

WELLNESS
**Weight
Management**

Intellektist.



Be SMART

Customer: **JANE DOE**

Sample Number: 0654061

Date of Test: 01.01.2021

Legal Disclaimer

INTELLEKTIST KEEPS THE PAGE INTENTIONALLY BLANK!

This is not a medical diagnostic report


SAMPLE REPORT

Hello JANE DOE,

We are pleased to present you your personalised Weight Management profile based on your individual genetic content. Thanks for trusting us.

The results provided to you is based on the latest scientific research that has been published as scientific papers in a peer reviewed journals. Therefore it is not a medical diagnostic report. To analyse your genetic code form the DNA of your Saliva sample, the state-of-the-art genetic testing lab procedure has been used. We deciphered your genetic code and estimated how your genes can influence many different aspects of your life including "Weight Management". Based on your test results, you receive some personalised "nutrition and fitness" recommendations that are alined with your genetic profile.

Now you can use your personalised recommendations to maximise your genetic potential toward optimising your goal in "weight management" based on your individual genetics. Hope you enjoy discovering yourself!


Prof. Dr. M. Houshmand
Medical genetics PhD, Be SMART


Wilhelm Schmidt
CEO, Intellectist



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SAMPLE REPORT

Genetics 101

Your genetic report:

In this genetic report you get variety of information about a set of your personal specifications that are called traits. For each trait you get a description, the trait impact, and some personalised recommendations. The terms in the report are defined below.

DNA

DNA is a huge ladder-shape molecule that exists in each and every of your cells and contains your genetic code. The rungs of the ladder are made of pairs of nucleotides. Nucleotides are organic molecules that has 4 types of A (Adenine), T (Thymine), C (Cytosine), and G (Guanine). Each A always pairs with a T, and each C with a G.

Genome

All of the DNA material in one cell makes your genome that contains the recipe of making you.

Gene

A gene is a sequence of nucleotides in DNA that are the basic unit of heredity. A gene encodes the synthesis of the gene product, either RNA or protein, which both are essential biomolecules within all life-forms on Earth. Humans have around 20,000 genes. We inherit half of them from our mother and half from our father.

Single-Nucleotide Polymorphism

All humans share 99% of their genome, which means that all humans are 99% genetically similar. However, the 1% difference is responsible for all differences that we have with each other and it is what that makes us unique as an individual.

A single-nucleotide polymorphism (SNP) is a variation of a single nucleotide at a specific position in our genome that each variant is present in a sufficiently large fraction of the population. For example, the same position of genome may have an A in a portion of human population and a G in the other part. Then we say there is a SNP at this specific position, and – A or G – are two possible nucleotide variants for this specific position. Most of the SNPs have no impact to the individuals, however, some can change how our body works and within this report we are talking about those who has an impact.

How does it effects you?

One man's food is another man's poison - Lucretius

Based on scientific researches, we now know that SNPs are responsible for a wide range of our differences to one another. SNPs pinpoint our differences in our physical appearances and personality. For example, a SNP in OCA2 gene, is mostly determined your eye color. Also SNPs can explain why our body respond differently to certain components in food such as milk sugar or gluten. We all know people who are lactose intolerant or cannot eat gluten. SNPs also determines our susceptibility to a wide range of diseases, the severity of illness, and the way the body responds to treatments. For example, a single-base variant in the APOE gene is associated with a lower risk for Alzheimer's disease.

Our genetics is not the only factor that determines who we are and how we live. Beside SNPs, our environment is also an important factor in our well being and health. Therefore, understand our genetics and its relation to our environmental factors such as our activity and our diet, is very critical to maintain an optimal health and reduce the risk of disease. "To maintaining a healthy body weight", we use the same approach that is using genetically optimised and personalised recommendations that maximises our benefits of nutritions and activities on our health status.

Weight Management

| Trait | Gene | Result | Description |
|-----------------------------|---------------------------------|---------------|---|
| Obesity Predisposition | FTO, ADIPOQ, MC4R, PPARG | Above average | Increased risk of obesity |
| Hunger | MC4R | Increased | More hunger, less satiety |
| Snacking | MC4R | Increased | Increased snacking |
| Sweet Tooth | TAS1R2 | Increased | Higher sugar intake and preference for sweet foods |
| Saturated Fat Response | FTO, TCF7L2, STAT3, APOA2, MC4R | Increased | Increased risk for higher BMI obesity with high fat diet |
| Stress Response | COMT, BDNF, HTR2C | Increased | Higher cortisol, depression, and anxiety in response to life stress |
| Exercise & Fat Loss | FTO | Decreased | Less fat loss in response to exercise training |
| Weight Loss & Low-Fat Diets | PPM1K, GIPR, IRS1, TCF7L2 | Elevated | Increased weight loss in response to a low fat diet |

SAMPLE REPORT



WEIGHT MANAGEMENT

Obesity Predisposition

Above average

Variants: 5

Genes: FTO, ADIPOQ, MC4R, PPARG

Your genes say you have an above average predisposition for being overweight.

