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# Health ulse magazine

## EDITORIAL

Facing the Truth about HIV/AIDS:  
Why Prevention Matters Most

## HEALTH & TECHNOLOGY

The Sphygmomanometer

# *Facing the truth about* **HIV/AIDS**

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## HCOWA: Advancing Healthcare Standards in West Africa

**H**COWA, the Health Community of West Africa, is a dynamic organization dedicated to promoting healthcare standards and enhancing access to quality medical services across the sub-region. With a commitment to improving the health and well-being of communities in West Africa, HCOWA serves as a catalyst for transformative change in the healthcare sector.

Our primary focus lies in industry brand promotion, supply and demand linkage, investment and trade policy alignment, and industrial cooperation guidance. Through strategic partnerships and collaborations, we facilitate the exchange of knowledge, expertise, and resources to drive innovation and sustainable development in the medical industry.

At HCOWA, we recognize the importance of academic exchange promotion and other key areas in shaping the future of healthcare in West Africa. Through a blend of online and offline initiatives, we foster

dialogue, facilitate networking opportunities, and explore avenues for cooperation between China and West Africa in the medical sector.

Our mission is to create a new window for medical cooperation between China and West Africa, paving the way for mutually beneficial partnerships and collaborations. By leveraging the strengths and resources of both regions, we aim to address the healthcare challenges facing West Africa and improve healthcare access and quality for all.

We remain steadfast: to be at the forefront of healthcare transformation in West Africa, driving positive change and making a meaningful impact on the lives of millions.

Join us in our mission to advance healthcare standards, foster innovation, and build a healthier future for West Africa. Together, we can create a brighter tomorrow for generations to come.

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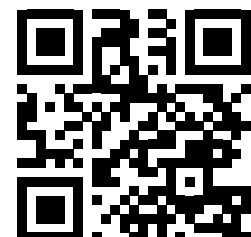
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# Facing the Truth about HIV/AIDS

## Why Prevention Matters Most

By Prince Opoku Dogbey



Around the world, many people are still living with HIV/AIDS. The World Health Organization says there were about 39 million people with HIV by the end of 2022. This is a big problem that affects real lives. To tackle it, we need to focus on prevention more than anything else. HIV/AIDS is not a relic of the past; it's a present-day reality that continues to claim lives and devastate communities worldwide.

The numbers tell a stark story. Despite significant progress in treatment and management, HIV/AIDS remains a significant public health concern, particularly in regions with limited access to healthcare resources and education. The burden of the disease falls disproportionately on vulnerable populations, including women, adolescents, sex workers, intravenous drug users, and marginalized communities. Moreover, the stigma surrounding HIV/AIDS often exacerbates the problem, hindering prevention efforts and discouraging individuals from seeking testing and treatment.

Prevention is undeniably the cornerstone of our response to HIV/AIDS. While medical advancements have revolutionized the treatment landscape, with antiretroviral therapy (ART) allowing individuals with HIV to lead longer and healthier lives, the old adage rings true: "prevention is better than cure." We cannot afford to be complacent in the face of this ongoing pandemic.

Comprehensive prevention strategies must encompass education, awareness, and access to essential services. It starts with empowering individuals with accurate information about HIV transmission, risk factors,

and prevention methods. Condom use, safe injection practices, and harm reduction programs for substance users are critical components of prevention efforts. Equally important is the promotion of regular HIV testing and counseling, which not only allows for early detection and treatment but also helps to reduce transmission rates.

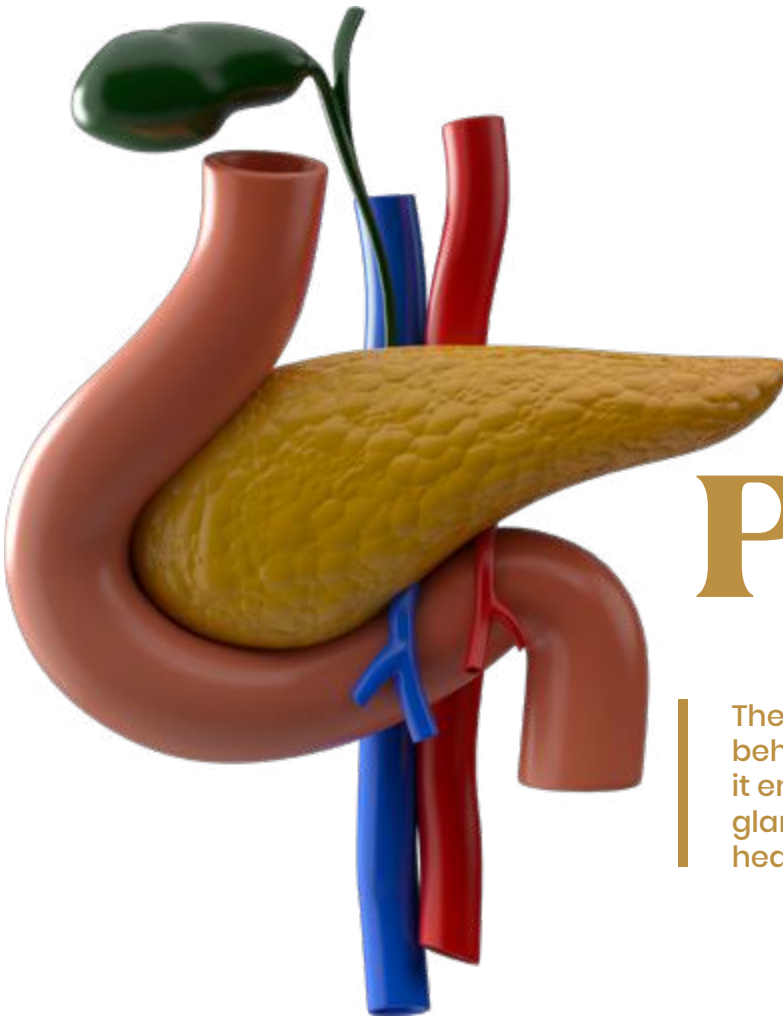
However, effective prevention goes beyond individual behavior change; it requires a holistic approach that addresses social, economic, and structural determinants of health. This includes tackling issues such as poverty, gender inequality, discrimination, and lack of access to healthcare services. By addressing these underlying factors, we can create environments that support healthy behaviors and reduce the risk of HIV transmission.

Furthermore, combating HIV/AIDS demands a commitment to destigmatization and inclusivity. Stigma and discrimination not only harm individuals living with HIV but also act as barriers to prevention and treatment efforts. We must work tirelessly to challenge misconceptions, promote acceptance, and create supportive communities where individuals feel safe seeking testing and care without fear of judgment or reprisal.

