



# A breakthrough 10-minute health assessment that could change your life



How would you like to live healthier for longer? Or, as we say, add life to your years. Well, do you know, most of the chronic illnesses that people living in the UK experience today have a preventable element to them? And are you aware that type 2 diabetes, certain cancers, heart disease, Alzheimer's, strokes, plus many other diseases, are now viewed in medical circles as interconnected? There is even a name for it: metabolic syndrome.

# 3 steps to better health

- 1. **Measure** your inner health with our 10-minute HRM assessment;
- 2. use your HRM score to **explore** relevant dietary and lifestyle ideas;
- 3. then make subtle, targeted changes to begin to improve your health.



At Health Results we have created a breakthrough 10-minute health assessment (known as the HRM Score) that paints a picture of what's going on inside your body, indicating your current metabolic health. And – once you know your score – by following tailored programmes on our website that guide you through subtle changes to diet and lifestyle, you can improve your inner health and reduce your susceptibility to these conditions.

And the great news is – no matter what your current health score – in just a few short weeks, following our FREE online health programmes, your inner health can begin to improve.

www.HealthResults.com

# Why knowing your HRM Score matters

The Health Results Metabolic (HRM) Score provides a convenient, reliable, and easy-to-understand indicator of metabolic (inner) health. The purpose of the score is to provide a physiological outcome measure of insulin resistance (more on this later). This can be used to assess current metabolic health and then track the positive impact of dietary and lifestyle changes. The HRM algorithm has been developed by leading doctors working on behalf of Health Results. It uses five widely accepted biomarkers of insulin resistance to provide a relative measure of your current metabolic health.

### Is the HRM Score absolute?

Once your quick, simple, and painless HRM assessment has been completed, the results are entered into the Health Results App and a score is generated. We recommend that rather than viewing the score as an absolute number, it's better to see the score as the middle of a range from plus or minus 10. This allows for variables such as: time of day, how relaxed you were when taking your blood pressure, or if you were bloated while doing your waist to height measurement.

So, for example, if your score was 45, then your range is 35 to 55.

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

As you make dietary and lifestyle changes, the aim is to keep steadily improving your range by scoring higher up the scale.

To achieve an accurate reading, it is important to follow the video guides on our website. Over the next few pages, we have give some guidance on how to take these measurements. If you need any help, please just contact us.

### What we measure

Firstly, we only measure health markers that can be improved through subtle changes in diet and lifestyle. Just five measurements are needed to discover what's currently happening inside your body; your metabolic health. The ratios and correlation of which then generate your HRM Score.

- 1. Waistline
- 2. Blood pressure
- 3. Blood glucose level
- 4. Blood trygliceride level
- 5. Blood HDL cholesterol level



### 1. Waistline

Knowing your waistline to height ratio is a simple screening test and is far more meaningful than knowing your BMI (body mass index). The problem with BMI is that it doesn't take muscle mass and other important factors into account – one of the most important being exactly where our weight is distributed. Fundamentally, our waist to height ratio provides us with one of the most important health screening tests there is – and it's really simple, too.

It is important to be aware that the fat we should be most concerned about losing is the fat around our waistline: our visceral fat. This fat provides one of the most accurate predictors of both healthspan and lifespan. Conversely, carrying subcutaneous fat (the jiggly fat just under the skin) is usually harmless.

#### Metabolic syndrome

Interestingly, it is widely accepted in medical circles that if your waist to height ratio is greater than 0.5 AND you currently have two of the following four conditions: high blood pressure, high triglycerides, low HDL, or high blood sugar, then you currently have metabolic syndrome. Notice how your waist to height ratio is a prerequisite. It's like the anchor. While this does not mean that people with a slender waistline can't have metabolic issues, if you carry excessive weight in the midriff, then it is likely that changing your diet and lifestyle will be beneficial for your inner health.

#### The truth about the belly

Call it what you like: 'beer belly', 'spare tyre', 'jelly-belly', 'muffin top' or 'love handles', they are all nicknames for visceral fat. Without doubt, the visceral fat we carry around our waist is the most dangerous. While we might be desperate to reduce our bingo wings, oversized buttocks, or large hips for aesthetic reasons, it's the size of our belly that is the most important indicator of our overall health.

# How your waist measurement and your waist to height ratio affect your HRM Score

Category	Criteria		Score
Waist			
Waist circumference	Men <90cm	Women <80cm	Adds a positive score
	Men 90 - 93.9cm	Women 80 - 82cm	No score added
	Men 94 - 102cm	Women 82 - 88cm	Negative score
	Men >102cm	Women >88cm	Increased negative score
Waist to height ratio	<0.5		Adds a positive score



#### **Waist Measurement**

A low-carbohydrate diet can help with losing fat from inside the belly. Waist circumference provides a useful indicator of this. Where you measure your waist circumference is important. Measuring at the level of the belly button when standing or lying down provides a consistent and accurate reading. Make sure the tape is not too loose nor too tight and ensure that it's straight, even at the back. Take the measurement after you have exhaled.

