

## Metabolic Syndrome

It is important we define metabolism, so that we can have a basic understanding of the title. *Metabolism* (metabolic) is the chemical process by which the body converts food into energy. The process involves breaking down of food into sugars and acids through the digestive system. The energy can be used instantly or stored in body tissues such as the liver and muscles. Therefore, the metabolic process occurs meticulously and if tampered with it can lead to various health issues.

Now, metabolic syndrome is also known as insulin resistance syndrome. It is a group of conditions that increase the risk of obesity, diabetes, coronary heart disease, stroke, hypertension and other serious health problems. **It is caused by deliberately not adhering to the dictates of the four pillars of a good health, which are diet, exercise, fasting and sleep.**

Latest global statistics reveals a grim picture of an unhealthy society. Currently, there are over 870 million undernourished, 1.745 billion overweight and 837 million obese people. [Worldometers.info, 17 June, 2023]. The global health cost of diabetes is \$375 billion a year. That of obesity is more than \$2 trillion. [Matthew Walker, PhD, *Why We Sleep* (2017), p. 169]. We are in such a health mess as a result of our refusal to unlearn what occupies our mind in terms of what it means to have a good health. In other words, we are slaves of our habits and in turn we are victims of our ill-conceived decisions in the name of social-fitting. Or deliberately not acting on the truth due to fear of social backlash or pressure!

Let us briefly expound on the importance of adhering to the three primary pillars of a good health. **First, diet:** are you eating real food; meaning it does not cause disorders? I know you will answer YES. But, wait for a moment, you might rethink your answer. In addition, you will cast doubts over the entire food pyramid that you have been taught and adopted as your so-called fundamental guide for a balanced diet.

In simple terms nutrients are categorized into essential (protein) and non-essential (carbohydrate). The difference between them is that essential nutrients need to be consumed through diet while non-essential nutrients our bodies can create enough internally. To enunciate, we will use two food types i.e. carbohydrate (sugar) and protein (meat); and their metabolism will give us a snapshot of either we eat real food (essential nutrients) or not.

Metabolism of carbohydrate (sugar) is as follows; in your mouth it is broken down into glucose and fructose. In the pancreas we have the insulin hormone, whose primary job is to lower blood sugar. Insulin triggers body cells to absorb glucose from the blood stream. On the other hand, fructose is metabolized by the liver into glucose, lactose, and glycogen. The liver can only use and store so much fructose as glycogen at one time. When the limited glycogen stores are full, the excess fructose is changed directly into liver fat through de novo lipogenesis.

Before we describe the metabolism of protein (meat), it is imperative to note that: 'protein plays a pivotal role in life. In the cell, proteins do the heavy lifting. If DNA is the CEO calling the shots, the proteins are the legions of blue-collar workers keeping the

business running. Proteins provide structure, building muscle, and catalyze metabolic reactions. They act as receptors, hormones and couriers of information, relaying messages from outside the cell back to DNA – signaling which genes to turn on and which ones to turn off. DNA provides the code to manufacture cellular proteins – the *message* contained within each gene is translated into *action* by proteins. One gene equals one protein.’ [Travis Christofferson, *Ketones the Fourth Fuel* (2020), p. 38].

Now, the metabolism of protein (meat); in your stomach it is broken into amino acids. Amino acids are used to create proteins. If amino acids exist in excess, the body has no capacity or mechanism for their storage; thus, they are converted into ketones or they are decomposed.

In brief, diets that are rich in carbohydrates especially in this era of processed food products, creates a dangerous cycle detrimental to our health. Since, whenever you eat carbohydrate (sugar): glucose spikes and insulin responds until it becomes resistance, and liver and muscle fat storage rises. In the ensuing cycle tampering with other crucial hormones such as leptin and ghrelin. Leptin triggers a sense of feeling full. Ghrelin triggers a strong sensation of hunger. In addition, our taste buds are damaged.