As we reflect on the global HIV/AIDS epidemic, let us reiterate our collective resolve to prioritize prevention. Every new infection prevented is a victory in the fight against HIV/AIDS. It's incumbent upon governments, healthcare providers, civil society organizations, and individuals alike to redouble their efforts and invest in prevention strategies that are evidence-based, culturally sensitive, and accessible to all.

*In conclusion, HIV/AIDS is indeed real, but so is our capacity to prevent its spread. Let us heed the call to action, confront the challenges head-on, and work together towards a future where HIV/AIDS is no longer a threat to global health and well-being. Prevention is not only better than cure; it's our most potent weapon in the battle against HIV/AIDS.*

## The Organ



# The Pancreas

The pancreas, a vital organ tucked away behind the stomach, is often overlooked until it encounters trouble. Yet, this unassuming gland plays a crucial role in maintaining our health and well-being.

By Nana Ama Oforiwaa Antwi

**P**rimarily known for its role in blood sugar regulation, the pancreas is both an endocrine and exocrine gland. As an endocrine gland, it secretes insulin and glucagon, hormones vital for regulating blood glucose levels. Insulin helps cells absorb glucose from the bloodstream, lowering blood sugar levels, while glucagon raises blood sugar levels by prompting the liver to release stored glucose when levels drop too low.

However, the pancreas isn't solely focused on glucose control. It also plays a significant role in digestion as an exocrine gland. The pancreas adds its own digestive juices and enzymes to the digestive process via a small duct called the pancreatic duct, which connects the pancreas to the duodenum, the first part of the small intestine.

These digestive enzymes, including amylase, lipase, and proteases, are released into the duodenum to aid in the breakdown of carbohydrates, fats,

and proteins, respectively, facilitating the absorption of nutrients.

Despite its importance, the pancreas is susceptible to various diseases, the most common being pancreatitis and pancreatic cancer. Pancreatitis, characterized by inflammation of the pancreas, can be acute or chronic and is often linked to excessive alcohol consumption, gallstones, or certain medications.

Meanwhile, pancreatic cancer, though less common, is one of the deadliest forms of cancer due to its aggressive nature and lack of early symptoms.

Maintaining a healthy lifestyle can significantly reduce the risk of pancreatic disorders. This includes eating a balanced diet, limiting alcohol consumption, avoiding smoking, and staying physically active. Additionally, regular check-ups and screenings can help detect any abnormalities early on, improving the chances of successful treatment.

While the pancreas may not receive as much attention as other organs, its functions are indispensable to our health. By understanding its role and taking steps to care for it, we can ensure that this modest gland continues to support our well-being for years to come.

“

*As an endocrine gland, it secretes insulin and glucagon, hormones vital for regulating blood glucose levels*

# The Sphygmomanometer

By Nana Ama Oforiwaa Antwi

**T**he sphygmomanometer, an essential tool in healthcare settings, plays a crucial role in monitoring blood pressure. Comprising a cuff, pressure gauge, and inflation bulb, this device accurately measures the pressure exerted by circulating blood against the walls of the arteries.

The invention of the sphygmomanometer is attributed to several individuals, notable among them is a German physician, Samuel Siegfried, Scipione Riva-Rocci, and Nikolai Korotkoff. According to history books, the first sphygmomanometer was invented in 1881 by Samuel Siegfried Karl Ritter von Basch, it consisted of a rubber bulb filled with water and a mercury column.

The water in the rubber bulb was used to restrict the blood flow in the artery, while the mercury column was connected to the bulb that translated the pressure required to obscure the pulse into millimeters of mercury completely. In 1896, Italian Scipione Riva-Rocci made further improvements and added a handcuff that could be fixed around the arm and apply pressure on the limb. Then in 1905, Dr. Nikolai Korotkoff, discovered the difference between systolic blood pressure and diastolic blood pressure. This discovery laid the foundation for the modern blood pressure measurement we know today.

The sphygmomanometer has since become a cornerstone of modern medicine. Its operation relies on the principle of auscultatory blood pressure

measurement, where the cuff is inflated to a pressure exceeding systolic blood pressure, temporarily occluding the brachial artery. As the cuff pressure is gradually released, blood flow resumes, producing characteristic sounds known as Korotkoff sounds. The systolic pressure corresponds to the onset of these sounds, while the diastolic pressure is recorded when the sounds disappear.

Accurate blood pressure measurement is vital for diagnosing hypertension, a leading risk factor for cardiovascular disease. Regular monitoring with a sphygmomanometer helps healthcare providers assess an individual's risk and develop appropriate treatment plans to mitigate potential complications.

In recent years, digital sphygmomanometers have gained popularity for their ease of use and automated measurement capabilities. These devices offer quick and reliable blood pressure readings, making them suitable for both clinical and home use.

Despite advancements in technology, the sphygmomanometer remains a cornerstone of cardiovascular assessment. Its role in detecting hypertension and guiding treatment underscores its importance in promoting heart health and preventing cardiovascular disease. As healthcare continues to evolve, the sphygmomanometer stands as a testament to the enduring value of accurate blood pressure measurement in safeguarding human health.



### In Conclusion

The sphygmomanometer, pivotal in healthcare, has evolved since its invention in 1881, with contributions from various innovators. Its auscultatory method, now digitalized, remains crucial in diagnosing hypertension and guiding treatment, highlighting its enduring importance in cardiovascular care.





# Avocado Consumption

## Linked to Lower Diabetes Risk in Women: Mexican Study



**In a groundbreaking study published in the Journal of the Academy of Nutrition and Dietetics, researchers from Mexico have unearthed a significant association between avocado consumption and reduced diabetes risk, particularly among women.**

By Prince Opoku Dogbey

**T**he findings shed new light on the potential of this popular fruit as a crucial component of dietary interventions aimed at combating the global diabetes epidemic. The study, conducted by a team of experts from Mexico, delved into the dietary habits of Mexican adults and their potential impact on diabetes prevalence.

Analyzing data from the Mexico National Survey of Health and Nutrition (ENSANUT), researchers focused on the consumption of avocados and its correlation with diabetes risk among a subset of participants aged 20 years and above.

Over a span of several years, the study examined the dietary patterns of thousands of individuals, employing a rigorous methodology to ensure accuracy and reliability of the findings. Utilizing a validated semiquantitative food-frequency questionnaire, researchers meticulously collected data on avocado consumption, categorizing participants as consumers

or non-consumers based on reported intake.

The results, derived from a final analysis of 25,640 participants, revealed a striking trend: women who consumed avocados showcased a significantly lower risk of diabetes compared to their non-consuming counterparts. This association remained robust even after adjusting for various confounding factors, underscoring the potential protective role of avocados against diabetes, particularly among women.

