



 rightangled

Sandra Sam

FITNESS DNA TEST

Results Overview  
31/03/2019

Sample Report

---

## Test Methodology

---

Genotyping by array-based evaluation of multiple molecular probes

---

# FITNESS DNA TEST

**Client name:** Sandra Sam

**Age:** 35

**Sex:** Female

**Report Date:** 31/03/2019

**Lab reference:** CFTWWW11111

**Sample type:** Saliva Results

**Results Reviewed By:** Mr. John James

**Speciality:** Personal Trainer

**Facility location:** 1 High Street, London, England

**Signed:** Yes

**Date:** 31/03/2019

---

## Specialist Review

---

**Summary:**

XXXXXXXXXXXXXXXXXXXXXX

**Key Recommendations:**

XXXXXXXXXXXXXXXXXXXXXX

---

## Diet & Nutrition Review

---

**Summary:**

XXXXXXXXXXXXXXXXXXXXXX

**Key Recommendations:**

XXXXXXXXXXXXXXXXXXXXXX

---

## Body & Weight Management Review

---

**Summary:**

XXXXXXXXXXXXXXXXXXXXXX

**Key Recommendations:**

XXXXXXXXXXXXXXXXXXXXXX

---

## Exercise Response Review

---

**Summary:**

XXXXXXXXXXXXXXXXXXXXXX

**Key Recommendations:**

XXXXXXXXXXXXXXXXXXXXXX

# General Questions

What is your date of birth? *1/15/1984*

Ethnicity: *White or not stated*

What is your height? *155 cm*

What is your gender? *Female*

What is your weight? *50 kg*

Do you smoke? *No*

Do you drink alcohol? *Yes*

Do you take vitamins, minerals or -- supplements?

Are you currently taking any medication? *Yes*

What activities/exercise are you currently participating in? *Running, Cycling, Yoga/Pilates, Free weights, Martial arts/Boxing, Resistance*

How often do you train a week? *3-4 times a week*

How much water do you drink a day? *1 liter*

What employment sector do you work in? *Other*  
Does your occupation involve much-- physical exercise?

How many days a week do you work? *5 days*

How many hours a day do you work? *7-8 hours*

How many servings of fresh fruit and vegetables do you consume a day? *3-4 servings*

# Fitness DNA Questions

**What are your goals?**

*Learn to have a balanced diet, Eat more fruit and vegetables, Improve overall health, Reduce stress, Feel better, Increase strength and power, Improve flexibility, Improve endurance,*

**What are the barriers keeping you from achieving your fitness and nutritional goals?**

*Not knowing where to begin*

**List, in order of priority, three things you would like to do in order to improve your health and fitness.** --

- 1: *Food intolerance*
- 2: *Skin*
- 3: *Tiredness*

**What motivates you?**

*Having fun, Praise/rewards, Feeling better, Socialising*

**What are your main reasons for being concerned about your health and fitness?**

*Stress management, Building muscular strength, Social factors, Enjoyment, Building overall fitness, Flexibility, Disease prevention*

**Are you currently following an exercise regime?**

*No*

**How long do you spend in a typical resistance/weight training session?**

*30-45 minutes*

**How long do you spend in a typical cardio/endurance session?**

*30-45 minutes*

**Are you currently experiencing any pain or exercise related problems?**

*Recovering from spinal injury*

**Do you have any food allergies?**

*Yes*

**Are you on any special diet?** *Other*

**How many meals do you have a day?**

*More than 3 meals a day*

**Are you currently experiencing any dietary related problems?**

*Lactose intolerance*

**Do you drink water during exercise?**

*Yes*

**What activities/exercise did you participate in the past?**

*Running, Walking, Cycling, Swimming, Dance, Recreational activities, Yoga/Pilates, Free weights, Martial arts/Boxing, Resistance training, Outdoor activities*

**What training environments do you prefer or enjoy?**

*Indoors, Outdoors, Classes*

What times in the day do you prefer to train and why?

*Afternoon (12pm-6pm),  
Evening (6pm-12pm)*

What exercise activities do you enjoy or what are your preferred training methods?

*Boxing.  
Spinning.  
Yoga.  
Pilates. HIIT  
sessions*

What exercise activities do you not enjoy?

*Don't love running!*

How do you prefer to train?

*Training  
with a  
group of  
friends*

How long on average do you take rests between sets (weightlifting)?

*N/A*

Are you currently experiencing any pain in your body?

*No*

On a scale of 1-10, how much pain do you experience following a cardio/endurance session?

*3*

On a scale of 1-10, how much pain do you experience following a weight/resistance session?

*5*

How many calories do you consume a day?

