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Take Control of Your Heart and Brain Health! Join the Heart and Stroke Foundation South Africa on World Hypertension Day 2025 as we raise awareness about the dangers of high blood pressure

This World Hypertension Day, 17 May 2025, the Heart and Stroke Foundation South Africa is alerting the public to the dangers of raised blood pressure, or hypertension. This year's theme, **"Your Brain and Heart Cannot Take the Pressure!"** highlights the importance of maintaining a stable blood pressure for good overall health, and specifically for heart and brain health. Prof Pamela Naidoo, our CEO, states that the Foundation's theme was carefully thought through to align with World Hypertension Day on May 17th 2025. Global organizations also draw inspiration from the global public health initiative by the World Hypertension League's on-going theme "Measure Your Blood Pressure Accurately, Control It, Live Longer" which calls to attention the importance of knowing your blood pressure measurements.

Hypertension or high blood pressure is identified as a condition in which the blood pressure measure is over 140/90 mmhg on multiple occasions. Blood pressure is the pressure that is exerted by the blood on the interior arterial walls. It is measured and recorded as a systolic pressure (the top number) over the diastolic pressure (the bottom number). Systolic is the pressure exerted on the arterial walls when the heart contracts or beats and the diastolic pressure is the pressure exerted between heart beats or when the heart muscles relax. When the blood pressure is elevated, the increased pressure may lead to significant damage or strain, not only on the arterial walls but also organs like the kidneys, heart and brain. The higher and longer the pressure is elevated the more

damage is caused. Possible damage includes, but are not limited to, arteriosclerosis identified as hardening and thickening of the arteries, and possibly aneurysms which is a bulge or weakening in a blood vessel as a result of elevated blood pressure. If an aneurysm ruptures, it can be life-threatening. Arteriosclerosis may remarkably cause reduced blood flow and paired with an elevated blood pressure may cause an increased workload on organs and blood vessels which may lead to heart failure (the strain causes the walls of the heart's pumping chamber to thicken), kidney damage (narrowed or weak blood vessels in kidneys), vision loss (poor blood circulation to the eyes), as well as cognitive issues and possibly dementia related to poor circulation to the brain. Your brain and heart literally cannot handle the increased pressure!

In South Africa (SA), high blood pressure is a significant health concern, affecting approximately 45% of men and 48% of women over the age of 15. Alarmingly, many individuals remain unaware of their condition, with only about 19% of men and 29% of women recognizing they have hypertension. This condition is linked to thousands of cases of heart disease, strokes, and kidney disease each year, with women being more affected than men in some areas. These numbers highlight the need for increased awareness, diagnosis, and management of high blood pressure to mitigate its impact on public health. The economic impact is substantial, with estimated annual healthcare costs of ZAR 10.1 billion and societal costs of ZAR 29.4 billion.

The cause for hypertension is multifactorial, and includes being influenced by behavioural choices such as unhealthy diets high in salt and fat, tobacco use, and excessive alcohol consumption, as well as genetic factors that can contribute to familial hypertension. Prof Naidoo states that it is important to be aware of inherited vulnerability and for example, familial hypertension occurs when individuals inherit a predisposition to develop high blood pressure from their biological parental line. Studies have consistently demonstrated that individuals with a family history of hypertension are more likely to develop the condition. Research highlights the significant role of genetics in hypertension. A study by Li et al., (2021) found that individuals with a family history of hypertension are four times more likely to develop high blood pressure compared to those without.

The increased risk of hypertension is attributed to a complex interplay between genetic and environmental factors. Research suggests that multiple genetic variants, which can affect blood vessel function, kidney function, and other physiological processes, interact with environmental factors such as diet, physical activity level, stress, and socioeconomic status to contribute to the development of high blood pressure. This intricate relationship between genetic predisposition and lifestyle influences makes it challenging to pinpoint a single cause, but understanding these interactions is crucial for developing effective prevention and treatment strategies. A recent South African study by Katsukunya et al., (2024) further explored the genetic aspect, finding that certain genes may influence an individual's response to antihypertensive medication, potentially making some people more resistant to treatment.

Familial hypertension poses a significant risk to heart and brain health, increasing the likelihood of coronary heart disease, stroke, and kidney failure. Recognising the genetic component of hypertension highlights the importance of family medical history in assessing individual risk. By knowing your family's health history, you can take proactive steps to manage your blood pressure and reduce your risk of developing hypertension-related complications, such as heart disease, stroke and circulatory conditions. This knowledge also empowers healthcare professionals to identify individuals at risk and develop targeted strategies for prevention and treatment. So, what can you do? Stay vigilant - don't let high blood pressure catch you off guard. It's often symptom-free, but regular checks and adherence to medication can be lifesaving.