Dr. Elena Martinez, lead researcher of the study, emphasized the importance of these findings in the context of the global diabetes epidemic. "Our research highlights the promising link between avocado consumption and reduced diabetes risk, especially among women," stated Dr. Martinez. "These findings underscore the potential of dietary modifications, such as incorporating avocados, in diabetes prevention efforts."

While the study benefitted from a large, nationally representative

dataset and rigorous methodology, researchers acknowledge certain limitations. The reliance on self-reported avocado consumption may introduce measurement bias, and the cross-sectional design precludes establishing causation definitively. Thus, further longitudinal studies are warranted to unravel the long-term effects of avocado consumption on diabetes risk.

Nevertheless, the implications of this study are profound, offering valuable insights into personalized nutrition approaches for diabetes prevention and management. As the global prevalence of diabetes continues to soar, the role of dietary modifications in mitigating risk assumes paramount importance. Avocados, with their nutrient-rich profile and potential metabolic health benefits, emerge as a promising ally in the fight against diabetes.

The findings of this study not only underscore the significance of avocados in dietary interventions but also underscore the need for tailored recommendations based on individual characteristics.







# Candidiasis

## Understanding Symptoms, Causes and Treatment

By Nana Ama Oforiwaa Antwi

**C**andidiasis, commonly known as a yeast infection, is a fungal infection caused by *Candida* species, most often *Candida albicans*. While

*Candida* naturally inhabits various parts of the body, such as the mouth, throat, gut, and genital area, it can multiply excessively under certain conditions, leading to infection.

This opportunistic fungus can cause a range of symptoms depending on the site of infection. In oral candidiasis, also known as thrush, symptoms include white patches on the tongue, inner cheeks, gums, or throat, along with redness, soreness, and difficulty swallowing.

Genital candidiasis, or vaginal yeast infection, presents with itching, burning, redness, swelling, and abnormal vaginal discharge. Invasive candidiasis, a more severe form of the infection, can affect the bloodstream, leading to fever, chills, and potentially life-threatening complications.

Several factors can predispose individuals to candidiasis, including weakened immune systems, certain medications (such as antibiotics or corticosteroids), hormonal changes (such as pregnancy or oral contraceptive use), diabetes, and poor hygiene.

It's worth noting that while candidiasis is more commonly associated with women, men can also develop genital

candidiasis, known as penile yeast infection or balanitis, which presents with symptoms like those experienced by women.

Also, while candidiasis is not considered a sexually transmitted disease, one infected partner can affect the other through sexual intercourse. In addition, in men, those who are uncircumcised, have weak immune systems or practice poor hygiene, are the ones most likely to be infected with balanitis.

Treatment for candidiasis depends on the severity and location of the infection. Antifungal medications, such as fluconazole, clotrimazole, or nystatin, are commonly prescribed to eliminate the fungus. For mild cases of thrush or vaginal yeast infection, over-the-counter antifungal creams or suppositories may suffice.

In addition to medication, maintaining good hygiene practices, avoiding tight-fitting clothing, and practicing safe sex can help prevent recurrence of candidiasis.

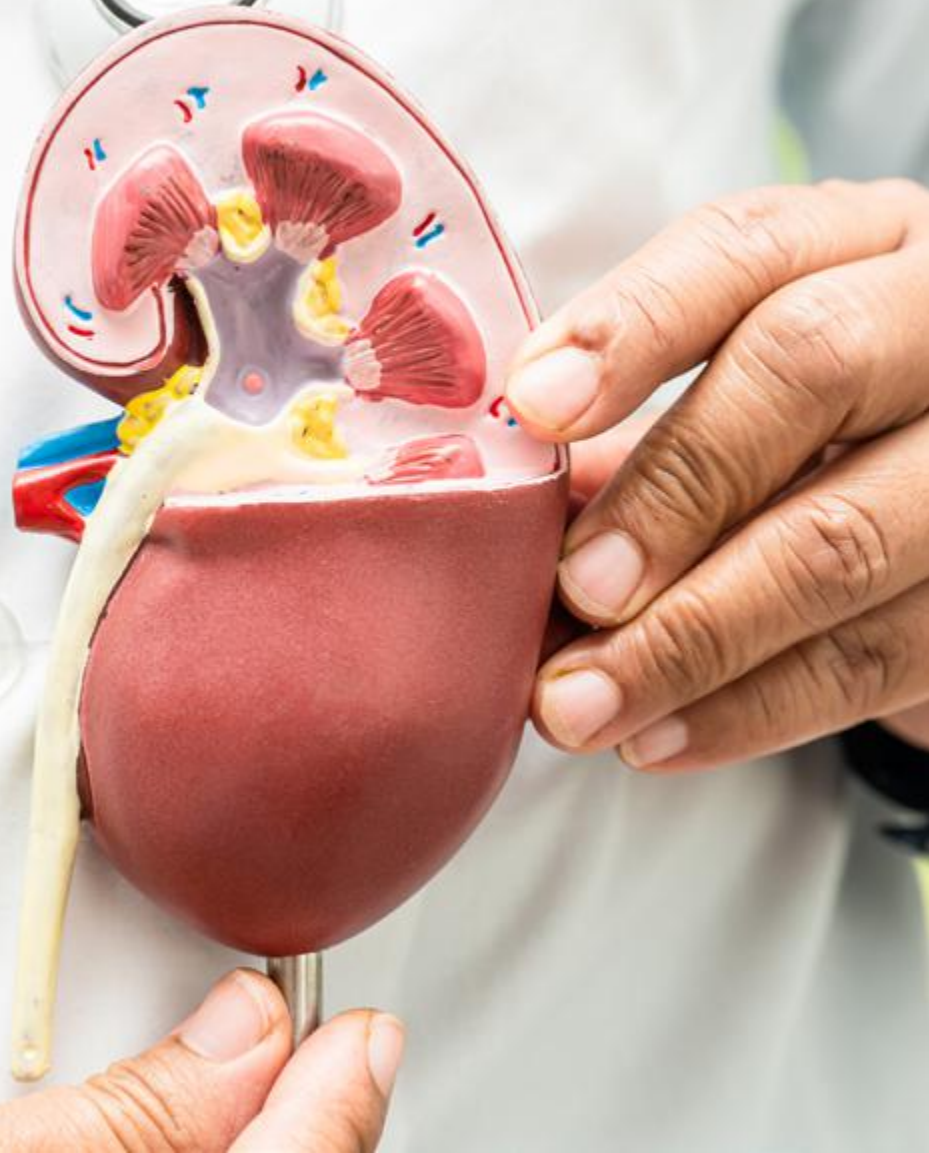
While candidiasis is usually not life-threatening, recurrent, or untreated infections can lead to complications and decreased quality of life.

