

A comprehensive approach to obesity in heart failure patients

Obesity and heart failure (HF) often go hand in hand, and addressing this connection is crucial for improving patient outcomes. Here is a breakdown of the diagnosis, evaluation, and management of obesity in individuals with heart failure:

Diagnosis: While Body Mass Index (BMI) is a common measure for obesity, it is not always the best indicator, especially for those with a BMI under 35. In such cases, other methods like waist circumference or body composition can provide a clearer picture of a person's weight-related health risks.

Risk assessment and evaluation: People with obesity may have lower levels of natriuretic peptides, which are commonly used to diagnose heart failure.



This can make it harder to diagnose HF in those with obesity, especially if symptoms like shortness of breath or fatigue are present. Additionally, conditions like diabetes, high blood pressure, sleep apnoea, and atrial fibrillation are often linked to obesity, and addressing these can help improve heart failure treatment.

Management

- **Lifestyle changes:** Weight loss and exercise can improve heart function, but making these changes is not always easy or sustainable.
- **Medications:** For people with heart failure and obesity, medications like GLP-1 antagonists (semaglutide and tirzepatide) have shown promise in reducing weight and improving symptoms. However, careful monitoring of kidney function and other treatments is essential.
- **Surgery:** Bariatric surgery may help reduce heart failure symptoms, but it carries risks, so it's vital to manage heart failure carefully before and after the procedure.

Overall, managing obesity in heart failure patients requires a balanced approach, combining lifestyle, medication, and sometimes surgery, under careful medical supervision.

Source: Journal of the American College of Cardiology



Home remedies for dengue viral infection

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Dengue, an Aedes mosquito-borne viral infection, has been a crucial public health concern during the monsoon in our country for its worrying statistical value. Individuals who have recovered from primary infection from one serotype of dengue virus get a lifelong immunity against the same serotype, but the risk of developing severe dengue would be higher following infection by any other serotypes (secondary infection).

Severe dengue is potentially fatal. Severe dengue, characterised by vascular leakage due to disruption of the endothelial cell layer in the vascular system, is preceded by thrombocytopenia (rapid fall in platelet count), indicating disruption of thrombopoiesis. These processes in the pathogenesis indicate the requirement of both immunomodulators and antivirals for treatment. Despite its life-threatening complications, there is still no specific antiviral medication available for dengue infection.

However, researchers continue to actively pursue identifying potent compounds with promising anti-dengue activities via in-depth understanding of

dengue pathogenesis. Medicinal plants, which are known to possess both immunomodulatory and antiviral activities, have long been considered as potential alternatives for the management of viral fever worldwide.

Among all the potential medicinal plants considered for dengue treatment, papaya has been studied extensively. Papaya is used to treat several digestive disorders, as it has its antimicrobial, antimalarial, antihelminthic, liver-protective, and immunomodulatory effects. Several compounds, such as papain, flavonoids, L-tocopherol, ascorbic acid, and others present in papaya leaves, possess therapeutic properties. The antioxidants present in papaya leaves exhibit anti-tumour and immunomodulatory effects. Metabolites in papaya leaf extract such as carpaine and quercetin are known to possess anti-malarial and anti-dengue activity. Carpaine is the principal alkaloid component contained in the papaya leaf extract, and it has been reported to be a major contributor towards anti-thrombocytopenic properties. Carpaine also possesses antitumor activity and antihelminthic activity. Papaya leaves also contain chemical compounds, like pseudo-carpaine, which impart a bitter taste to the

leaves.

Use of papaya leaf extract to increase the platelet count in dengue-affected patients is a topic of debate. Whether the natural increase in the platelet count observed in dengue patients after the defervescence phase is being mistaken as the effect of papaya leaves has been addressed by several studies. The anecdotal evidence is supported by studies indicating a rapid increase in platelet count in a test group of dengue patients following administration of papaya leaf extract. Thrombocytopenic mice treated with papaya leaf extract showed increased levels of thrombopoietin, a chemical that enhances platelet production.

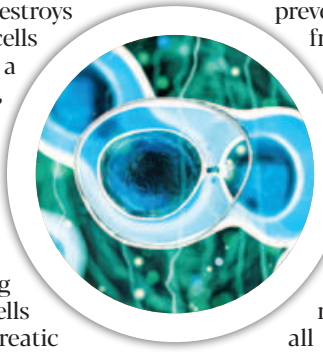
Papaya leaf extract has also been reported to exert significant inhibition of haemolysis along with red blood cell membrane stabilisation. Thus, the immunomodulatory effect of papaya leaf extract, particularly with regard to the platelet count enhancing effect, has been established.

In this context, papaya leaf juice seems to be a potential candidate against dengue viral infection.

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Stem cell-derived islet cells show promise for type 1 diabetes treatment

Researchers have made a significant advancement in the treatment of type 1 diabetes, a condition where the immune system destroys insulin-producing cells in the pancreas. In a recent clinical trial, scientists tested stem cell-derived islet cells (zimislecel) as a potential treatment for this disease. Zimislecel is created by turning embryonic stem cells into functional pancreatic islet cells, which are responsible for insulin production. The treatment involves a single infusion of these



cells into the bloodstream, delivered via the portal vein, alongside an immunosuppression protocol to prevent the immune system from attacking the new cells.

In a phase 1-2 trial, 22 patients with type 1 diabetes received zimislecel. After at least 12 months of follow-up, 14 patients were still being monitored. The results were promising: all patients had some level of insulin production, and many saw significant improvements in blood sugar control. In fact, 10

patients were able to stop taking insulin altogether.