Explore more about waistline and watch a short video on how to take the measurement



## 2. Blood Pressure

When your heart beats, it pumps blood round your body, which amongst other things gives it the energy and oxygen it needs. As the blood travels, it creates pressure against the sides of the blood vessels (arteries, veins, and capillaries). If the blood pressure in our arteries is too high, it may put extra stress on the arteries, which can lead to several different health issues.

Your blood pressure reading consists of two numbers: the bigger number is your **systolic** (**systole = contraction**) blood pressure. This is your blood pressure when your heart beats (contracts, squeezes). The smaller number is your **diastolic** (**diastole = relaxation**) blood pressure: as your heart relaxes between beats and fills back up (residual pressure).

Causes of high blood pressure include if you:

- are overweight;
- do not do enough exercise;
- drink too much alcohol or coffee (or other caffeine-based drinks);
- smoke;
- do not get much sleep or have disturbed sleep.

As with the other HRM measurements that indicate the current condition of your inner health, the good news is that if your blood pressure is too high (called hypertension), there are simple steps you can take to improve it.

According to an article published in 2017 by Public Health England, if you have high blood pressure then, for every 10mmHg reduction in systolic blood pressure you achieve, this reduces the risk of coronary heart disease by 17% and heart failure by 28%.

### How your blood pressure affects your HRM Score

Category	Criteria	Score
Blood Pressure		
	SBP <120 and DBP <80	Increased positive score
	SBP 120-129 or DBP 80-84	Adds a positive score
	SBP 130-139 or DBP 85-89	No score added
	SBP 140-159 or DBP 90-99	Negative score
	SBP 160-179 and/or DBP 100-109	Increased negative score
On medication for BP	Yes	Increased negative score



#### **Blood Pressure Measurement**

How you take your blood pressure is important to ensure an accurate measurement. Arm or wrist home blood pressure monitors are accurate if used properly. The blood pressure cuff should be at the same level as the heart. Sit for five minutes before measuring your blood pressure so your body is relaxed. Repeat the measurement three times and record the lowest reading.

Explore more about blood pressure and watch a short video on how to take the measurement



### 3. Blood Glucose

To fully understand the importance of your blood sugar levels, it is equally important to also understand the insulin hormone. Therefore, we cover both in a lot more detail throughout the next section of this booklet.

Do you know what your normal blood sugar level should be? Don't worry if you don't, because other than those in the medical profession, very few people do! It's likely the following information won't mean too much either right now, but by the end of this booklet you will fully comprehend its critical importance to both your health and longevity.

For most people, normal blood sugar levels are as follows:

- between 4.0 to 5.4 mmol/L (72 to 99 mg/dL) when fasting;
- up to 7.8 mmol/L (140 mg/dL) two hours after eating.

### The sugar-insulin cycle

With the exception of fibre, the human body converts ALL carbohydrates into sugar. And, as any excess sugar in the blood is poisonous, it is bundled up by the hormone insulin and stored as body fat. This can happen so quickly that shortly after a carbohydrate-loaded meal, we feel hungry again.

We call this the sugar-insulin cycle. And it works like this. We eat a sandwich and the body converts the bread to sugar. Our brain summons insulin to quickly grab the excess sugar and stores it as body fat. Because the bread is now no longer in circulation, we feel hungry again, so consume another sandwich. If the HRM assessment shows a higher than normal fasted glucose level, it indicates that our sugar-insulin cycle is no longer working efficiently.

# How your blood glucose (sugar) level affects your HRM Score

Category	Criteria	Score
Fasting Glucose		
Fasting glucose	<5.5 mmol/L	Increased positive score
	5.5 mmol/L	Adds a positive score
	5.6 mmol/L	No score added
	5.7-6.9 mmol/L	Negative score
	> 6.9 mmol/L	Increased negative score
Taking T2D medication	Yes	Increased negative score



# Steps to measuring your fasted blood glucose level

- 1. Other than drinking water, fast for 8 to 12 hours.
- 2. Wash your hands and make sure they are nice and warm.
- 3. Insert the test strip into your meter, with the single line facing outwards
- 4. Always insert a clean needle into the lancing device.
- 5. Use your lancing device on the side of a fingertip to get a drop of blood.
- 6. Touch and hold the edge of the test strip to the drop of blood.
- 7. After a few seconds, your blood glucose level will appear on the screen.
- 8. Safely discard the needle and test strip.

Explore more about blood glucose and watch a short video on how to take the measurement



# 4. Blood Triglycerides

Triglycerides are a type of fat found in the human body. You may confuse them with cholesterol, but the key difference is that triglycerides are fats found in the blood, whereas cholesterol is a substance made by the liver. Triglycerides provide your body with energy by storing unused calories, whereas cholesterol is for building cells and certain hormones in your body.

When we eat, any excess food that we don't need as energy is converted into our triglycerides by our liver. If you regularly eat more food that you can burn at that time – especially if it is sugar, refined carbohydrates, or ultra-processed foods – you may have high triglycerides (hypertriglyceridemia). The good news is – and therefore why we measure it in the HRM assessment – is that the same dietary and lifestyle changes you can make to promote overall good health can also help lower your triglyceride levels too.