Therefore, it's essential to seek medical attention if experiencing persistent symptoms suggestive of candidiasis. With proper diagnosis and treatment, candidiasis can typically be managed effectively, allowing individuals to resume their daily activities comfortably.



# Tips for Maintaining a Healthy Liver

The liver, one of the body's most vital organs, plays a crucial role in various metabolic processes, including detoxification, digestion, and nutrient storage. Yet, amidst the hustle and bustle of modern life, it's easy to overlook the importance of liver health until problems arise.



By Nana Ama Oforiwaa Antwi

Fortunately, with a few simple lifestyle adjustments and mindful habits, you can keep your liver in optimal condition and safeguard your overall well-being.

**1. Maintain a Healthy Weight:** Obesity and excessive weight gain can strain the liver, leading to conditions such as fatty liver disease and non-alcoholic steatohepatitis (NASH). Focus on maintaining a balanced diet rich in fruits, vegetables, lean proteins, and whole grains. Regular exercise not only helps control weight but also promotes liver health by reducing inflammation and improving insulin sensitivity.

**2. Limit Alcohol Consumption:** Excessive alcohol consumption is a leading cause of liver damage, ranging from fatty liver disease to cirrhosis and liver cancer. Practice moderation by

adhering to recommended limits: up to one drink per day for women and up to two drinks per day for men. If you have a history of alcohol abuse or liver disease, it's best to avoid alcohol altogether.

**3. Watch Your Medications:** Certain medications, including over-the-counter pain relievers like acetaminophen (Tylenol) and prescription drugs, can harm the liver if taken in high doses or over long periods. Always follow your healthcare provider's instructions when taking medications, and never exceed the recommended dosage. Be particularly cautious if you have liver disease or a history of liver problems.

**4. Stay Hydrated:** Adequate hydration is essential for liver health, as it helps flush toxins from the body and supports optimal liver function. Aim to drink plenty of water throughout the day,

and minimize consumption of sugary beverages and excessive caffeine, which can strain the liver.

**5. Embrace a Liver-Friendly Diet:** Certain foods are known to promote liver health and protect against liver damage. Incorporate these into your diet:

**Fruits and vegetables:** Rich in antioxidants and fiber, fruits and vegetables help reduce inflammation and support liver detoxification.

**Healthy fats:** Include sources of healthy fats such as avocados, nuts, seeds, and fatty fish like salmon, which provide essential fatty acids and support liver function.

**Whole grains:** Opt for whole grains like brown rice, quinoa, and whole wheat bread, which are rich in fiber and nutrients beneficial for liver health.

Limit processed foods, saturated fats, and sugary snacks, which can



contribute to liver inflammation and damage.

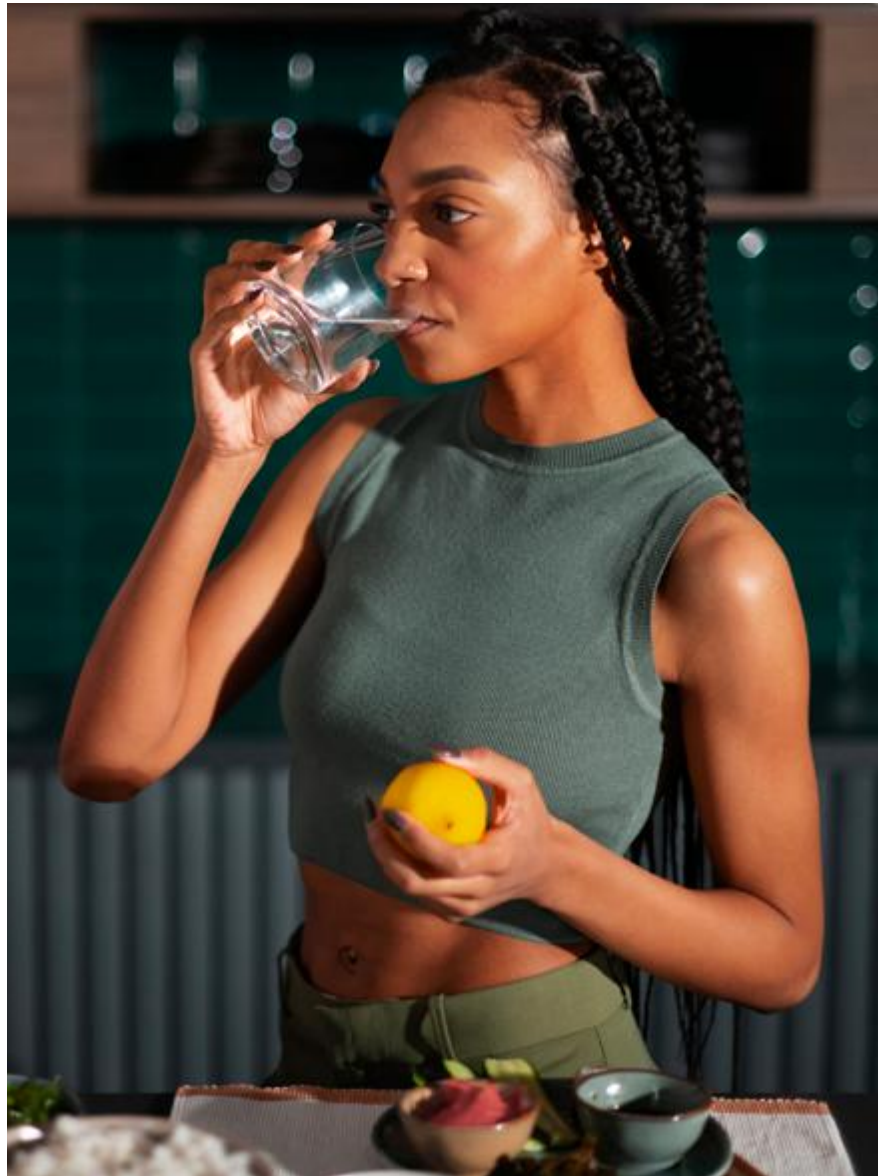
**6. Practice Safe Sex and Avoid Sharing Needles:** Hepatitis B and C are viral infections that can cause liver inflammation and, if left untreated, lead to serious liver damage. Practice safe sex by using condoms and avoiding risky behaviors that could expose you to bloodborne pathogens. If you're at increased risk of hepatitis, consider getting vaccinated or screened for these viruses.

**7. Get Regular Exercise:** Physical activity not only helps maintain a healthy weight but also improves liver function by reducing inflammation and enhancing insulin sensitivity. Aim for at least 30 minutes of moderate-intensity exercise most days of the week, incorporating activities you enjoy, such as walking, swimming, or cycling.

