StrokeIs It All in Your Head?

Amy Yin, M.D., and Stephan Esser, M.D.

top for a moment and gently place your fingers on the side of your neck. Do you feel that pulsation? It's your carotid artery, one of the main vessels that carry over 750ml of lifegiving blood to the brain every minute. Interrupt that flow even for a few seconds and catastrophe can occur. 280 In the U.S., this "catastrophe" Regular happens once every 40 LOW SOCIUM seconds and we call it a "stroke." Nearly 800,000 strokes occur each year in strokes America and 137,000 people die from their stroke, making it the nt of high blood pressure third leading cause of death just behind heart Derfon attacks and all cancers combined. That means that in the time it takes you to read this page two more people will have succumbed to Heart diseas a stroke. The real question is, what causes a stroke and what can YOU do to prevent one?

Article continues on next page.

Brain Attack

Simply put, a stroke is a brain attack. You are probably familiar with a heart attack; it is when blood flow to the heart is interrupted and heart tissue dies off. The same thing can occur in the brain causing a stroke. Blood enters the brain through two carotid arteries in the front of the neck and two vertebral arteries in the back of the neck. This dual circulation provides some protection against interruption of blood flow but is not full-proof, and the longer the brain is without adequate blood flow, the greater the risk of brain injury and permanent damage. So "time" as they say really is "tissue."

Neurons, Neurons Everywhere

With an estimated 100 billion nerve cells packed into a three-pound gelatinous shape, the brain is an amazing organ. Our very existence is contained in the brain. Our experience of yesterdays' lunch and our dreams of next years' vacation all exist there. Different regions of the brain control our ability to walk, talk, digest, sleep, feel emotions, have aspirations and on and on. The brain is the *central processor* of the body, receiving and delivering vast amounts of information in interconnected webs that modern science has yet to unravel.

Wet or Dry

Strokes come in two main types: hemorrhagic or ischemic. You can think of them as wet or dry. In a wet or hemorrhagic stroke a blood vessel in the brain bursts, resulting in a collection of blood outside the vessel wall. The blood irritates the brain tissue, may put pressure on the surrounding neurons, and if the size of the bleed is sufficient or in the right location, it can impair blood flow and thus starve brain tissue of oxygen and nutrition. This induces a stroke.

In a dry or ischemic stroke, something blocks normal blood flow through the vessel and insufficient oxygen and nutrition arrives to that area of the brain. In America today, over 85 percent of strokes are ischemic (dry) and only 15 percent are due to hemorrhages (wet).

Know Your Risk

What really matters is how YOU can prevent a stroke. To answer this question you have to know your risks. The risks for stroke can be categorized as modifiable and non-modifiable or what you can change and what you can't. The risks you can't modify include being older than 55, being male, or being of African-American descent. Of course, if someone in your family has had a stroke or you have had one before, this also increases your risk. It's good to know these simple facts, but we really want you to focus

on what you CAN do to prevent a stroke.

The risk factors you CAN control include being overweight, having high blood pressure, high cholesterol, diabetes or abnormal heart rhythms called atrial fibrillation. Other risks include the toxins and substances you are exposed to like nicotine from smoking and alcohol.

High Numbers

Your blood pressure reflects the pressure inside your blood vessels. The top number called the systolic pressure is when your heart is squeezing or pushing blood through your body and the bottom number, the diastolic pressure when your heart relaxes. Having pressures consistently above 140/90 increases the risk of a stroke by two to seven fold.

If you have high blood pressure then you have a few choices:

A: Do nothing and ignore it. Many of the 800,000 people who develop a stroke each year make that unwise choice. Don't follow their lead.

B: Make halfway choices. Of course, halfway makes you feel like you are doing something, when you really aren't and the risk reduction you get is minimal if at all. You deserve better.

C: Make intensive lifestyle changes. The most powerful evidence-based nutrition changes include those recommended by the likes of Drs. Esselstyn, Fuhrman, Ornish, Barnard, Kempner, etc. You may also wish to consider a doctor-supervised therapeutic fast to kick-start your program. For most people, blood pressure can be rapidly normalized during a fast, as shown by studies conducted at TrueNorth Health Center. Find an NHA-approved doctor who offers supervision and schedule a stay.

D: If you are unwilling to make these changes, or they are insufficient to control your pressures, then you should use appropriate medications guided by your physician.

Long story short is that doing "nothing" should not be an option for you. Pretending you don't have a problem will not make it go away.

Of course you won't know you have a problem unless you know your pressures. Find out what your average blood pressures are by tracking them at home or in a local store or fire department. If they are persistently above the 130-140/80-90 range when you are at rest, then it's time to make a plan. Re-check your pressures every few months or sooner and make sure you are really achieving the "ideal" levels.