#### Do high triglycerides matter?

High triglycerides may indicate prediabetes or type 2 diabetes and can increases the risk of stroke, heart attack, and heart disease. And importantly, insulin resistance can also be caused by high triglycerides released from abdominal fat.

#### What does mmol/L mean?

It is a measure that shows the concentration of something in a fluid. Rather than getting caught up on what exactly it means, we just need to understand that the mmol/L concentration measurement is used for various health markers such as cholesterol, triglyceride, and blood glucose levels.

It's crucial to understand that the healthy ranges will differ according to what you are measuring. For example: 0.8 mmol/L for triglyceride is a good score, but 0.8 mml/L for HDL cholesterol is considered not high enough to count as a good score.

### How your triglyceride level affects your HRM Score

Category	Criteria	Score
Lipids		
Fasting triglycerides	<1.3 mmol/L	Increased positive score
	1.3-1.69 mmol/L	Adds a positive score
	1.7-1.99 mmol/L	No score added
	2-2.29 mmol/L	Negative score
	>2.29 mmol/L	Increased negative score



# Steps to measuring your fasted triglyceride level

- 1. Other than drinking water, fast for 8 to 12 hours.
- 2. Wash your hands and make sure they are nice and warm.
- 3. Insert the test strip into your meter and make sure the correct chip is inserted.
- 4. Always place a clean needle into the lancing device.
- 5. Use your lancing device on the side of a fingertip to get a drop of blood.
- 6. Squeeze the finger and use the pipette to collect the blood (watch the video to see a simple way to do this).
- 7. Drop the blood onto the test strip and wait around a minute for the result to appear.
- 8. Safely discard the needle and test strip.

Explore more about blood triglycerides and watch a short video on how to take the measurement



### 5. HDL Cholesterol

Cholesterol is one of the most misunderstood and miscommunicated topics in the world of medicine. HDL Cholesterol (HDL-C), also known as 'good cholesterol', travels around the blood and absorbs other cholesterol and returns it to the liver. HDL stands for high density lipoproteins.

Dr Malcolm Kendrick writes in his best selling book *The Great Cholesterol Con*, 'Why do you think that an egg yolk is full of cholesterol? Answer: Because it takes one hell of a lot of cholesterol to build a healthy chicken. It also takes one hell of a lot of cholesterol to build, and maintain, a healthy human being.'

Although there are many more, let us provide just two reasons why we need HDL cholesterol: firstly, the vitamin D we get from sunshine is actually created (synthesised) by cholesterol. Secondly, we would not exist at all without cholesterol, as it is a building block for most sex hormones.

The NHS website says, 'good cholesterol (called HDL) – this makes you less likely to have heart problems or a stroke'.

Please note, there is also an important balance between our HDL level and triglycerides happening inside our body, so part of the calculation we make (the app does this automatically) is the relationship (the ratio) between the two measurements.

#### Measurements

- Ideally, men should have a HDL-C reading greater than 1.0 mmol/L.
- Ideally, women should have a HDL-C reading greater than 1.3mmol/L.
- Does having a lot more mean you are healthier? Not really; some research suggests that if it goes over 2.6mmol/L then health risk factors increase.

### How your HDL-C level affects your HRM Score

Category	Criteria		Score
Lipids			
HDL-C	Men >1 mmol/L	Women >1.3 mmol/L	Adds a positive score
Trig: HDL-C ratio	<1.3		Adds a positive score



### Steps to measuring your fasted HDL level

- 1. Other than drinking water, fast for 8 to 12 hours.
- 2. Wash your hands and make sure they are nice and warm.
- 3. Insert the HDL test strip into your meter and make sure the correct HDL chip is inserted.
- 4. Use your lancing device on the side of a fingertip to get a drop of blood.
- 5. Squeeze the finger and use the pipette to collect the blood (watch the video to see a simple way to do this).
- 6. Drop the blood onto the test strip and wait around a minute for the result to appear.
- 7. Safely discard the needle and test strip.

Explore more about blood triglycerides and watch a short video on how to take the measurement



# You will need to download the FREE Health Results app to get your score

Available for download today. **Search 'Health Results'** 









Once you have entered all your measurements, you will need to enter the code from the side of either your HDL Cholesterol or Triglyceride box.



# HRM Score Nutritional Traffic Light System



Use your HRM score to discover tailored plans on our website



While there is some generic nutritional advice that is beneficial for all humans – such as eat real food and avoid man-made, chemical-infused packaged foods – once you know your HRM score, we offer specifically tailored dietary plans to help you improve your metabolic heath.



We further tailor these plans based on whether you desire to lose weight or not.



Once you have had your HRM assessment and know your score, **simply scan the QR code below** to visit the relevant page on our website and discover the right dietary guide for you.