Condition

Your genetic predisposition to obesity is determined from your genotypes at variants in the FTO, ADIPOQ, MC4R, PPARG genes. Based on your genetics you might have an average or above average predisposition to obesity. However, having an above average predisposition to obesity does not mean that you are obese, since obesity is influenced by both genetic and environmental factors. It only means that you have a higher than average genetic likelihood for a high body mass index (BMI).

Research shows that our diet and exercise habits can also influence the way our genes work in our bodies. Therefore, regardless of your obesity predisposition status, to maintain a low risk of obesity it is important to eat right and stay active.

When someone has a BMI between 30 to 40 (clinically obese) or above 40 (morbidly obese), genetic factors with strong effects are likely to be involved. The association of the above mentioned genes to obesity is well-established. The mechanism of the influence of FTO is less well-understood, but is believed to be important for controlling feeding behaviour and energy balance.

Recommendations

- Choose Mediterranean diet as a safe choice
- Expose yourself to Cold weather
- Do More Than Just Your Daily Exercise Routine
- Use Conjugated Linoleic Acid (CLA) as Supplements



WEIGHT MANAGEMENT

Hunger

increased

Variants: 1

Genes: MC4R

Your genes say you have a genetic likelihood to feel hungry more often and more intensely than some others, thereby increasing the risk of overeating.

Condition

While most of us know the feeling of hunger, some people feel hunger more intensely and more often than others. Susceptibility to hunger can be partially explained by genetics.

A variation in the MC4R gene has been associated with increased feelings of hunger. People with a C/C and C/T variant are more likely to eat in the absence of hunger, while others are likely to have a typical hunger response.

Recommendations

- Eat fiber foods to stay longer saturated
- Add Spices to your Food
- Choose Naturally Sweet Options to Satisfy Your Sweet Tooth
- Drink enough water

TIP Switching to a high-fiber diet is easy when foods that are low in fiber are swapped for high-fiber foods. Like...

| | | |
|---------------------------------------|----|---|
| Buns, toast, white bread, croissants | to | Whole grain bread, flaxseed bread, graham bread, pumpernickel |
| Pies, cakes, waffles, biscuits, rusks | to | Wholegrain rusks, wholegrain biscuits, cakes baked with wholemeal flour |
| Pasta | to | Pasta Whole grain pasta, millet, green spelled |
| Polished rice | to | Whole grain rice |
| Cornflakes | to | Cereal flakes, whole grain oat flakes |
| Pudding, cream dishes, ice cream | to | Berries, red fruit jelly, fruit salad, muesli, baked fruit |



WEIGHT MANAGEMENT

Snacking

Increased

Variants: 1

Genes: MC4R

Your genes say you are more likely to eat between meals.

Condition

Scientific researches discovered the associated of the MC4R gene with the likelihood of eating between meals. Eating between meals (snacking) can be a beneficial habit if healthy snacks are used. Healthy snacks can assist with weight control and curb food cravings.

However, for most of us snacking is often an unhealthy habit due to snack-food choices and excessive calorie intake beyond our needs. Therefore, it is important to control emotional eating (psychological reasons of snacking). Some reasons for emotional eating may include stress, anxiety, habit (i.e. eating in front of the television) or loneliness.

Recommendations

- Try to recognise the difference between real hunger and appetite.
 - Replace unhealthy snacks with lower-calorie, nutrient-dense snacks.
-

TIP Replace these foods... with these foods...

| | |
|-------------------------|---|
| Potato chips and dip | Whole wheat pita with hummus |
| Muffin | Whole wheat English muffin with peanut butter |
| Ice cream with toppings | Low-fat yogurt with fresh berries |
| 'Veggie' chips | Fresh vegetables with low-fat dip |
| Pasta salad | Mixed salad topped with chickpeas |
| Nachos and cheese dip | Whole wheat crackers with low-fat cheese |
| Potato chips | Natural popcorn |
| Pizza Slice | Half a turkey sandwich with veggies |



WEIGHT MANAGEMENT

Sweet Tooth

Increased

Variants: 1

Genes: TAS1R2

Your genes say you tend to eat more sugary foods than average.

Condition

Craving sweet foods is sometimes referred to as having a sweet tooth. Many factors may impact your preference for sugary foods: For example, the age at which you first were introduced to sweets and made psychological associations between those foods and a certain life experience or emotion. Our brain even has a pleasure-generating signalling system in response to eating or drinking something sweet.

Research has shown that your intake of sweet foods can also be determined by your genes. A variant in the TAS1R2 gene has been associated with higher sugar intake and preference for sweet foods. People with the G/G variant showed an increased likelihood to eat more sweets and sugary foods than the other variants.