*Approx 2000*

Do you skip meals?

*No*

Do you snack in between meals?

*Yes*

Do you eat late at night?

*Yes*

Do you have breakfast on a regular basis?

*Yes*

How often do you eat out?

*Few times a  
week*

Please list the types of diet or types of food that satisfy your appetite the most.

*I'm often hungry!*

Do you feel hungry after a meal that did not contain any meat?

*Yes*

On a scale of 1-10, please select your level of appetite at the following times.

*--*

Breakfast:

*5*

Lunch:

*8*

Dinner:

*8*

What would you consider to be a nutritional weakness for yourself?

*Too much  
junk*

What does your diet consist of pre-training?

*Varies*

What does your diet consist of post-training?

*Varies*

**How many hours of sleep do you get every night on average?** *7-8 hours*

**When were you in the best shape of your life?** *Now!*

**Do you have any hobbies or pastimes?** *Fitness! Trying stuff in London*

# FITNESS DNA TEST

Report Date: 31/03/2019

Lab reference: CFTWWW11111

## BODY AND WEIGHT MANAGEMENT RESULTS

## EATING BEHAVIOUR

### FEELING FULL

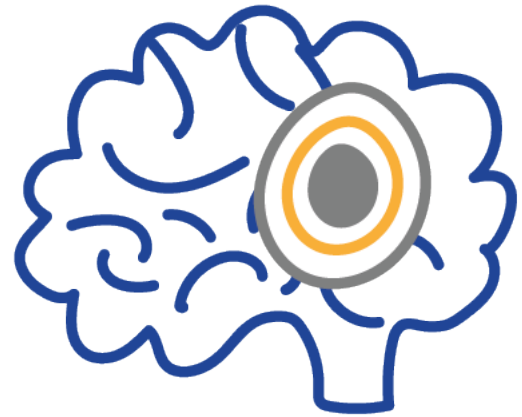
This is your sensitivity to fats

NORMAL

Slightly impaired

IMPAIRED

Fat regulation is essential in ensuring fat is broken down efficiently, which could otherwise lead to conditions such as altered lipid levels



### FOOD PLEASURE RESPONSE

This is your relationship between Dopamine and weight gain



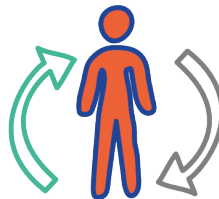
NORMAL

DECREASED

Dopamine is a neurotransmitter involved in the regulation of food intake and pleasure response from food. When we eat, the amount of dopamine released is increased proportionally with our self-reported level of pleasure from the food.

### ENERGY METABOLISM

This is your relationship between your energy metabolism and risk for obesity



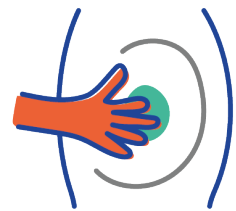
NORMAL

DECREASED

Energy metabolism is the process of generating energy from nutrients we consume in our diet.

### EXCESS EATING

This is your hunger feeling levels vs food intake levels



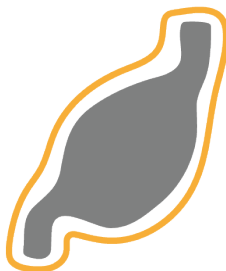
NORMAL

EXCESS

The test will look at the levels of protein Neuromedine Beta (NMB) and food intake and weight gain. NMB plays a key role in regulating dietary intake and energy balance by negatively directing eating behaviour.

### APPETITE

This is how your Ghrelin levels affect your eating behaviour



NORMAL

INCREASED

Appetite is controlled by a hormone called Ghrelin, also known as hunger hormone. The hormone is involved in increasing appetite. The higher levels of Ghrelin the more frequently person feels hungry and therefore at risk of weight gain.

### SNACKING BEHAVIOUR

This is your Leptin hormone which controls your snacking behaviour



NORMAL

INCREASED

Snacking is a term often used to refer to consumption of food or beverages between regular meals. Leptin tells the brain when you are feeling full, thus restricting further intake of food.



# FITNESS DNA TEST

Report Date: 31/03/2019

Lab reference: CFTWWW11111

## BODY AND WEIGHT MANAGEMENT RESULTS

## BLOOD SUGAR

### SUGAR SENSITIVITY

This is your sweet tooth gene sensitivity which affects your sugar consumption levels

NORMAL

DECREASED

Sugar sensitivity looks at an individual's increased preference for sweet foods. Decreased sensitivity can encourage a larger intake of sweet food. In turn, this can cause health consequences like diabetes and dental problems.



