calories than this is if you are performing 45 minutes or more of moderate-to-high intensity cardio exercise on a daily basis.

Here are suggested macronutrient ranges to follow that may optimize the weight loss from your diet.

RECOMMENDATION	PERCENT	GRAMS	CALORIES
PROTEIN Choose a reduced-calorie diet that is between 20-25% protein. Get your protein from mostly plant food sources such as beans, legumes, nuts, seeds,whole grains and vegetables.	20% to 25%	76g to 95g	303 to 378
FAT Choose a diet low in fat and saturated fat. Get your fats mostly from plant foods, but avoid excess added oils.	20% to 25%	34g to 42g	303 to 378
CARBOHYDRATES Choose a plant-based diet that is high in complex carbs (veggies, beans, whole grains, etc.), and avoid simple or processed carbs (fries, chips, crackers, etc.).	50% to 60%	189g to 227g	757 to 908

* Before making changes to your diet, consult with your physician, registered dietician, and/or nutritionist.

FOOD | CARB UTILIZATION

YOUR GENETIC PROFILE INDICATES THAT YOUR UTILIZATION OF COMPLEX CARBOHYDRATES IS ENHANCED

You may experience the best weight loss results if you follow a diet that is higher in complex carbohydrates. This means that you should focus on including more whole, unprocessed plant foods in your diet, including beans, whole grains, nuts, seeds, fruits and vegetables

WHAT YOUR GENES SAY ABOUT YOU

Your genotype appears to favor a higher complex-carbohydrate diet and you may experience better weight- loss results from a regimen focusing on complex carbohydrates for the majority of your daily calorie intake.

SUCCESS STRATEGIES

People who eat diets high in complex carbohydrates tend to be leaner, and this diet approach provides optimal energy and nutrients. Complex carbs are unprocessed carbs; strive to eat whole plant foods as opposed to processed, "junky" carbs. Eat a potato instead of potato chips, eat beans instead of white bread, and eat whole fruits instead of fruit juices.

- *Eat unprocessed foods that contain carbs include legumes (beans), whole grains (such as brown rice, quinoa and oats), nuts, seeds, vegetables and fruits*

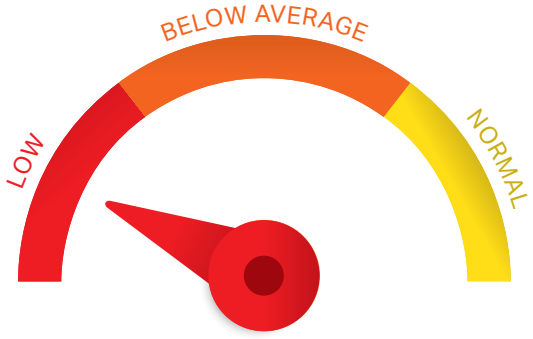
- *Use the glycemic index (GI) as a tool to help choose foods. The glycemic index is a rating assigned to foods that contain carbohydrates reflecting their potential effects on blood glucose levels. The higher the GI number, the faster a food may be digested and absorbed, potentially resulting in higher blood- glucose levels and greater insulin release. Foods high in carbohydrates that are more processed may have higher GI numbers. So this tool may help you identify foods that may be more or less processed and this may help you make more nutritious food choices.*

Before making changes to your diet, consult with your physician, registered dietician, and/or nutritionist.

RELATED GENES / SNPS

The genes included in this category have been shown to be associated with a person's insulin sensitivity and the potential effects of the amount of carbohydrates and fat in the diet. Insulin is a hormone released by the body that helps cells take in glucose, or sugar, for energy. Glucose is present in the blood after the digestion of carbohydrates from foods like fruit, vegetables, legumes and grains. Insulin is also released in response to eatin gprotein as it helps to shuttle amino acids into cells, as well.

NUTRIENTS | VITAMIN C TENDENCY



YOUR GENETIC PROFILE INDICATES YOUR RESPONSE IS BELOW AVERAGE

You should make sure you consume plenty of Vitamin C-rich foods, and you may wish to supplement if your blood levels are low.

WHAT YOUR GENES SAY ABOUT YOU

Because you are likely to have below-average levels of this essential nutrient, even if you consume enough Vitamin C in the foods you eat, blood levels of L-ascorbic acid may be lower than those who have a different genotype. This does not mean that even though it is low, you will be deficient in this nutrient. But it is a good idea to monitor your intake, because higher circulating levels of Vitamin C are considered to be beneficial.

