

Boosting your metabolic rate

INCREASING metabolic rates has been a topic of interest to many, especially among weight-conscious individuals. Understanding metabolism is crucial for obtaining an optimal metabolic rate. Metabolism is the conversion of energy intake i.e., food consumption into products, including energy and waste. Increasing the rate of conversion is believed to burn off body fat. But is this true?

MSU Medical Centre (MSUMC) health screening and wellness specialist Dr Faridah Mohd Zin explains, "Our body consumes energy in four pathways: basal metabolism, food thermogenesis, non-exercise activities thermogenesis (NEAT) and exercise activities thermogenesis (EAT). More than half of the body's metabolism is consumed as basal metabolism, for the function of vital organs such as the heart, kidneys, brain and many others (about 60%).

The thermic effect of food has the lowest contribution which involves the energy needed to change the food we eat into substances that are "edible" by our cells i.e., glucose (about 10%). Increasing the metabolic rate would mean increasing the energy-burning rate of the body, which theoretically could be increased by optimising the NEAT, EAT, thermic effect of food and body metabolism.

NEAT is simply the energy consumed when performing daily activity. Optimising daily activities such as cooking while standing or pacing around the room while on the phone has been shown to increase metabolic rates. Since these activities will naturally be done every day, enhancing the energy burned through this pathway could be regarded as an opportunity that should not be missed. Moreover, NEAT is found to be associated with improvement in overall

health and helps with body fat reduction.

EAT is the body's way of consuming energy through structured exercise which primarily includes cardiovascular, strengthening, flexibility and balance. Furthermore, each type should have specific criteria in terms of frequency, intensity, time and types (FITT approach) for different objectives of exercise. For example, in maintaining fitness, a total of 150 minutes of cardiovascular exercise per week is recommended, while a longer duration is needed for body weight reduction.

Food thermogenesis contributes the least to body energy consumption. High lean protein and whole foods burn more energy during metabolism compared to other types of food. Although eating high lean protein and whole foods induces higher thermogenesis, hence a higher metabolic rate, the contribution made in the increment of daily body metabolism is still the lowest.

The major factors contributing to the basal metabolic rate include sex, height, age, ethnicity, body composition and genetic factors. While the body compositions are mainly composed of the vital organs, bones, body fat and muscle mass, the latter two are the only factors that can be intentionally changed.

Total body fat is composed of essential and storage fat. Storage fat is mainly deposited under the skin as subcutaneous fat, or around the body organs as visceral fat. The latter has been shown to have a strong correlation with the increment in cardiovascular diseases, including heart attack and stroke. Energy consumption of more than required would be stored in the body as fat. Hence, a negative balance between energy intake and consumption is essential to force our body to use up the storage fat as a source of energy, leading to weight reduction. Since storage fat



Dr Faridah Mohd Zin.

activities that work the major muscle groups (legs, hips, back, chest, abdomen, shoulders and arms) at least two times each week. Examples of muscle-strengthening activities include lifting weights, using resistance bands, doing push-ups and some types of yoga. Even everyday activities such as gardening, playing with your kids and carrying groceries can strengthen muscles.

Although resistance training is an important part of a complete exercise regimen, consuming the appropriate amount and type of protein to maintain and build muscles is just as important. On top of that, a healthy balanced diet is crucial to ensure adequate macro- and micro-nutrients needed for a healthy body.

Body metabolism occurs continuously, allowing ongoing opportunities to maximise its effect. Body fat is a way for our body to store unused energy. Hence, optimising the body's metabolism while eating lower than our body's daily energy requirement will force our body to burn off energy from the stored body fat. Thus, consistency in maintaining this negative balance in energy will gradually shave off unwanted storage fat.

originates from food intake, adjusting one's diet is essential for achieving the desired body fat level.

Increasing muscle mass would increase the ability of the body to use up energy. The American College of Sports Medicine recommends regular resistance training exercises as the key to building and keeping muscle. Men and women should participate in muscle-strengthening

Ways to support a person with obesity

ACCORDING to the World Health Organization, obesity has become a global epidemic, affecting over 1 billion people worldwide as of 2022. The prevalence of obesity has more than doubled since 1990, with increasing health risks linked to cardiovascular diseases, diabetes, and other chronic conditions.

In Malaysia, obesity rates have continued to rise. The 2023 National

Health and Morbidity Survey (NHMS) reported that 54.4% of Malaysian adults are either overweight or obese, compared to 50.1% in 2019. This means that more than half of the adult population is struggling with weight-related health concerns.

With obesity becoming more common, the chances of you having a family member, spouse, child, or close friend affected by obesity are high. Supporting them with empathy and encouragement can make a difference in their journey towards a healthier lifestyle. Here are some ways you can help:

Educate yourself

Before offering support, take the time to understand what obesity really is. It's not just about food choices or willpower; obesity is influenced by genetics, metabolism, mental health, lifestyle, and medical conditions.