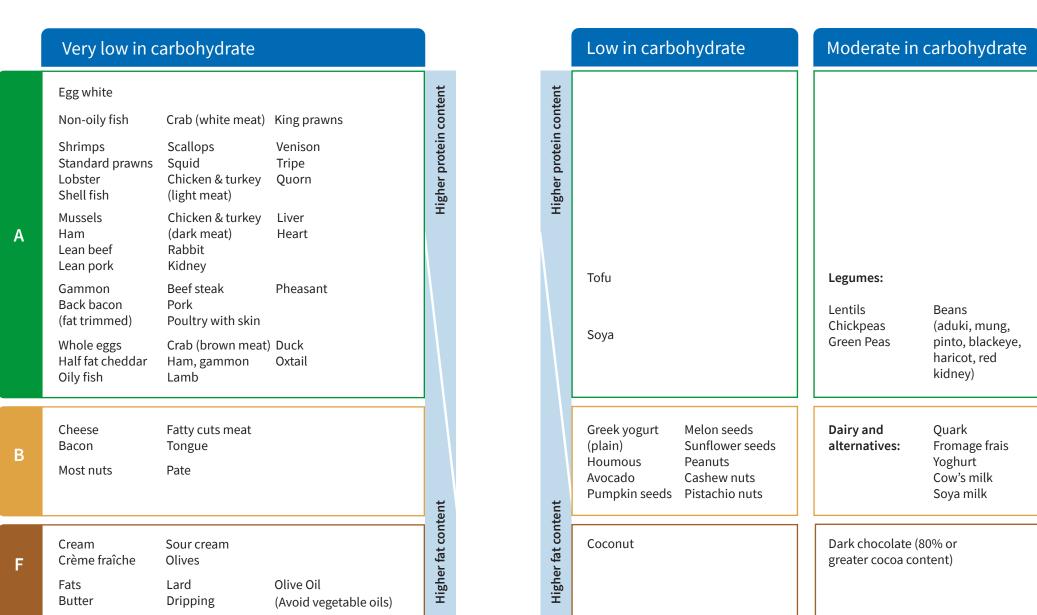
On the following pages we show an example of the Health Results dietary guideline for someone with an HRM Score of 40-60 and who desires to lose weight.

Scan here to find your specific food guide that best fits your HRM Score



## An example of an HRM Score tailored nutritional plan

Foods that are higher in protein and/or fat



Enjoy

Limit

Minimise

# An example of an HRM Score tailored nutritional plan

Foods that are very low in protein

Enjoy



Minimise or avoid

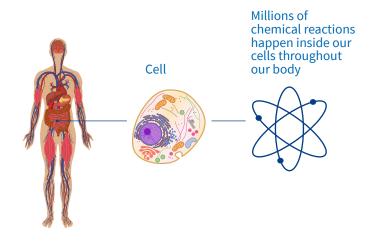
## Carbohydrate content (per 100g food)

Enjoy	Enjoy some	Eat in smaller amounts
Konjac <0.1g Mushrooms 0.3g Celery 1g Cucumber 1g Lettuce 1g Artichoke 1g Kale 1g Pak choi 2g Spinach 2g Spring greens 2g Asparagus 2g Courgette 2g Aubergine 2g Pumpkin 2g Celeriac 2g Leeks 3g Broccoli 3g Tomatoes 3g Cranberries 3g Cauliflower 4g Brussel Sprouts 4g Mange tout 4g Bell peppers 4g Cabbage 4g	Swede 5g Turnip 5g Grapefruit 5g Raspberries 5g Blackcurrants 6g Blackberries 6g Plums 6g Strawberries 6g Pears 6g Broad beans 7g	Melon 7g Apricots 8g Beetroot 8g Peaches 8g Pomegranate 8g Onions 8g Orange 8g Butternut squash 8g Sweetcorn 8g Blueberries 9g Gooseberries 9g Peas 10g Nectarine 10g Apples 10g Pineapple 11g Parsnips 12g

Minimise or avoid	<b>Avoid</b> (or a very minimal amoun	nt)
Red kidney beans 15g Cherries 15g Grapes 17g Carrots 20g Potatoes 20g Sweet Potato 20g Bananas 20g	Avoid all foods that are made refined carbohydrates, or are cakes, pastries, biscuits, crack chocolate (with less than 80% content), ice cream, breakfast with natural or added sugar, fi sugar sweetened drinks, hone	e sugary. All ders, sweets, cocoa bars, sauces ruit juices,
	Wholewheat pasta (cooked) Pearl barley Yam Plantain Rice (all types) cooked White pasta (cooked) Cassava Bread (all types) Quinoa Dried dates Raisins Dried fruit Crispbread (rye) Flour (grain, all types) Porridge Sultanas Currants Breakfast cereals (all types)	28g 28g 28g 28g 30g 32g 33g 50g 55g 58g 63g 63g 63g 70g 70g 70g 70g 80-90g

# A quick biological guide to metabolic health

## Metabolism



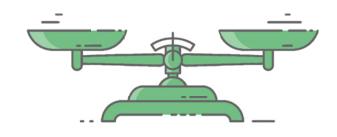
All of our body parts are made up of cells. Inside the cells there are millions of chemical reactions going on.

This is called metabolism.

It is all part of life.

# **Keeping the balance**

Homeostasis is the body keeping itself in balance

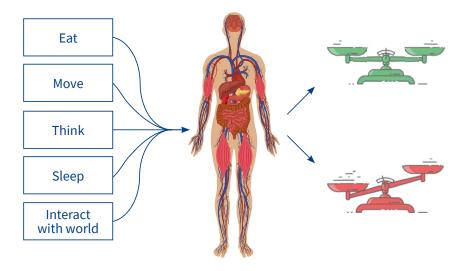


Whilst all this activity is happening throughout our body, it is working hard to keep everything in balance.