**Second, exercise:** have you exercised today? Exercise, also known as physical activity, is any movement that works the body at a greater intensity than the usual level of daily activity. Exercising is important due to the following major reasons: one - it improves skeletal muscles insulin sensitivity. Two - it reduces stress, and resultant cortisol release. Third – it makes the TCA (tricarboxylic acid) cycle run faster, detoxifies fructose, improving hepatic insulin sensitivity. Try to avoid being sedentary as much as possible. Sedentary means sitting a lot and refers to a person or job that is not very physically active. There are numerous types of exercises but focus on three most crucial: walking fast, gym (doing compound workouts: bench press, squats, dead lift, rows and pull-ups) or High-intensity interval training (HIIT) such as jogging, push-ups, etc.

**Third, fasting:** are you fasting today? Fasting is the opposite of starving. Fasting is intentional abstinence from food and drink consumption for a period of time. There are numerous reasons for fasting, but for the purpose of our context is metabolic. In this eon of processed fast food products that keep us craving for more and more. Furthermore, causing us to become overweight and obese.

Fasting must be included as part of our dietary strategy in our day to day lives. Limiting our food and /or drink intake to specific time in a day. For instance, we take one meal in a day at between 12pm – 2pm or between 5pm – 7pm (two hours only). It will not only assist us in losing weight, but also address other numerous health challenges. Fasting makes our bodies go into ketosis. Ketosis is metabolic state where the body burns stored fats. The prolonged fasting, such as 48 / 72 hrs of water fasting is recommended, since the body goes into the state of autophagy. Autophagy is a natural, self-preservation mechanism that removes damaged or dysfunctional parts of a cell and recycles other parts towards cellular repair.

**Fourth, sleep:** did you have a quality sleep? ‘Humans are not sleeping the way nature intended. The number of sleep bouts, the duration of sleep, and when sleep occurs have all been comprehensively distorted by modernity.

Throughout developed nations, most adults currently sleep in a *monophasic* pattern – that is, we take a long, single bout of slumber at night, the average duration of which is now less than seven hours. Visit cultures that are untouched by electricity and you often see rather different patterns. Hunter – gatherer tribes, such as the Gabra in northern Kenya or the San people in the Kalahari Desert, whose way of life has changed little over the past thousand years, sleep in a *biphasic* pattern. Both these groups take a similarly longer sleep period at night (seven to eight hours of time in bed, achieving about seven hours of sleep), followed by a thirty – sixty minute nap in the afternoon.

There is also evidence for a mix of between two sleep patterns, determined by time of year. Pre-industrial tribes, such as the Hadza in northern Tanzania or the San of Namibia, sleep in a biphasic pattern in hotter summer months, incorporating a thirty- to forty-minute nap at high noon. They then switched to a largely monophasic sleep pattern during the cooler winter months. [Matthew Walker, PhD, *Why We Sleep* (2017), p. 67].

Sleep is a crucial pillar in achieving good health. Any acts of sleep procrastination and deprivation will lead to dangerous short-term and long-term health consequences. One catastrophic example is that of a driver driving then falls asleep or has a microsleep on a busy road or a highway. Another example is that of a young child who has been denied sleep by his parents in the name of education. One thing must be clear, sleep debts cannot repaid! Sleep is the most ignored pillar among the four, but, it is the one that all the remaining three revolve around it, since the body requires it to function at its optimal level.

In conclusion, metabolic syndrome must be tackled at individual level by attempting to incorporate better diet – rich of protein, regular exercise, intermittent water fasting and taking nap in the afternoon and sleep early after dusk. In addition, policies will be enacted in the upcoming Islamic state of Khilafah (Caliphate) reestablished on the methodology of the Prophethood. Policies that will guarantee citizens' health and secure environment. The Khilafah will ban multinationals that profit from peoples' suffering. Adhering to the Islamic Shari'ah and not profits will be the benchmark for safeguarding the health of the citizens. Health sensitization will be regularly done to ensure that citizens are consuming the right diet, engaging in exercise, encouraging regular fasting, having adequate quality sleep among other necessary health issues of priority. Because healthy citizens equal a stable state. Healthy citizens are a vital role for the Khilafah to be a global dominant player.

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