**8. Prioritize Sleep:** Quality sleep is essential for overall health, including liver function. Aim for 7-8 hours of sleep per night, and establish a regular sleep schedule to optimize your body's natural rhythms. Poor sleep can disrupt metabolic processes, leading to insulin resistance and fatty liver disease.

**9. Minimize Exposure to Toxins:** Limit exposure to environmental toxins and chemicals that can harm the liver, such as pesticides, heavy metals, and industrial chemicals. Whenever possible, choose organic produce, use natural cleaning products, and avoid smoking and secondhand smoke.

**10. Stay Informed and Get Regular Check-Ups:** Stay informed about liver health and seek medical advice



if you experience symptoms such as persistent fatigue, abdominal pain, jaundice, or unexplained weight loss. Schedule regular check-ups with your healthcare provider, who can assess your liver function and recommend appropriate screenings based on your risk factors.

By incorporating these simple yet effective strategies into your daily routine, you can take proactive steps to nurture your liver and safeguard your overall health and well-being. Remember, a healthy liver is essential for a vibrant, fulfilling life, so prioritize its care and reap the rewards of optimal health and vitality.



 Health Myth Buster

# Exposing the Fallacy of Eating After 7 PM Leads to Weight Gain

By Mavis Essaba Mensah

A common misconception perpetuated in the realm of dieting is the belief that consuming food after 7 PM inevitably leads to weight gain. This myth has been ingrained in popular culture, with many individuals adhering to strict rules about when they can eat in an effort to control their weight. However, the truth behind this notion may surprise you.

The idea that eating after a certain time of day directly contributes to weight gain lacks scientific validity. Weight management is primarily influenced by the total number of calories consumed versus calories expended over the course of the day, rather than the timing of meals. While late-night snacking may pose challenges for some individuals, particularly if it involves high-calorie, unhealthy foods, it is not inherently responsible for weight gain.

Research examining the impact of meal timing on weight management has yielded mixed results. Some studies suggest that late-night eating may be associated with increased calorie intake and poorer dietary choices, while others find no significant correlation between meal timing and weight gain. Ultimately, individual factors such as overall diet quality, portion sizes, and physical activity levels play a more significant role in determining weight outcomes.

Furthermore, rigid dietary rules regarding meal timing can lead to feelings of deprivation and anxiety around food, potentially contributing to disordered eating patterns. It's essential to listen to your body's hunger and fullness cues, fueling yourself with balanced meals and snacks throughout the day as needed, regardless of the time on the clock.

Rather than fixating on arbitrary rules about when to eat, focus on cultivating a healthy relationship with food based on balance, moderation, and mindful eating practices. By prioritizing nutritious, whole foods, and adopting sustainable lifestyle habits, you can support your overall health and well-being without falling prey to the myth of the clock dictating your dietary choices.





# Canada Pledges Nearly \$4 Billion to Enhance Healthcare in Quebec

By Prince Opoku Dogbey

In a significant move to address the healthcare challenges facing Quebec, the Canadian government has pledged over \$3.7 billion in federal funding through two bilateral agreements aimed at bolstering the province's healthcare system.

**T**hese agreements mark the initial investment as part of Canada's commitment to allocate \$6.7 billion to Quebec over the next decade.

The first agreement, totaling \$2.5 billion, is dedicated to supporting Quebec's 2023-2027 strategic plan, spearheaded by the Department of Health and Social Services. This funding will facilitate initiatives aimed at enhancing healthcare access and optimizing communication through digital transformation. Additionally, \$1.2 billion has been allocated to Quebec's five-year action plan, designed to provide dignified aging options for seniors through home care or long-term care facilities.

Mark Holland, Canada's Minister of Health, underscored the importance of collaboration between federal and provincial governments in ensuring access to healthcare for all Quebecers. He emphasized that these investments

would cater to Quebec's specific needs, enabling improvements in healthcare access and services for seniors.

The agreements were announced online on March 27, heralding a new chapter in Quebec's healthcare landscape. Kathleen Ross, MD, President of the Canadian Medical Association, lauded the agreements as a promising step forward but emphasized the need for transparent and measurable goals to ensure effective utilization of funds.

Under Quebec's strategic plan, 25 indicators and targets have been identified to drive continuous improvement in the healthcare system. Initiatives include expanding access to family healthcare, enhancing care for patients with chronic diseases, and addressing surgical and diagnostic backlogs.

However, challenges persist, particularly in primary healthcare. Quebec faces a shortage of general practitioners,

contributing to long wait times and physician burnout. Efforts to establish primary care "homes" for patients have shown promise but require further collaboration between the government and healthcare providers.

Federal funding will also support mental health and social services, with a focus on community organizations and initiatives to address homelessness and addiction. Additionally, investments in digital infrastructure aim to streamline patient-provider interactions and improve data sharing across the healthcare network.

As Quebec embarks on this transformative journey to strengthen its healthcare system, close collaboration between government entities and healthcare stakeholders will be crucial to ensuring the effective implementation of these initiatives and the delivery of high-quality care to all residents of the province.



# Hydration

A best way to keep the skin health

By Chance Iradununka

**The skin is one the body's largest organs, and it functions as a barrier to protect you from an external harm. This barrier has many different layers of skin cells, which are built together by a substance called lipids. The roles of these lipids are to keep moisturizing and preventing environmental contaminants and toxins from penetrating the skin.**

**W**hen the skin is well hydrated, it becomes soft looks plump. Whiles when it is not hydrated, it appears dry, flaky, or wrinkled. Moreover, to being uncomfortable, dry skin is also more susceptible to inflammation and infection.

Dehydration can also make existing skin conditions worse. For instance, if a person has eczema, dehydration can trigger a flare-up. If he has acne, dehydration can make his skin oilier and multiply the number of breakouts he will experience.

It's important to note that while drinking plenty of fluids is essential for maintaining hydration, what to eat is also vital which is also one of the process of skincare.

Foods in higher water content, such as fruits and vegetables, can contribute keeping the skin hydrated from the inside out. Eating a balanced diet with enough of fresh products is one of the best things one can do for an overall health.

The benefits of hydration are second-to-none a skin. Here are some of the most prominent benefits:

Hydration can help improve skin elasticity, which can lower the appearance of wrinkles and fine lines. Dehydrated skin is more prone to sunburn and other forms of UV damages. Hydration can provide protection to skin from the sun's harmful rays.

Hydration helps keep the skin cells healthy and promote a youthful complexion.

There are several ways that hydration can improve your skin quality. First, it helps to keep your skin's lipid barrier functioning properly, which prevents moisture loss and keeps your skin looking healthy.