This is called 'homeostasis'.

# **Keeping the balance**

What we do and the world around us affects whether the body can stay in homeostasis

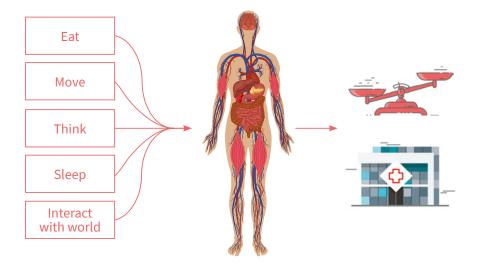


Our nutrition, movement, mind, sleep, and environment all have an effect on our body.

Sometimes they can have a negative effect on homeostasis and upset the balance.

# **Upsetting the balance**

If homeostasis is challenged too much for too long then diseases can develop



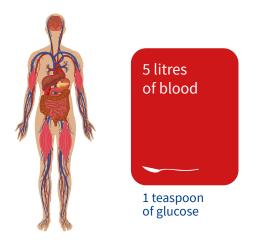
The world around us and what we do in our daily life can cause our body to struggle to keep in homeostasis.

If our body has to struggle daily to keep everything in balance, then over the years many diseases and illnesses can happen.

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# Blood glucose is very important for inner health

Normal blood glucose

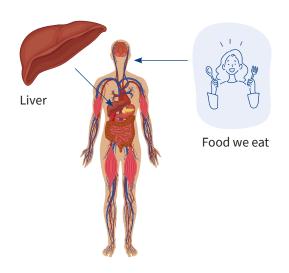


We have approximately 5 litres of blood in our body.

In all of our blood we should only have about 1 teaspoon (5g) of glucose.

# Blood glucose is increased by our liver and food

Glucose in our blood comes from our food and from our liver

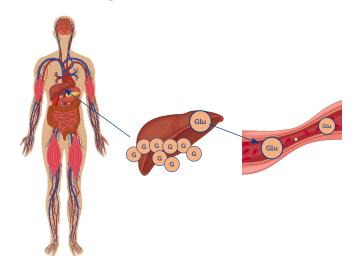


In our blood we have many things, including sugar. The type of sugar in our blood is called 'glucose'.

The glucose in our blood can come from:

- the food we eat;
- our liver which can make glucose and release it into the blood.

# Our liver makes, stores, and releases glucose into our blood



We do not want too much glucose in our blood; just one teaspoon (5g).

It is very important to have this small amount of glucose.

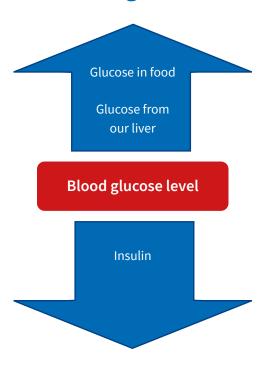
Because this is so important, our liver can store glucose. The stored form of glucose in the liver is called 'glycogen'. Glycogen is formed from long chains of glucose, very similar to starch in plants.

When more glucose is needed in the blood, the glycogen can be broken back down into glucose and released into the blood.

The liver itself can also make glucose. This means when we are not eating any carbohydrate foods our liver can happily keep our blood glucose at just the right level.

Because our liver can do this, we don't have to eat any carbohydrate to be able to live.

# Increasing and decreasing blood glucose



Keeping the blood glucose at a level of 5g is called 'blood glucose homeostasis'.

When food is eaten, this causes the blood glucose level to rise, meaning the body needs to work fast to bring the glucose level down again.

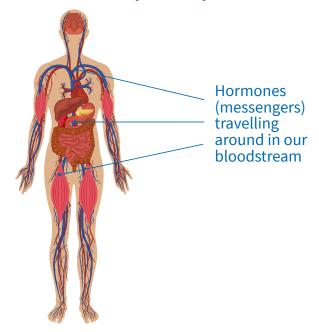
To do this the pancreas (an organ near our stomach) releases insulin.

Insulin is a hormone. Hormones are messengers that tell the body what to do.

Insulin tells the body to get glucose out of the blood.

### **Hormones**

What we do and the world around us affects whether the body can stay in homeostasis



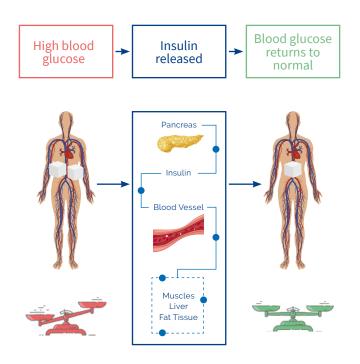
Our body is very good at looking after itself most of the time. It has many control systems to try to keep everything in balance and in homeostasis.

Hormones have a big role to play in homeostasis.

Hormones are messengers. They are released from one part of the body then travel in the blood and tell other body parts what to do.