SUCCESS STRATEGIES

- *To ensure your body gets the Vitamin C it needs, make sure to include a wide variety of plant foods, including citrus in your diet*
- *Vitamin C can be destroyed by heat and oxygen, so include fresh, raw fruits and vegetables as often as you can*
- *If you wish to supplement with Vitamin C, avoid very high doses because they can cause diarrhea and gastro-intestinal distress*

Before making changes to your diet, consult with your physician, registered dietician, and/or nutritionist. Eating healthful, vitamin-rich foods is the best way to incorporate micronutrients into your diet. Consult with your physician, dietician, and/or nutritionist before adding over-the-counter supplements to your wellness regimen.

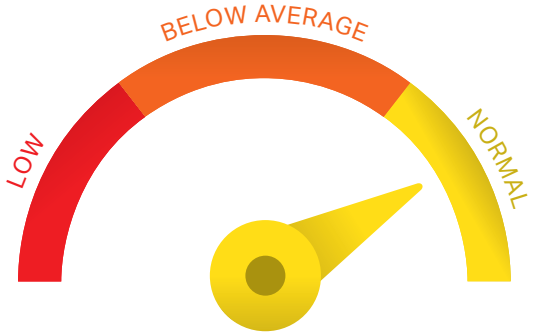
RELATED GENES / SNPS

The genes included in this category have been shown to have statistically-significant associations with a person's blood levels of L-ascorbic acid, or Vitamin C. People who carry more unfavorable pairs of genes, or alleles, are more likely to have lower blood levels of the nutrient compared to those with different genotypes, although they are not necessarily deficient in Vitamin C.

Vitamin C is a nutrient that has many functions in the body, including acting as an antioxidant. It is also needed for skin and membrane tissues. Low levels have also been associated with diseases such as heart disease and cancer; deficiencies cause scurvy. Vitamin C also helps with the absorption of iron.

This nutrient must be obtained from foods since the human body cannot make its own (as some other animals can). Vitamin C can be found in citrus fruits, but is also in many fruits, vegetables and legumes.

EXERCISE | FITNESS RESPONSE TO CARDIO



YOUR GENETIC PROFILE INDICATES THAT YOUR FITNESS RESPONSE TO MODERATE-TO-HIGH-INTENSITY CARDIO IS BELOW AVERAGE

You may be less likely to experience optimal cardiovascular fitness improvements from high-intensity cardio compared to others with a more favorable genotype.

WHAT YOUR GENES SAY ABOUT YOU

Your genotype shows the "unfavorable" gene combinations. This means you have the potential to not see the same improvements in fitness from high-intensity cardio workouts as someone else with a more favorable genotype would. The good news is that you might be able to attain the same cardiovascular benefits by working at lower intensities.

SUCCESS STRATEGIES

- *Your genotype suggests you might benefit most from sticking to moderate intensity workouts. Therefore, you might see better fitness results from longer endurance workouts.*

- *Aim for more moderate-intensity cardio workouts on four (4) or more days per week that last longer over time. Start with 20 to 30 minute sessions and work up to 60 to 90 minutes. You may want to consider training for an endurance event like a charity bike race or a 10K, half-marathon, or even a full marathon.*

If you are inexperienced in cardio/resistance training/power moves, consult with your physician to see if you are healthy enough to begin an exercise program. Also, please consult a fitness trainer to help determine the safest way to incorporate the recommendations into your workout.

RELATED GENES / SNPS

The genes included in this category have been shown to have significant associations with a person's cardiovascular fitness response to moderate-to-high intensity exercise.

The more you exercise, the fitter you become. This allows you to work harder and longer—and to continue developing higher levels of fitness. The more exercise you can handle, the more calories you can burn because you can work at higher intensities. Getting fitter is a key aspect that affects your ability to manage your body weight with exercise.

Many factors play a role in being able to push hard without feeling overly fatigued when exercising. One indication of fitness is oxygen capacity, also known as VO2 Max. As a person becomes fitter, their ability to take in more oxygen improves, which helps them to work out harder and longer. The greater one's VO2 Max, the more exercise they can handle since they can take in more oxygen that working muscles need during intense physical activity.