Let us re-state, we are not saying that everyone needs medication. We are, however, saying that elevated blood pressure is a serious risk and if you can not or will not make intensive changes, or they are insufficient to control things, then medication should be used appropriately.

Mothers and Faces

Cholesterol levels are a second major predictor of stroke risk. Cholesterol comes from two sources: your body and the food you eat. It is an important molecule used in the production of cell membranes, hormones and various processes in the body, but in excess it can cause havoc. Very few of us have genetically high cholesterol levels, but we primarily develop high cholesterol levels from the foods we eat. If you really want to have a powerful impact on your cholesterol, you need only remember one phrase, "If it has a mother or a face," it has cholesterol. No mother or no face equals no cholesterol. So, eat more or eat exclusively plants and plant-based foods and be prepared to watch your cholesterol decline. Eat animal-based foods and expect your cholesterol to rise. There is no magic or mystery here. In studies, plant-based diets can make cholesterol drop 15-25 percent in 1-2 months. Persistently elevated cholesterol levels will contribute to the development of atherosclerotic plaques in the arteries. These reduce flexibility, obstruct blood flow and increase your risk of future strokes.

The Risk of Belly Fat

Two-thirds of Americans are overweight or obese. If you fall into this category you increase your risk of a "dry" stroke by nearly double. You also increase your risk for type 2 diabetes by up to 900 percent. Diabetes results in elevated blood sugars and creates a low-grade inflammatory state in the body. In turn, this inflammation damages tiny blood vessels and can result in kidney injury, blindness, and increased stroke risk.

It is essential you make achieving a healthy body weight a priority. Adopting the recommendations the NHA has been promoting for decades is precisely what you need to achieve this goal. So read the articles, buy some books, and make a sustainable lifestyle plan.

Up in Smoke

We know we are writing to an educated audience, so hopefully minimal comments need to be made on the dangers of cigarette smoking. Of all the human habits we have developed, inhaling mouthfuls of toxin-laden fumes is perhaps the most baffling and one of the most toxic. Smoke is a powerful oxidant, damaging blood vessel walls, increasing the risk of innumerable diseases including elevating stroke risk by double. Quite simply, don't do it and help anyone in your circle of influence to quit. Here are some frightening numbers you can share with them to give them further motivation. In one study of people who had a stroke, 49 percent of the strokes were due to smoking and 62-72 percent of the strokes were due to the combination of smoking and not exercising or having been obese.

In fact, 79 percent of the strokes that happened in this study could have been avoided if these people didn't smoke, exercised, and watched their weight.

The good news is that as soon as you quit smoking, your stroke risk begins to decline. In fact, your increased risk of stroke can return to normal by ten years after you quit smoking. So if you are planning to make changes in your life, make this one first. If you or someone you love is still struggling with a nicotine addiction, get help. This habit CAN be overcome!

Off Beat

Atrial fibrillation is the most common abnormal heart rhythm or arrythmia in those over the age of 60. The "atria" are the top two chambers in the heart and to "fibrillate" means to contract rapidly. When heart contractions are too rapid, the heart doesn't work effectively so blood pools in the heart and clots can form. As the heart returns to a "normal" rhythm, the clots can be spit out by the heart, travel upward to the brain and cause a stroke.

Atrial fibrillation is a very real risk for stroke. According to findings from one of the biggest heart studies in medicine, the Framingham Heart Study, it is estimated to increase the risk by up to five times. If you have abnormal heart rhythms or a diagnosis of atrial fibrillation, you should discuss the risks and benefits of treatment with a trusted doctor. Take the time to make an informed and educated decision with good guidance.

It Is NOT All in Your Head

Preventing a stroke is all about making rational, sustainable, and personal lifestyle choices. It's about getting back to the basics of a health-promoting life — eating clean plant foods, avoiding toxins, getting adequate exercise, and managing your stress and emotions. These are the simple but powerful choices that have the ability to alter your future health destiny. They sound so "basic" that it can be difficult to believe they really are so powerful, but mother nature and modern science confirm they are. Evaluate your stroke risk today and set some goals to lower your risk or the risk of someone you love. Today is the day, don't wait. You deserve your BEST health! Your brain will thank you!

Amy Yin, M.D., is a Clinical Fellow at Harvard Medical School in the department of Physical Medicine and Rehabilitation. Her areas of interest include medical and health education and health informatics as well as dance and sports medicine.

Stephan Esser, M.D., is a regular speaker and contributor to the NHA. He is a Clinical Fellow at Harvard Medical School and an Assistant in Clinical Development at Harvard's Institute of Lifestyle Medicine.