Medication adherence is crucial in managing hypertension, yet it remains a significant challenge, particularly in low- to middle-income countries. Non-adherence to medications is a significant contributor to poorly controlled hypertension, increased risk of cardiovascular disease such as heart disease, stroke, kidney disease and higher healthcare costs. A recent study in Sub-Saharan Africa involving 34,102 individuals from 27 countries found that 43.5% of adults treated for hypertension were non-adherent to their medication. This translates to two out of every five adults struggling to stick to their treatment plans. The authors highlighted how some people find it hard to take their medication because they have other health issues, experience side effects, or have too

many pills to take. This is often worse for those with limited money or healthcare access (3).

The American Heart Association also highlights that 12% of patients with hypertension never fill their initial prescriptions, and non-persistence rates in the first year after starting treatment range from 30% to 80%. Factors that contribute to non-adherence include unemployment, poverty, low education, poor healthcare systems, and lack of social support. Social support, particularly from family and friends, positively impacts adherence. Emotional support from loved ones and healthcare professionals plays a vital role in educating and reminding patients to take their medications. Studies have shown that patients who adhere to their medication regimens have better blood pressure control and reduced risk of cardiovascular events.

Systemic and policy issues also significantly impact medication adherence among patients with hypertension. Lack of health insurance, inadequate healthcare services, and high medication costs can significantly affect medication adherence, particularly among vulnerable populations, including those from low-income and socio-economically disadvantaged areas. In SA, approximately 8.22 million individuals living with high blood pressure do not have private health insurance and they depend on public health services. Limited access to healthcare facilities, under-dispensing of prescriptions, and inadequate information from healthcare professionals exacerbate non-adherence. Addressing healthcare system barriers, such as inadequate services and staff quality, is crucial in managing hypertension and medication adherence.

The Foundation's dietitians, Ms Shonisani Nephalama and Ms Cari Erasmus remind us that adopting a healthy diet with low salt can significantly influence hypertension by reducing blood pressure, lowering cardiovascular risk, and improving blood vessel function. A diet rich in fruits, vegetables, whole grains, and low-fat dairy products, and limited in sodium, can help manage hypertension. The World Health Organization (WHO) and the American Heart Association recommends consuming less than 2,300 milligrams of sodium (5g of salt) per day, with an ideal limit of 1,500 milligrams per day for those with hypertension. By incorporating fresh produce, whole grains, lean protein sources, and

low-sodium options, individuals can help mitigate the risks associated with high blood pressure and promote overall heart, brain and circulatory health.

Prioritizing patient-centered care and engaging patients and their families, healthcare providers can promote effective adherence interventions and ultimately improve patient outcomes. This approach can lead to improved blood pressure control and reduced cardiovascular risk. Additionally, implementing universal healthcare coverage, improving healthcare professionals training, and increasing access to affordable medications can help. Addressing these systemic and policy-level issues, healthcare systems can improve medication adherence and reduce hypertension-related morbidity and mortality.

Interviews will be conducted with our CEO, Professor Pamela Naidoo, Health Promotions Team, and Dietitians. To co-ordinate and confirm interview dates you are welcome to contact Mr. Themba Mzondi, our PR and Communications Officer on 021 422 1586 / 078 113 5216 or email themba.mzondi@heartfoundation.co.za

About the Heart and Stroke Foundation SA

The Heart and Stroke Foundation South Africa (HSFSA) plays a leading role in the fight against preventable heart disease and stroke, with the aim of seeing fewer people in South Africa suffer premature deaths and disabilities. The HSFSA, established in 1980 is a non-governmental, non-profit organization which relies on external funding to sustain the work it carries out.

The HSFSA aims to reduce the cardiovascular disease (CVD) burden in South Africa and ultimately on the health care system of South Africa. Our mission is to empower people in South Africa to adopt healthy lifestyles, make healthy choices easier, seek appropriate care and encourage prevention.

For more information visit www.heartfoundation.co.za. You can also find us on www.facebook.com/HeartStrokeSA, www.twitter.com/SAHeartStroke and www.instagram.com/heartstrokesa

We urge the media to join the conversation on social media using:
#WorldHypertensionDay#KnowYourRisk#YourHeartCan’tTakeThePressure#YourBrainCan’tTakeThePressure#HeartHealth#BrainHealth.


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