## Insulin

If homeostasis is challenged too much for too long then diseases can develop



Insulin is one type of hormone. It has a very important role in helping to keep our blood glucose level normal.

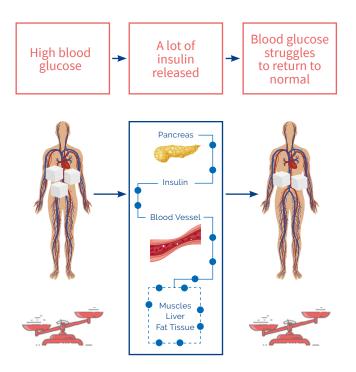
When our blood glucose level goes too high our pancreas releases insulin into the blood.

Insulin travels around the body telling body parts to help bring the blood glucose level back down to normal.

The liver, muscles, and fat stores have a big role to play in this.

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## **Insulin resistance**



How easy or hard it is for our body to keep our blood glucose level normal can have a big influence on our health.

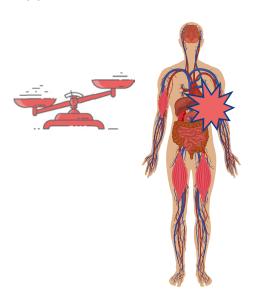
If there is a lot of glucose going into our blood (from our food), and if the parts of the body and the cells do not want to take glucose out of the blood, then a lot more insulin has to be released to try to force the glucose out of the blood.

When this happens the body is no longer in balance (homeostasis). The medical name for this is 'insulin resistance'.

Many common modern diseases (that were rare a hundred years ago) are due to insulin resistance.

# Insulin resistance is linked to many unhealthy changes in the body

Inflammation and fat inside the belly also happens with insulin resistance



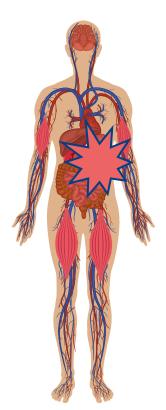
When the body continues to be overloaded with too much sugar, it is not just insulin resistance and the body struggling to keep blood sugar normal that is the problem.

A lot of other harmful changes happen throughout the body. This includes fat building up inside the belly and organs.

Inflammation also develops. Inflammation can be thought of as the cells and parts of the body being upset, angry, and unable to look after themselves properly.

This is poor inner health. A more technical name for inner health is metabolic health.

# Poor inner health causes lots of daily problems and is linked to many modern diseases



#### **Daily problems**

- Tired with low energy levels, and energy slumps
- Frequently hungry
- Brain fog
- General aches and pains
- Difficulty losing weight
- Feeling generally a bit fed up

#### **Modern diseases**

- Prediabetes
- Type 2 diabetes
- High blood pressure
- Non-alcoholic fatty liver disease
- Heart disease
- Some cancers
- Fertility problems
- Joint pain
- Skin conditions
- Low mood
- Dementia

Poor inner health can make us feel generally unwell. It can feel that we are not functioning at our best.

We may not know why we do not feel well, and we may have felt like this for so long that it has become normal. Poor inner health is associated with many modern diseases.

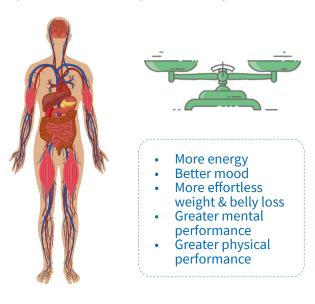
Many of these diseases and conditions were very rare a hundred years ago.

- Overweight and obesity
- Prediabetes
- Type 2 diabetes
- Essential hypertension
- Non-alcoholic fatty liver disease
- Metabolic syndrome
- Reactive hypoglycaemia
- Polycystic ovary syndrome
- Joint pain / osteoarthritis
- Migraine
- Skin conditions
- Irritable bowel syndrome
- Acid reflux
- Heart failure
- Some mental health conditions (including depression and anxiety)

- Asthma
- Erectile dysfunction
- Sleep apnoea
- Fibromyalgia
- Gallstones
- Severe COVID
- Some cancers (bowel, breast, prostate)
- · Alzheimer's, dementia
- Chronic kidney disease
- Prostatic enlargement
- Ischaemic heart disease
- Stroke
- Gout
- Osteoporosis
- And more...

# Maintaining and improving our inner health makes us feel better

Good inner health also helps to reverse, prevent, and improve many diseases



By improving our inner health we can improve how we feel, as well as our current and future health.

The benefits can be rapid. Many people will feel better within a few days or weeks and their body measurements of inner health will start to improve, too.

People can reverse their type 2 diabetes, prediabetes, lower their blood pressure, and lose weight.

# Visit www.HealthResults.com and begin to Explore, Measure & Improve your inner health



### FREE features include:

- over 600 healthy recipes;
- possibly the world's biggest nutritional database;
- lots of FREE downloadable books;
- hundreds of articles on nutrition, exercise, and lifestyle;
- loads of health videos.

www.HealthResults.com

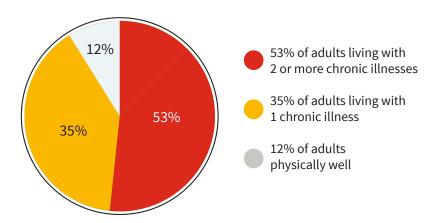
# Why Measuring Your HRM Matters (and some tips to improve it)

For the past 30 years, the World Health Organisation (WHO) have talked about three pillars of wellness: social, physical, and mental health.