Second, dehydration can cause the production of excess oils, which can lead to acne breakouts. Third, dehydration can also make your skin more sensitive to sunlight and increase the risk of sunburn.

Fourth, drinking plenty of fluids throughout the day helps flush toxins from the body and reduces inflammation.

Finally, staying hydrated boosts the overall health and well-being, which has a positive effect on the skin as well.







# Tuberculosis (TB)

By Chance Iradununka

**T**uberculosis (TB) persists as a global health challenge, especially in low- and middle-income countries. Despite historical advancements, TB remains one of the top causes of death worldwide, claiming 1.5 million lives in 2020 alone. Tuberculosis (TB) is an infectious disease that most often affects the lungs. TB is caused by a type of bacteria called *Mycobacterium tuberculosis*. It spreads through the air when infected people cough, sneeze or spit.

TB primarily affects the lungs, causing symptoms such as a persistent cough, chest pain, and weight loss. However, it can also target other parts of the body, presenting with a range of symptoms depending on the affected area.

Diagnosis involves imaging tests and microbiological examinations, with treatment requiring a multi-drug regimen over several months.

Prevention strategies include vaccination with the BCG vaccine, infection control measures like proper ventilation, and addressing social determinants such as poverty and access to healthcare. Treating latent TB infection is also crucial in preventing its progression to active disease.

The rise of drug-resistant TB strains, such as multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB), poses significant challenges to effective treatment. Strict adherence to treatment protocols and the development of new drugs are essential in combating these resistant forms.

The WHO's End TB Strategy aims to reduce TB deaths by 95% and new cases by 90% by 2035, providing a framework for global action. Advancements in research and a focus on equitable healthcare access are critical components of this strategy.

TB's enduring impact highlights the ongoing need for comprehensive approaches to public health. By addressing social disparities, investing in healthcare infrastructure, and advancing research, we can move closer to a world where TB no longer poses a significant threat. It is through sustained efforts and global collaboration that we can envision a future free from the burden of tuberculosis.

*“ TB primarily affects the lungs, causing symptoms such as a persistent cough, chest pain, and weight loss*

# Understanding the mechanics of defibrillators in healthcare

By Pavel Chamabe

In the realm of medical emergencies, defibrillators stand as critical lifesaving devices. But how exactly do they work, and what role do they play in restoring normal heart rhythms? Let's delve into the mechanics of these indispensable tools.



**D**efibrillators function on the principle of delivering a controlled electric shock to the heart, aiming to reset its rhythm. Irregular heartbeats, such as ventricular fibrillation or ventricular tachycardia, can lead to cardiac arrest, wherein the heart's pumping action becomes chaotic and ineffective. This is where a defibrillator steps in.

There are primarily two types of defibrillators: external and internal. External defibrillators, commonly found in public spaces and hospitals, come in automated external defibrillators (AEDs) and manual variants.

AEDs are user-friendly devices designed for bystanders to administer in emergencies, while manual defibrillators are typically used by trained medical personnel. Internal defibrillators, such as implantable cardioverter-defibrillators (ICDs), are surgically implanted devices used for long-term management of cardiac arrhythmias.

The process of defibrillation begins with the placement of electrode pads on the patient's chest. These pads deliver the electric shock to the heart. When activated, the defibrillator sends a controlled electric current through the heart muscle, momentarily stopping all electrical activity. This brief pause allows the heart's natural pacemaker, the sinoatrial node, to regain control and reestablish a normal rhythm.

Timing is crucial in defibrillation. The sooner a defibrillator is used after the onset of cardiac arrest, the higher the chance of survival. Automated external defibrillators are designed to guide users through the process with clear audio and visual instructions, enabling even those without medical training to administer lifesaving aid.

In essence, defibrillators are indispensable tools in the medical arsenal, offering a lifeline in moments of cardiac crisis. Their ability to swiftly restore normal heart rhythms underscores their significance in healthcare settings and underscores the importance of widespread accessibility and awareness.



# Avocado toast

By Pavel Chamabe

**A** vocado toast has surged in popularity in recent years, becoming a staple on breakfast menus and home kitchens alike. Its simplicity belies its versatility and nutritional benefits. Whether you're looking for a quick, satisfying breakfast or a wholesome snack, avocado toast fits the bill.

## Health Benefits of Avocado Toast

Avocado, the star ingredient of this dish, is a nutritional powerhouse packed with essential vitamins, minerals, and healthy fats. Here are some of the health benefits it offers:

- 1. Heart-Healthy Fats:** Avocados are rich in monounsaturated fats, particularly oleic acid, which is beneficial for heart health. These fats help lower LDL (bad) cholesterol levels while increasing HDL (good) cholesterol levels, reducing the risk of heart disease.
- 2. Nutrient-Rich:** Avocados are loaded with vitamins and minerals, including potassium, vitamin K, vitamin E, and folate. Potassium helps regulate blood pressure, while vitamin K is essential for bone health and blood clotting. Vitamin E acts as an antioxidant, protecting cells from damage caused by free radicals.
- 3. Fiber:** Avocados are an excellent source of dietary fiber, with one medium avocado containing approximately 13 grams. Fiber aids digestion, promotes satiety, and helps regulate blood sugar levels, making avocado toast a satisfying and filling option.

**4. Weight Management:** Despite their high-fat content, avocados may aid in weight management when consumed as part of a balanced diet. The combination of healthy fats, fiber, and low sugar content helps keep you feeling full and satisfied, reducing the likelihood of overeating.

## RECIPE

### Ingredients

- 1 ripe avocado
- 2 slices of bread
- 1 tablespoon of lemon juice
- Salt
- Optional toppings: sliced tomatoes, eggs, microgreens, pepper

### Instructions:

1. Start by toasting the slices of bread to your desired level of crispiness.
2. While the bread is toasting, cut the avocado in half, remove the pit, and scoop the flesh into a small bowl.
3. Mash the avocado with a fork until smooth, then stir in the lemon juice, salt, and pepper.
4. Once the bread is toasted, spread the mashed avocado evenly onto each slice.
5. Top with your favorite optional toppings

**Serve immediately and enjoy your delicious and nutritious avocado toast!**







# Nourish Your Body

## The Power of Eating Well

By Mavis Essaba Mensah

In the fast-paced modern world, amidst the hustle and bustle of daily life, the importance of nourishing our bodies with wholesome foods cannot be overstated. Eating well isn't just about filling our stomachs; it's about fueling our bodies with the nutrients they need to thrive. Here's why prioritizing a balanced diet is essential for optimal health and well-being.