CUSTOM 7 DAY MEAL PLAN

DAY 3 MEAL PLAN

BREAKFAST - SCRAMBLED EGGS INGREDIENT	QTY	MEAS.	PROTEIN	FAT	CARBS	CAL.
Potatoes, hash brown, frozen, plain, prepared, pan fried	0.25	cup	1.03g	4.52g	11.12g	85.41
Egg whites, scrambled/boiled	3.0	each	10.5g	0.0g	0.9g	51.0
2% milkfat cheddar cheese	0.12	ounce(s)	0.84g	0.24g	0.12g	6.0
Onion, chopped	1.0	tablespoon	0.1g	0.0g	0.9g	4.0
MORNING SNACK - FRESH FRUIT TOPPED WITH PEANUT BUTTER						
Apple - medium with peel	1.0	each	0.3g	0.5g	21.0g	81.0
LUNCH - BURGER W/ AVOC, VEGGIES, DRESSING						
Avocados, raw, all commerical varieties	0.25	cup, sliced	0.73g	5.35g	3.11g	58.4
Spinach, raw	3.0	leaf	0.86g	0.12g	1.09g	6.9
Lettuce, butterhead (includes boston and bibb types), raw	2.0	leaf, large	0.41g	0.07g	0.67g	3.9
Veggie burgers or soyburgers, unprepared	2.0	patty	21.98g	8.82g	19.98g	247.8
Salad dressing, italian dressing, reduced calorie	1.0	tablespoon	0.04g	2.8g	0.94g	28.0
tomato, diced	0.25	cup	0.38g	0.15g	2.09g	9.5
Sweet potato, baked in peel, large	1.5	each	6.0g	0.0g	55.5g	240.0
AFTERNOON SNACK - FRUIT & NUTS						
Kiwifruit, green, raw	2.0	fruit, without skin (medium)	1.73g	0.79g	22.28g	92.72
DINNER - GRILLED SALMON, ASPARAGUS TOP W/ FETA AND OIL						
Squash, winter, acorn, cooked, baked, with salt	1.0	cup, cubes	2.3g	0.29g	29.89g	114.8
Cheese, feta	0.25	ounce(s)	1.01g	1.51g	0.29g	18.71
Fish, Salmon, Atlantic, wild, cooked, dry heat	3.0	ounce(s)	21.62g	6.91g	0.0g	154.7
Asparagus, fresh - boiled	1.0	cup	4.6g	0.6g	7.6g	44.0
Olive oil, pure	0.25	tablespoon	0.0g	3.5g	0.0g	32.5
EVENING SNACK- FRUIT & GRAIN (CAN BE MOVED TO DINNER MEAL)						
Amaranth grain, cooked	0.5	cup	4.67g	1.94g	22.99g	125.46
Blueberries, raw	1.0	cup	1.07g	0.48g	21.01g	82.65
DAY 3 TOTALS			**80.17g**	**38.59g**	**221.48g**	**1487.45**

CUSTOM EXERCISE PLAN

CARDIO EXERCISE

STRENGTH TRAINING

FREQUENCY	INTENSITY	FREQUENCY	SETS & REPS
More than or equal to 4-5 days per week	Moderate to vigorous	3 days per week	3 sets; 12 reps per muscle group
DURATION		MUSCLE GROUPS	
More than or equal to 200-300 minutes per week		Chest, back, legs, shoulders, core (abs and low back), arms	

HOME WALK

* description included

Day 1	Walk - 60 minutes	
Day 2	Walk - 45 minutes	Dumbbells - 3 sets; 12 reps
Day 3		
Day 4	Walk - 60 minutes	* Kettlebells - 3 sets; 12 reps
Day 5		
Day 6	Walk - 60 minutes	Dumbbells - 3 sets; 12 reps
Day 7		

If you are inexperienced in cardio/resistance training/power moves, consult with your physician to see if you are healthy enough to begin an exercise program. Also, please consult a fitness trainer to help determine the safest way to incorporate the recommendations into your workout.

CUSTOM EXERCISE PLAN

CARDIO EXERCISE

STRENGTH TRAINING

FREQUENCY	INTENSITY	FREQUENCY	SETS & REPS
More than or equal to 4-5 days per week	Moderate to vigorous	3 days per week	3 sets; 12 reps per muscle group
DURATION		MUSCLE GROUPS	
More than or equal to 200-300 minutes per week		Chest, back, legs, shoulders, core (abs and low back), arms	

HOME RUN + BIKE

* description included

Day 1	Bike - 45 minutes	Dumbbells - 3 sets; 12 reps
Day 2	Run - 30 minutes	
Day 3		
Day 4	Bike - 60 minutes	Dumbbells - 3 sets; 12 reps
Day 5		
Day 6	Bike - 35 minutes	* Kettlebells - 3 sets; 12 reps
Day 7	Run - 35 minutes	

If you are inexperienced in cardio/resistance training/power moves, consult with your physician to see if you are healthy enough to begin an exercise program. Also, please consult a fitness trainer to help determine the safest way to incorporate the recommendations into your workout.