Encouraging your loved ones to lose weight is better than judging them for missing their goals.

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Enriching Health Care

Safe weight loss

OBEESITY is a medical condition defined by an excess of body fat that can significantly impact a person's health, leading to conditions such as diabetes, heart disease, high blood pressure, joint problems, liver disease, and more.

Mawar Medical Centre physician, Dr Sattian Kollanthavelu, emphasised the importance of raising awareness and providing effective treatments for obesity in Malaysia. One such treatment option is Endoscopic Sleeve Gastroplasty (ESG), a non-surgical and minimally invasive weight-loss procedure. ESG involves using an endoscope inserted through the mouth to suture the stomach, reducing its size. This procedure helps patients eat less and feel full more quickly, supporting healthier weight management.

This procedure is suitable for patients with a BMI of 30 to 40 who have struggled with weight loss through diet and exercise, as well as individuals without severe acid reflux, a large hiatal hernia or major gastrointestinal disorders. It also serves as an alternative for those seeking a non-surgical option to traditional bariatric surgery.

"ESG does not involve external incisions, allowing for faster recovery and fewer complications. The procedure is performed under sedation and typically takes between 60 and 90 minutes. ESG can reduce stomach volume by approximately 70%. Additionally, it can help improve obesity-related conditions such as diabetes, hypertension, and sleep apnoea," he said.

Dr Sattian highlighted that most patients experienced minimal downtime, allowing them to resume normal activities within a few days. However, for long-term success, the procedure requires sustained dietary

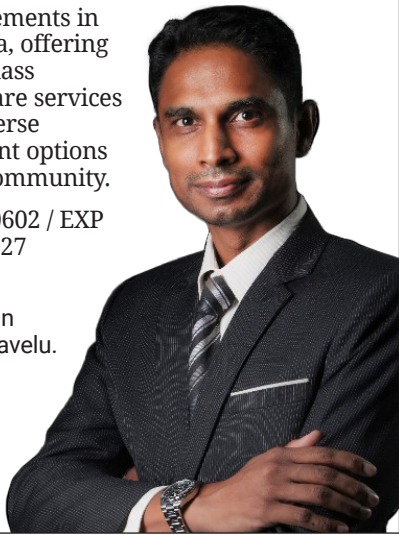
modifications and lifestyle changes. Patients will need to follow up with healthcare professionals for ongoing monitoring and support.

"ESG is less invasive, does not involve the removal of stomach tissue, and carries a lower risk. It is also more effective for long-term results compared to weight-loss medications. Besides, when compared with lifestyle changes alone, ESG provides an extra tool for those struggling with obesity."

Dr Sattian strongly emphasised the importance for Malaysians to recognise obesity as a medical condition that requires treatment. He also encourages individuals to seek medical advice for personalised weight loss solutions. Mawar Medical Centre is now equipped to offer ESG as a cutting-edge, non-invasive weight-loss solution to fight against obesity. This achievement solidifies the centre's position at the forefront of medical advancements in Malaysia, offering world-class healthcare services and diverse treatment options to the community.

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Dr Sattian Kollanthavelu.



Motivate with kindness

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It also increases the risk of diabetes, heart disease, and other chronic illnesses. By educating yourself, you can provide informed and compassionate support rather than relying on misconceptions or judgment. Learning about the challenges they face will help you become a better ally in their journey.

Support, don't judge

Be a source of encouragement, not criticism. If they struggle with their weight goals, avoid nagging or making judgmental remarks like "Why didn't you follow the diet?" Instead, offer support by checking in on their well-being, not just their weight.

Help them stay on track by being involved – whether it's meal planning or finding healthier coping mechanisms. If they eat when stressed, talk it out instead of letting food be the solution. Your role is to uplift, not criticise. Let them know you're there for them, no matter what.

Be their cheerleader, not their coach

Support them with encouragement, not pressure. Celebrate their efforts whether it's choosing a healthy meal, skipping junk food, or staying active. Even if they haven't reached their goal yet, your positivity can keep them motivated.

Don't just praise weight loss, acknowledge their progress at every step. A kind word can boost their confidence and inspire them to keep going. Your support makes all the difference!

Suggest professional help

While encouragement is important, professional guidance is crucial. Nutritionists, dietitians, and healthcare professionals can create personalised plans that suit an individual's needs.

What not to do

- **Don't tempt them** – Even a tiny bite could ruin months of hard work, and they could fall right off the wagon. Respect their food choices and eating habits.

- **Don't overwhelm them** – Avoid bombarding them with weight loss programmes, diet plans, exercise routines, weight loss articles, or subscriptions to fitness magazines. Too much information can only feel like pressure instead of information.

- **Don't be the 'food police'** – Constantly reminding them of what they can or can't eat only adds stress. Support them, offer advice when needed, but never make them feel controlled.

Your role is to encourage, not enforce. Let them take charge of their own journey while you cheer them on.



Exercising with your loved one is a good way to help them lose weight.



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