**Nutrient-Rich Foods:** A well-rounded diet includes a variety of nutrient-rich foods such as fruits, vegetables, whole grains, lean proteins, and healthy fats. These foods provide essential vitamins, minerals, antioxidants, and phytochemicals that support various bodily functions, from boosting immunity to promoting heart health and supporting brain function.

**Energy and Vitality:** Just like a car needs fuel to run efficiently, our bodies require the right balance of nutrients to function optimally. Eating a balanced

diet ensures that we have the energy and vitality to tackle our daily tasks, whether it's powering through a workout or staying focused at work.

**Weight Management:** Eating well plays a crucial role in maintaining a healthy weight. By choosing nutrient-dense foods and practicing portion control, we can prevent excess weight gain and reduce the risk of obesity-related health conditions such as heart disease, diabetes, and certain cancers.

**Gut Health:** A healthy gut is essential for overall well-being, as it plays a key role in digestion, nutrient absorption, and immune function. Fiber-rich foods like fruits, vegetables, and whole grains, along with probiotic-rich foods like yogurt and kefir, help maintain a healthy balance of gut bacteria and support digestive health.

**Mental Well-Being:** The foods we eat also impact our mood and mental well-being. Research suggests that

a diet rich in fruits, vegetables, whole grains, and omega-3 fatty acids may help reduce the risk of depression and anxiety while promoting cognitive function and emotional resilience.

**Longevity:** Studies have shown that following a healthy diet is associated with a lower risk of chronic diseases and may contribute to a longer, healthier life. By nourishing our bodies with nutrient-rich foods, we can help prevent age-related decline and enjoy a higher quality of life as we age.

In conclusion, eating well isn't just a matter of following the latest diet trends; it's about making informed choices that support our overall health and well-being. By prioritizing a balanced diet rich in whole foods, we can nourish our bodies, boost our energy levels, support our mental health, and lay the foundation for a long and healthy life. So, let's make every bite count and savor the benefits of eating well every day.



# 4 Nutrient-Rich Staples

to Boost Health

By Prince Opoku Dogbey

In the journey towards optimal health and vitality, nutrition plays a pivotal role, and for men, incorporating specific foods into their diet can provide a powerful boost to overall well-being. From supporting heart health to enhancing muscle strength and promoting longevity, here are four nutrient-rich foods that every man should consider adding to his plate.

## 1. Fatty Fish

Rich in omega-3 fatty acids, fatty fish such as salmon, mackerel, and trout are renowned for their myriad health benefits. Omega-3s have been shown to reduce inflammation, lower blood pressure, and improve heart health, making them essential for men looking to protect against cardiovascular disease. Additionally, these fatty acids support brain function and may even help alleviate symptoms of depression and anxiety, promoting mental well-being.

## 2. Lean Protein

Protein is the building block of muscle tissue, making it crucial for men looking to maintain or increase muscle mass. Opting for lean sources of protein such as chicken, turkey, lean cuts of beef, tofu, and legumes provides the necessary amino acids for muscle repair and growth. Protein-rich foods

also help promote satiety, aiding in weight management and preventing overeating.

## 3. Colorful Vegetables

Colorful vegetables like spinach, kale, bell peppers, carrots, and tomatoes are packed with vitamins, minerals, and antioxidants that support overall health. These nutrient powerhouses help bolster the immune system, protect against chronic diseases such as cancer and diabetes, and promote healthy aging. Aim to include a variety of colorful vegetables in your meals to reap their diverse array of health benefits.

## 4. Whole Grains

Whole grains such as oats, quinoa, brown rice, and whole wheat are rich in fiber, vitamins, and minerals, making them an essential component of a healthy diet for men. Fiber aids

in digestion, regulates blood sugar levels, and promotes heart health by lowering cholesterol levels. Additionally, the complex carbohydrates found in whole grains provide a steady source of energy, supporting sustained endurance and physical performance.

Incorporating these nutrient-rich foods into your daily diet can help men optimize their health and well-being, from bolstering heart health and muscle strength to supporting mental clarity and longevity. By prioritizing a balanced diet rich in these power foods, men can nourish their bodies, fuel their active lifestyles, and thrive at every stage of life. So, load up your plate with these nutritional powerhouses and enjoy the benefits of a vibrant and healthy life.



# Have you heard of Cholera?

By Prince Opoku Dogbey

**C**holera, a word that evokes images of historical epidemics and global health crises, remains a significant threat to public health in many parts of the world.

While advancements in sanitation and healthcare have reduced its incidence in developed countries, cholera continues to claim thousands of lives each year in regions plagued by poverty, inadequate sanitation, and limited access to clean water. Understanding the causes, symptoms, and prevention of cholera is crucial in combating this deadly disease and safeguarding communities worldwide.

## What is Cholera?

Cholera is an acute diarrheal illness caused by the bacterium *Vibrio cholerae*. It spreads primarily through contaminated water and food, particularly in areas with poor sanitation and hygiene practices. The bacterium produces a toxin that triggers severe diarrhea and dehydration, leading to rapid fluid loss and potentially fatal consequences if left untreated.

## Symptoms and Complications

The hallmark symptom of cholera is profuse watery diarrhea, often described as "rice water" due to its appearance. Other symptoms may include vomiting, nausea, abdominal cramps, and dehydration. In severe cases, cholera

can lead to electrolyte imbalances, kidney failure, and circulatory collapse, resulting in shock and death within hours if prompt treatment is not administered.

## Prevention and Control

Preventing cholera outbreaks requires a multifaceted approach that addresses both individual and community-level factors. Access to safe drinking water, improved sanitation facilities, and proper hygiene practices, such as handwashing with soap, are critical in reducing the risk of cholera transmission. Vaccination campaigns can also play a vital role in high-risk areas, offering additional protection against the disease.

## Global Impact

Cholera disproportionately affects vulnerable populations living in impoverished and conflict-affected regions, where access to clean water and healthcare services is limited. According to the World Health Organization (WHO), an estimated 1.3 to 4.0 million cases of cholera occur annually, resulting in 21,000 to 143,000 deaths worldwide. The true burden of cholera is likely underestimated due to underreporting and challenges in surveillance systems.

## Response and Preparedness

Efforts to control cholera outbreaks require coordinated action from governments, international







organizations, and local communities. Rapid detection and response, including the provision of oral rehydration therapy and antibiotics, are essential in containing the spread of the disease and saving lives. Strengthening health systems and infrastructure is also crucial in building resilience against future outbreaks.

In conclusion, cholera remains a persistent threat to global health, particularly in regions struggling with poverty and inadequate sanitation. While progress has been made in reducing its impact, much work remains to be done to eliminate cholera and ensure access to clean water and sanitation for all. By raising awareness, mobilizing resources, and implementing effective prevention and control measures, we can turn the tide against cholera and protect the health and well-being of communities worldwide.