However, the trial was not without risks. Two patients died during the study period—one at 20 months and another at 30 months—due to complications related to immunosuppression, which is used to prevent the rejection of the new cells.

While the treatment is still in its early stages, these results offer hope for a potential breakthrough in managing type 1 diabetes by restoring the body's ability to produce insulin. Further studies are needed to confirm these findings and ensure the long-term safety of this approach.

Source: The New England Journal of Medicine (NEJM)

The art of boredom in healing your brain

TASHIRIF AREFIN

There is an Italian term, *il dolce far niente*, that calls for intentionally letting go—to prioritise simply being alongside doing. It gives the brain the pause it needs to recharge so that it can be more productive. Yet in today's hyperconnected world, this kind of purposeful idleness has become increasingly difficult to access.

Boredom might just be the rarest experience of our time. In an age where every empty second is instantly filled with a scroll, a swipe, or a screen, the simple act of doing nothing has become almost extinct. We carry endless entertainment everywhere. As a result, many people never access the brain's default mode—the space where thoughts about life's meaning and personal purposes arise—and this could have been fuelling today's mental health crisis.

Neuroscientist Alicia Wall, a researcher at Rensselaer Institute, says it is critical for brain health to let ourselves be bored from time to time as our brain shifts to default. Being bored, the researcher says, improves social connections. Boredom can also foster creative ideas, replenish our work mojo, and provide an incubation period



for embryonic work ideas to hatch. Our brain gets a much-needed rest when we are not working it out too hard. Interestingly, famous writers have said their most creative ideas came when they were moving furniture, or taking a shower. These eureka moments are called insights.

This idea aligns with what author Arthur Brooks told Sean Kelly in a podcast: if you were put into an fMRI machine and asked to 'think about nothing,' the parts of the brain that would light up are the same ones involved

in contemplating and exploring life's meaning. He added that the problem today is that most young people are not even looking for the meaning. And the reason they are not even looking is they are not in the parts of the brain where they need to be to look. As Brooks puts it, we are using our brains wrong.

So ditch that outdated adage, "An idle mind is the devil's workshop," and alongside your to-do list, create a to-be list: a time when you can be mindfully present. Set aside 10-20 minutes a day where you intentionally will not do anything productive. No phone. No music. Just sit or lie down in nature.

Let your thoughts drift without judgement. Also, next time you are in a waiting room or in a line, do not pull out your phone. Let yourself just exist in that moment. It might feel awkward at first. That is good. Alongside, what you can try is to just sit and stare. Watch the clouds, the ceiling fan, or just a tree. Do not try to think; just let your brain breathe.

Let your mind wander. And sometimes, do not be afraid to do nothing because that is exactly what your brain needs to begin.

Tashrif Arefin came up with this article out of boredom. Email: meghdoot.dmc@gmail.com

Harnessing AI to enhance traditional medicine

On 11 July 2025, the World Health Organisation (WHO), the International Telecommunication Union (ITU), and the World Intellectual Property Organisation (WIPO) released a new report titled Mapping the Application of Artificial Intelligence in Traditional Medicine. The report, presented at the AI for Good Global Summit, highlights the transformative potential of AI in enhancing traditional, complementary, and integrative medicine (TCIM), used by billions globally.

The brief showcases AI's role in areas like personalised care, drug discovery, and biodiversity conservation. Examples include AI-powered diagnostics in Ayurgenomics, machine learning models identifying medicinal plants in Ghana and South Africa, and AI analysis of compounds for blood disorders in South Korea.

A key focus is the need for high-quality, inclusive data to reflect the diversity of traditional medicine, emphasising the importance of preserving Indigenous knowledge through initiatives like India's Traditional Knowledge Digital Library. The brief also stresses safeguarding data sovereignty, with a call for community-led data governance models to protect Indigenous Peoples' rights.

With the TCIM market expected to reach nearly \$600 billion by 2025, the report calls for action in several areas: developing legal frameworks for AI in traditional medicine, building digital literacy among practitioners, and establishing global standards for ethical AI use.

By combining AI with the wisdom of traditional medicine, a new, more inclusive era of healthcare could emerge—one that benefits all.

Source: World Health Organisation



Mastering portion control for healthier eating habits

It sounds simple enough: just avoid overeating. But managing portion sizes is often more challenging than it seems. Many people unknowingly consume more than they intend to, which can lead to weight gain and other health issues. The key to success lies in understanding what a true serving size looks like—and often, it is smaller than we think.

A "serving size" is a standard measure of food that helps you gauge how much to eat. Instead of memorising complex measurements, it is easier to compare serving sizes to everyday objects. For instance:



- Vegetables or fruit: the size of your fist
- Pasta: about one scoop of ice cream
- Meat or fish: roughly the size of a deck of cards
- Chips: a cupped handful
- Apple: the size of a baseball
- Potato: like a computer mouse
- Cheese: the size of two dice or your thumb (from tip to base)

At home, portion control becomes easier with a few simple tricks. Use smaller plates and bowls to naturally limit the amount of food you serve. When preparing meals, serve yourself appropriate portions and avoid going back for seconds. It can be helpful to store any leftovers in pre-measured portions, and freezing excess food in individual servings ensures you do not overeat later.

Dining out also presents challenges, but they are manageable. You can ask for smaller portions or share dishes with a dining companion. If you have dessert, consider splitting it—most restaurant servings are much larger than needed.

At the supermarket, be mindful of bulk-sized snack packs, which often encourage mindless munching. Instead, choose single-serving packages to keep portion sizes in check.

By following these simple strategies, you can make it easier to stick to healthy portion sizes, helping you enjoy your meals without indulging. Managing portion control is not about restriction—it is about learning what a true serving looks like and making it work for you.