### PROINSULIN TO INSULIN CONVERSION

This is your chance of impairment with proinsulin to insulin conversion levels

NORMAL

Slightly impaired

IMPAIRED

Insulin is made from a precursor protein called proinsulin. If an individual has poor proinsulin to insulin conversion, there will be less insulin produced and a higher glucose level. High glucose in the blood can lead to diabetes.

### FASTING BLOOD GLUCOSE

This is your chance of having type II diabetes

NORMAL

Slightly increased

INCREASED

Fasting blood glucose is the glucose level in the blood after a period of not eating. If the level is high, it may indicate type II diabetes.



### INSULIN SECRETION

This is your chance of pancreas dysfunction in secreting insulin and the effect on blood glucose level

NORMAL

IMPAIRED

Insulin secretion is important in the regulation of blood glucose. The test will indicate the chance of pancreas dysfunction in secreting insulin.

### INSULIN SENSITIVITY

This is how your insulin affects the uptake of glucose in the body

INCREASED

NORMAL

DECREASED

Sensitivity to insulin affects the uptake of glucose in the body. High sensitivity will increase the glucose uptake and reduce the chance of type II diabetes mellitus.



# FITNESS DNA TEST

Report Date: 31/03/2019

Lab reference: CFTWWW11111

## EXERCISE RESPONSE RESULTS

MUSCLES, TENDONS &  
POST-WORKOUT  
CARDIO FITNESS

### MUSCLE POWER

This is your fast twitch fibres responding to power exercises



INCREASED

Slightly increased

DECREASED

There are two types of muscle fibre, slow twitch and fast twitch. Fast twitch fibres contract quickly and tire easily; they are used in power exercises such as sprinting and weightlifting. Slow twitch fibres are used in endurance exercises such as cycling or long-distance running.

### MUSCLE ENDURANCE

This is your slow twitch fibres responding to endurance exercises



INCREASED

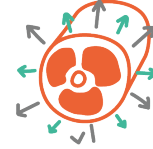
Slightly increased

DECREASED

Fast twitch fibres contract quickly and tire easily; they are used in power exercises such as sprinting and weightlifting. Slow twitch fibres are used in endurance exercises such as cycling or long-distance running.

### MUSCLE GROWTH

This is your interleukin-6 protein and its role in muscle growth and muscle regeneration



EFFICIENT

DECREASED

IL-6 also has a key role in inflammation and cell development. Our muscle cells produce the largest amount of IL-6 after exercise compared to other cells. Inflammation is a part of body's immune response.

### MUSCLE REPAIR

This is your CRP levels working to repair muscle



DECREASED

EFFICIENT

During a work out, the human body will repair or replace damaged muscle fibres by fusing new muscle fibres together, encouraging new growth. CRP is a substance produced by the liver in response to inflammation.

### MUSCLE RECOVERY

This is how quickly it takes for muscles to recover from an exercise session



FAST

SLOW

This test will look at how quickly it takes for muscles to recover from an exercise session. The AMPD1 gene is code for a protein which is found in muscles.

### ACHILLES TENDINOPATHY

This is your chance of developing Achilles tendinopathy



NORMAL

Slightly increased

INCREASED

Tendons are special connective tissues that join our muscles and bones together allowing the muscle contraction and causing movement. Achilles tendinopathy is a condition where there is a deterioration of the tendon due to micro-injuries developed over time.

### POST-WORKOUT BLOOD PRESSURE RESPONSE

This is your post-workout blood pressure



NORMAL

Slightly increased

INCREASED

When the heart beats, the blood is pumped out from the heart to the arteries that carry the blood around the body and the force with blood pushing against artery walls is defined as blood pressure.

### POST-WORKOUT CHOLESTEROL RESPONSE

This is your post-workout 'good' cholesterol response



NORMAL

INCREASED

High-density lipoprotein (HDL), also known as 'good' cholesterol, removes excess and 'bad' cholesterol (LDL) from the bloodstream and prevents it from being deposited in the arteries.

# FITNESS DNA TEST

Report Date: 31/03/2019  
Lab reference: CFTWWW11111

## DIET & NUTRITION RESULTS

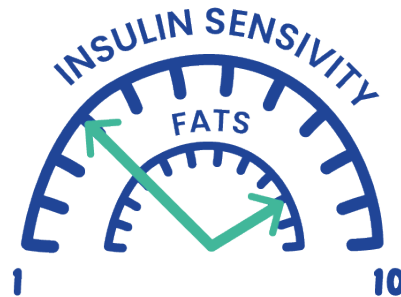
## DIETARY INTERACTIONS

### FAT AND GLUCOSE METABOLISM

This is your sensitivity to fats



Fat regulation is essential in ensuring fat is broken down efficiently, which could otherwise lead to conditions such as altered lipid levels.