Recommendations

- Try to keep your intake of added sugar below 5% of your total daily energy intake

TIP Avoid foods that are high in sugar. A look at the list of ingredients is often useful.

| Foods high in sugar | Amount (g) |
|---------------------------------------|-------------------|
| Iced cappucino (2 cups) | 56 |
| Cola (1 can) | 36 |
| Citrus juice, frozen, diluted (1 cup) | 32 |
| Caramels (40g) | 26 |
| Milk chocolate (50g) | 26 |
| Maple syrup (2 Tbsp) | 24 |
| Jellybeans (10 beans) | 20 |
| Caramel-coated popcorn (1 cup) | 20 |
| Popsicle (75g) | 10 |
| Jam (1 Tbsp) | 10 |



WEIGHT MANAGEMENT

Saturated Fat Response

Increased

Variants: 7

Genes: FTO, TCF7L2, STAT3, APOA2, MC4R

Your genes say you may be predisposed to higher BMIs when consuming high saturated fat diets.

Condition

Many scientific studies showed the associations of saturated fats, such as those found in red meat and baked products with health conditions such as diabetes, cardiovascular disease and obesity.

However, the direct link between saturated fats and obesity, has not been clearly understood. Accumulating number of studies shows that the effect of saturated fat on obesity can be influenced by variations in our genes, such as FTO, TCF7L2, STAT3, APOA2, STAT3, MC4R.

Recommendations

- Limit your intake of saturated fat to less than 10% of energy intake.
 - Monitor Your Saturated Fat Intake
-

TIP Try to avoid saturated fats in your diet and try to eat foods with unsaturated fats.

Foods containing lots of saturated fats.

coconut and palm oils, fatty meats (lamb, pork and beef), butter, cheese, fried foods and baked products

Foods containing lots of unsaturated fats.

olive and vegetable oils, lean meats, low-fat dairy products, fish, and plant protein sources such as beans, lentils, nuts/seeds or soy-based proteins such as soy beverages and tofu



WEIGHT MANAGEMENT

Stress Response

Increased

Variants: 3

Genes: COMT, BDNF, HTR2C

Your genes say you may be predisposed to greater cortisol reactivity, as well as greater anticipatory cortisol response. This can cause stress related depression, anxiety and eating disorders.

Condition

Some people have genetically a higher cortisol response to stress which can cause stress-related depression, anxiety and eating disorders. All of these conditions are shown to be linked to obesity.

Recommendations

- Use Magnesium, Rhodiola Extract, Chamomile Extract as supplements
- Use Dark Chocolate (70-99%), Magnesium Rich foods, Butternut Squash Seeds
- Reduce Stress in your life by new habits like meditation or yoga
- Do Aerobic Activity



WEIGHT MANAGEMENT

Exercise & Fat Loss

Decreased

Variants: 1

Genes: FTO

Your genes say you have a decreased level of weight loss in response to exercise.

Condition

Physical activity has important benefits for weight maintenance and the prevention of many chronic illnesses. However, Some people can achieve greater weight loss than others based on the amount and type of physical activity they perform.

Research shows that variants in the FTO gene can impact your metabolic response to physical activity. FTO variant A carriers lose significantly less body weight in response to exercise.

Recommendations

- Aim for 30-60 min/day of cardio activity, 6 days/week and muscle-strengthening activities at least 2 days/week

Cardiovascular Activities (Moderate-Vigorous Intensity)

Swimming

Race walking, jogging, running

Briskly walking (3 miles/hour or faster)

Tennis

Biking

Water Aerobics

Muscle-Strengthening Activities

Lifting weights

Working with resistance bands

Heavy gardening (digging, shovelling)

Sit-ups

Push-ups

Certain types of yoga



WEIGHT MANAGEMENT

Weight Loss & Low- Fat Diets

Elevated

Variants: 4

Genes: PPM1K, GIPR, IRS1, TCF7L2

Your genes say you have a slightly higher effectiveness of low-fat diet for weight loss and healthy weight maintenance.

Condition

If your goal is to lose weight, some people may find low fat diets more effective and some others people may find losing weight is very slow and ineffective by solely maintaining a low dat diet. A Number of studies on weight loss showed that people with variations in genes associated with sensitivity to fat (such as PPM1K, GIPR, IRS1, TCF7L2) are more responsive to low fat diets when losing weight.

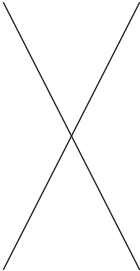
Recommendations

- Reduce your fat intake to less than 20% and increase your protein and complex carbs intake.
- It is important to include polyunsaturated and monounsaturated fats in your diet. These fats are contained in fish, olive oils, avocados, and nuts.



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