This has become known as the 'biopsychosocial model of health'. Their model studies the interconnection between the three pillars – examining how they play a role in health, longevity, and the prevention of disease. The HRM Score focuses primarily on our physical health and once you know your HRM Score and act on it, it normally has a positive knock-on effect on the other two.

#### A metabolic pandemic

In the US, researchers have estimated that 88% of adults over the age of 60 are not completely physically well and the rest of the modern world is not far behind. Sadly, today more adults are living with a chronic illness than those without. Yet a hundred years ago, virtually all these disease were very rare indeed.



Put simply, today we are living with and dying from the plague of prosperity or (perhaps more aptly) the plate of prosperity.

Some argue the reason so many of us are suffering from cancer, Alzheimer's, strokes, and heart disease is because we are living longer. However, this is not true. In fact, a male adult alive in Britain in the 1870s had a longer life expectancy than a British male adult today. Yes, when you remove childhood deaths from the data, in the 1870s, where every class had access to real food, if you managed to reach adulthood as a male, then your life expectancy was greater than it is today. And it's not just about life expectancy. In the modern world, the number of years we live without illness has also tragically and dramatically reduced. Regrettably, and shockingly, more adults are living with the consequences of these chronic diseases than without.

Our nationwide suffering from cancers, heart disease, strokes, diabetes, and Alzheimer's is not because we are living longer, it is because something has changed in the way we are living. Unfortunately, the current institutional approach to fixing this pandemic of modern chronic illness is to try and use pharmaceutical drugs. But, despite vast expense and medical diligence, this solution doesn't appear to be working and as a result, health and social care systems are collapsing. Not just in Britain, but around the entire modern world too. The core fundamental reason being: whilst medications can often work well for acute diseases such as infections, they do not and simply cannot fix chronic diseases.

# What is causing so much chronic illness in our country?

Think back to how 'homeostasis' describes the body's systems as being in and staying in balance: in harmony. To remain physically well, we must spend most of our time in healthy homeostasis.

Now, here is the crunch and the reason why many nations around the world are facing a tsunami of these chronic diseases. There is one element of homeostasis that – if challenged too frequently – can lead to virtually all the chronic conditions we suffer today. And on the rare occasion it is not the primary reason for a chronic illness, it often still plays a leading role.

As we read on previous pages, one of the key tasks of homeostasis is to tightly regulate how much sugar we have in our blood. Why? Because a constant high blood sugar level could kill us much sooner than we might think. Even a mildly elevated level of blood sugar over a long time can be seriously harmful.

Now, let's look at what challenges our blood sugar homeostasis. The body has several control mechanisms to maintain normal blood sugar levels, but – as you may recall from the sugar-insulin cycle – its key tool is the insulin hormone. Virtually every cell in the body responds to insulin and while it performs many different roles, two of its key tasks are: to maintain our overall blood sugar level at around one teaspoon, and to promote the creation and storage of fat in the body.

In summary, when we eat sugary food or foods that turn into sugar (carbohydrates), insulin is released from our pancreas. The insulin travels around the body in our blood and instructs cells to 'open their doors' to let sugar out of the blood and into the cells. But eventually, if we continually bombard our cells with more and more insulin, due to mainly eating a poor diet that is high in sugar and processed carbohydrates, the cells stop listening and don't let the sugar in.

Eat sugary foods

Insulin is released from the pancreas

Insulin is released from the pancreas

Insulin travels into the blood

If insulin sensitive

Cells 'open their doors'

The process 'breaks down here'

Sugar is let out of the blood into the cells

Over-stuffed cells just don't want to open their doors so easily. So, instead of a small amount of insulin politely knocking at the door, the pancreas must now release a larger army of insulin and batter at cell doors, trying to force them to open and let the sugar in. This internal war is known as insulin resistance.

Insulin resistant cells cause your pancreas to compensate by making even more insulin, leading to elevated levels of insulin in the blood, and a further condition known as **hyperinsulinemia**. Consequently, because insulin's other major role is to store fat, hyperinsulinemia drives the body hard into fat storage mode.

For millions of years, we had no issue with insulin and never really experienced elevated levels. We ate fruit only in the autumn: it turned to sugar and insulin was summoned to store it as body fat to get us through the winter. Perfect. Unfortunately, in our modern sugary world, sugar has become plentiful and available all year round. Our food environment has been hacked and we are truly suffering from the plate of prosperity. As we mentioned earlier, only 12% of US adults over the age of 60 are metabolically healthy.

Most people living in the modern world, where food is available 24/7, are challenging blood sugar homeostasis several times a day, 365 days a year. There is no longer internal harmony: we are experiencing an internal civil war.