## DIET & NUTRITION RESULTS

## SENSITIVITIES & INTOLERANCES

### CAFFEINE SENSITIVITY

This is your caffeine metabolism



Caffeine is a natural drug found in coffee beans, tea and carbonated drinks. Genetics can determine individual's sensitivity to caffeine.



### LACTOSE INTOLERANCE

This is your ability to produce and tolerant lactose in your digestive system



Milk and dairy products contain a natural sugar called lactose. Some people may not process lactose properly. The test will determine your ability to produce and tolerant lactose in your digestive system.



### ALCOHOL TOLERANCE

This is your sensitivity to alcohol



Genetics have an important role in determining how quickly individual can break down alcohol.



## DIET & NUTRITION RESULTS

## VITAMIN NEEDS

### VITAMIN B9 (FOLATE)

This is the way you process folate



Folate, also known as vitamin B9, is a Vitamin B required to make DNA and vital for many other processes. Folate cannot be made by the body so needs to be consumed in the diet.

### VITAMIN B12

This determines your ability to metabolise B12



Vitamin B12 is required in the production of DNA, amino acids, fatty acids and is essential in other processes. Vitamin B12 cannot be made by the body so needs to be consumed in the diet.

### VITAMIN D

This is your vitamin D levels



Vitamin D can be obtained from absorption from sunlight and diet. Enzymes in the kidney and liver then activate vitamin D. Deficiency of the vitamin may cause muscle pain, bone pain and increased fracture risk

### VITAMIN A

This is your ability to process Vitamin A



Vitamin A regulates growth, bone remodelling, vision, cell growth and immune system function. Vitamin A deficiency is rare but can result in poor vision, weak immune system and increased chance of infection.

---

## DISCLAIMER

---

This test gene markers panel was developed by Rightangled Ltd, and its performance characteristics were determined by IDNA Genetics Ltd. Rightangled Limited is a CQC registered healthcare provider for screening and diagnostic procedures, regulated under the Social Care Act 1997 as qualified to perform high - complexity testing. This test is used for informational purposes, and it should be regarded as such.

If you have any questions about this report or wish to speak with one of Rightangled' genetic counsellors, please call +44(0) 20 3950 3394.

---

## RISK AND LIMITATIONS

---

### Risk of Laboratory Technical Problems or Laboratory Error

The certified testing laboratory has standard and effective procedures in place to protect against technical and operational problems. However, such problems may still occur. The testing laboratory receives samples collected by patients and physicians. Problems in shipping to the laboratory or sample handling can occur, including but not limited to damage to the specimen or related paperwork, mislabelling, and loss or delay of receipt of the specimen. Laboratory problems can occur that might lead to inability to obtain results. Examples include, but are not limited to, sample mislabelling, DNA contamination, uninterpretable results, and human and / or testing system errors. In such cases, the testing laboratory may need to request a new sample. However, upon retesting, results may still not be obtainable.

As with all medical laboratory testing, there is a small chance that the laboratory could report inaccurate information. For example, the laboratory could report that a given genotype is present when in fact it is not. Any kind of laboratory error may lead to incorrect decisions regarding medical treatment and/or diet and fitness recommendations. If a laboratory error has occurred or is suspected, a health care professional may wish to pursue further evaluation and/or other testing. Further testing may be pursued to verify any results for any reason.

### General Limitations

The purpose of this test is to provide information about how a tested individual's genes may affect carrier status for some inherited diseases, responses to some drugs, risk for specific common health conditions, and / or selected diet, nutrition and / or exercise responses, depending upon the specific genetic testing that is ordered by the health care professional. Tested individuals should not make any changes to any medical care (including but not limited to genetic testing results without consulting a health care professional.

The science behind the significance or interpretation of certain testing results continues to evolve. Although great strides have been made to advance the potential usefulness of genetic testing, there is still much to be discovered. Genetic testing is based upon information, developments and testing techniques that are known today. Future research may reveal changes in the interpretation of previously obtained genetic testing results. For example, any genetic test is limited by the variants being tested. The interpretation of the significance of some variants may change as more research is done about them. Some variants that are associated with disease, drug response, or diet, nutrition and exercise response may not be tested; possibly these variants have not yet been identified in genetic studies.

Many of the conditions and drug responses that are tested are dependant on genetic factors as well as non-genetic factors such as age, personal health and family health history, diet, and ethnicity. As such, an individual may not exhibit the specific drug response, disease, or diet, nutrition and exercise response consistent with the genetic test results. Based on test results and other medical knowledge of the tested individual, health care professionals might consider additional independent testing, or consult another health care professional or genetic counsellor.