# Eating Fruits & Vegetables in Proportion

By Nana Ama Oforiwa Antwi

**T**he importance of consuming fruits and vegetables cannot be overstated. These nutrient-rich foods are packed with vitamins, minerals, fiber, and antioxidants, offering a multitude of health benefits. However, achieving optimal health requires more than simply adding fruits and vegetables to your diet—it's about striking the right balance and consuming them in their proper proportions.

## Why Proportion Matters

Fruits and vegetables are integral components of a balanced diet, but consuming them in excess or insufficient amounts can impact overall health. While fruits provide essential vitamins, natural sugars, and antioxidants, overconsumption can lead to excessive calorie intake and blood sugar spikes. Similarly, vegetables offer vital nutrients and fiber, but neglecting them in favor of fruits or other food groups can result in nutrient deficiencies and compromised health.

## Finding the Right Balance

The key to reaping the full benefits of fruits and vegetables lies in moderation and variety. Aim to fill half your plate with colorful fruits and vegetables at each meal, incorporating a diverse range of options to maximize nutrient intake. Choose whole fruits over fruit juices or processed snacks, and opt for a variety of vegetables—leafy greens, cruciferous vegetables, root vegetables, and legumes—to ensure a well-rounded diet.

## Portion Control Tips

When it comes to portion sizes, it's essential to be mindful of serving sizes and avoid overindulgence. A general guideline is to aim for about 1-2 cups of fruits and 2-3 cups of vegetables per day, depending on individual energy needs and activity levels. Incorporating fruits and vegetables into snacks and meals throughout the day can help distribute intake more evenly and prevent excessive consumption at any one time.





## Health Benefits of Balance

Consuming fruits and vegetables in their right proportions offers a plethora of health benefits, including reduced risk of chronic diseases such as heart disease, diabetes, and certain cancers. Their high fiber content supports digestive health and promotes satiety, aiding in weight management and preventing overeating. Additionally, the antioxidants found in fruits and vegetables help protect against oxidative stress and inflammation, contributing to overall well-being.

In conclusion, achieving optimal health requires balance, and incorporating fruits and vegetables into your diet in their right proportions is essential for overall well-being. By embracing variety, moderation, and portion control, you can harness the power of these nutrient-rich foods to support a vibrant and healthy lifestyle. So, load up your plate with nature's bounty and savor the benefits of a balanced diet rich in fruits and vegetables.







# Should I Take Self-Medication?

By Nana Ama Oforiwaa Antwi

Welcome to "Ask the Expert," where we address your pressing health questions with evidence-based insights and expert advice. Today, we tackle a common query: Should I take self-medication?

Self-medication, the practice of treating oneself with over-the-counter medications or home remedies without consulting a healthcare professional, is a topic that warrants careful consideration. While it may seem convenient and cost-effective, self-medication carries inherent risks and potential consequences that should not be overlooked.

## Understanding the Risks

One of the primary risks associated with self-medication is misdiagnosis. Without proper medical evaluation and diagnosis by a qualified healthcare provider, individuals may incorrectly identify their symptoms or underlying health conditions, leading to inappropriate treatment and potential complications. Moreover, self-medication may mask the symptoms of an underlying medical problem, delaying proper diagnosis and treatment.

## Potential for Harm

Another concern is the potential for adverse drug reactions and interactions. Over-the-counter medications, herbal remedies, and supplements can interact with prescription medications or exacerbate existing health conditions, posing serious risks to one's health. Additionally, improper dosage or misuse of medications can lead to toxicity, overdose, or other adverse effects.

## Role of the Healthcare Provider

Consulting a healthcare professional is paramount in making informed decisions about medication use. Physicians, pharmacists, and other healthcare providers possess the knowledge and expertise to assess individual health needs, evaluate symptoms, and recommend appropriate treatment options tailored to each patient's unique circumstances. Seeking professional guidance ensures safe and effective management of health concerns while minimizing the risk of complications.

## Empowering Patients

While self-medication should be approached with caution, patients can actively participate in their healthcare by advocating for themselves and seeking reliable information from credible sources. Engaging in open and honest communication with healthcare providers, asking questions, and expressing concerns can facilitate collaborative decision-making and promote informed choices about medication use.

## Final Thoughts

In conclusion, the decision to take self-medication should not be taken lightly. While it may offer short-term relief for minor ailments, it is essential to recognize the potential risks and limitations associated with self-diagnosis and treatment. Consulting a healthcare professional remains the gold standard for safe and effective management of health concerns. Remember, when in doubt, always seek the guidance of an expert.



# Medical Jargons You Need to Know

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**ARRHYTHMIA:** Arrhythmia refers to irregular heart rhythms, which can manifest as a heartbeat that is too fast, too slow, or erratic, potentially leading to palpitations, dizziness, or fainting.

**HYPERTENSION:** Hypertension, or high blood pressure, is a chronic medical condition characterized by elevated blood pressure levels, which can increase the risk of heart disease, stroke, and other cardiovascular complications if left untreated.

**HYPERGLYCEMIA:** Hyperglycemia is a condition marked by high blood sugar levels, commonly associated with diabetes mellitus. Untreated hyperglycemia can lead to diabetic ketoacidosis or other serious complications.

**DYSURIA:** Dysuria is the medical term for painful or difficult urination, often indicative of underlying urinary tract infections, bladder inflammation, or other urinary system disorders.

**APHASIA:** Aphasia is a language disorder that affects a person's ability to communicate effectively, typically caused by brain injury or neurological conditions such as stroke.

**HEMOPTYSIS:** Hemoptysis is the coughing up of blood or bloody sputum from the respiratory tract, which can indicate serious lung conditions such as pneumonia, tuberculosis, or lung cancer.

**SYNCOPE:** Syncope, commonly known as fainting or passing out, is a temporary loss of consciousness caused by insufficient blood flow to the brain. It can be triggered by various factors, including dehydration, low blood sugar, or heart rhythm abnormalities.

**NEURALGIA:** Neuralgia is a sharp, stabbing, or burning pain caused by irritation or damage to a nerve, often occurring along the path of the affected nerve.

**ANEMIA:** Anemia is a condition characterized by a deficiency of red blood cells or hemoglobin in the blood, resulting in symptoms such as fatigue, weakness, and shortness of breath.

**POLYURIA:** Polyuria refers to excessive urination, typically defined as producing more than 2.5 liters of urine per day. It can be a symptom of various conditions, including diabetes insipidus, diabetes mellitus, or kidney disease.

*Empowering oneself with knowledge of these medical terms can facilitate clearer communication with healthcare professionals and promote a better understanding of personal health concerns and conditions.*



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