As well as over-consumption of sugary or sugar-releasing foods, insulin resistance can also be caused by stress, lack of exercise, lack of sleep, vegetable and seed oils, poor muscle mass, and a few other things. If you would like to discover the biological pathway for each of these, we discuss them in great detail on our website. But right now, what is crucial to understand is that insulin resistance is mainly caused by poor diet and that insulin resistance drives virtually all of the chronic diseases that may prevent you from living the long, healthy life you deserve.

Nowadays, most people are aware that sweets, ice cream, fizzy pops, cakes etc are loaded with sugar. Pair this with your new-found understanding of insulin resistance, and you can probably appreciate how these food types challenge homeostasis. But on the next page you will find two 'staple' food items that also drive insulin resistance – you will probably be quite surprised!



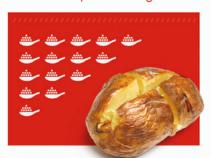




HOW MUCH SUGAR DOES A BOWL OF RICE TURN INTO ONCE DIGESTED?



Affects the blood glucose level to the equivalent of 15 teaspoons of sugar



Affects the blood glucose level to the equivalent of 10 teaspoons of sugar



### Dr Campbell Murdoch says...



"The body is now facing an internal war as it desperately battles to stay in homeostasis. With insulin resistance in full flow, as we eat foods that turn into sugar, homeostasis releases even more insulin. So, now we have elevated levels of insulin in the blood (hyperinsulinemia) and eventually when it can no longer successfully cope with the load, we may also have a dangerously elevated level of blood sugar. A body stuffed full of insulin can't burn fat, because insulin's responsibility is to store fat, rather than burn it. You see, you can't burn fat, lose weight, beat obesity, and get lean when you have lots of insulin in the body. It's biology!"

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Dinner Serving		Sugar teaspoon equivalent	
Jacket Potato	Large	15	
12" Subway (just bread)	150g	15	
Bagel	Medium	11	
Basmati Rice	150g	10	
Chocolate Muffin	Medium	10	
Potato White, boiled	150g	9.1	
French Fries, baked	150g	7.5	
Spaghetti White, boiled	180g	6.6	
Sandwich (just bead)	60g	7.4	
Sweetcorn, boiled	80g	4	
Frozen Peas	80g	1.3	···_
Broccoli, Cabbage, Celery, Cauliflower, Mushrooms, Spinach, Almonds, Hazelnuts, Beef, Chicken, Eggs, Fish, Lamb, Pork, Veal, Shellfish, Turkey, Ham etc.	Eat as much as you like	0	

# Steve Bennett founder of Health Results says...



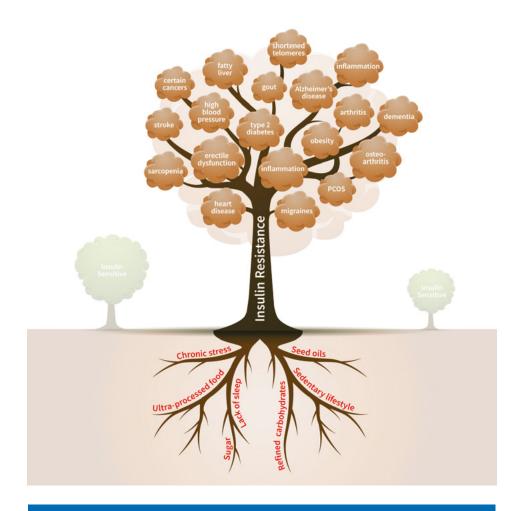
"Virtually all modern chronic illnesses are simply just branches of the same tree, the tree being insulin resistance. They have the same root disease but manifest in different ways. For my dad it is diabetes and for my mom it is Alzheimer's.

GPs and doctors across the country now spend most of their working day dealing with the consequences of insulin resistance. In many hospitals, most beds are tragically being occupied by a

patient with a condition derived from insulin resistance. And it will be insulin resistance that will most likely be responsible for you not living the long, healthy life you deserve.

Now the good news. Insulin resistance can both be prevented and reversed. Reversed really quickly: as in, potentially within just a few weeks For many, as their cells once again become more sensitive to insulin, their blood pressure also improves, belly fat is lost, their joints feel better, and they generally feel well again.

Looking back, we were healthier 150 years ago and lived longer too. At Health Results we hope that in the future we will see the past hundred years through a lens where our society underwent three historic transformations in healthcare and social care. The first was the defeat of acute or infectious illness, which we will rightly attribute to the success of biomedical medicine. The second was how for several generations we incorrectly believed that the same biomedical concept of disease would somehow work for modern chronic illness and how we incorrectly saw them all as separate diseases. But thirdly and finally, how globally we recognised that the creation of ultra-processed foods led to a plate of prosperity, which resulted in a pandemic of insulin resistance, which escalated virtually all modern diseases and – most importantly of all – how we began to implement solutions to support people to change diets and lifestyles and to measurably improve their health."



# Health Results exists because insulin resistance is measurable and improvable.

Together, we need to accept that we have little evolved since our ancestors and get back to fuelling our bodies with a human diet, living a lifestyle our bodies need to live and empowering everyone to achieve their dreams of a longer life spent in good health. By adapting these simple, effective, and long-lasting changes, we can all make lifelong improvements to our metabolic health.

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www.HealthResults.com