

While taking inventory of his gear, the hunter replays hunts from months before, making sure no equipment has been forgotten. The rifle has been sighted in, and the cartridges loaded with the correct ratio of gunpowder to bullet weight specifically balanced for his weapon of choice. For some hunters, a ruckus of eager deerhounds being loaded into a truck shatters the comforting quiet of the darkness. In other areas of North Carolina, the outing begins with only the rustle of gear being piled into a vehicle.

A quick glance at his watch assures a sharp departure. As the hunter drives, memories of hunts both sweet and sour accompany him. He hopes this day will be sweet indeed. After donning his gear, the hunter sets out, but the walk seems farther than he remembered, and, driven by anticipation, he hurries. Once on stand, the nausea he has felt subsides as his innards begin to settle.

After he turns off his guide light, darkness shrouds the forest once again. Silence shortly follows. As if it had rehearsed all year, the surrounding world gradually wakes in unison with the creeping sunrise. *Keep a sharp eye out!* he repeatedly reminds himself. It is easy to forget to look for deer when the birds and mist and creatures stirring about create distractions.

Each moment the sun slides higher, bringing warmth to the air. Daylight has hushed the critters, and the quiet soothes with a hypnotic effect. Then, "Snap!" In hopes of controlling his excitement, the hunter thinks to himself, *It's only a squirrel*. But a visceral thought intrudes: A squirrel isn't heavy enough to break a twig that size.

Only seconds after the crack of the limb, the familiar syncopated rhythm of four hooves starts and stops repeatedly, coming closer and closer. The hunter's internal alert sounds, his blood runs warm and all his senses are locked on. From a clearing steps a doe, then another doe and finally *him*, the buck the hunter was tracking last season.

Raise the weapon ... center the sight ... click off the safety ... explosion! Smoke wanes, and an image appears. The buck is down without motion.

ZEROING IN ON THE HEART

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The excitement elicits a tympanic response, and the hunter's heart rate zooms. The hunter admires his kill for several moments before beginning the chore of field dressing. Now, instead of dragging out 160 pounds of deer, he has a carcass weighing 125 pounds and only a quarter

mile to travel to his vehicle.

Although the hunter's heart slows, the exertion of field dressing never really allows it to recover. Nonetheless, the hunter commences the journey from the woods one step at a time, while the carcass leaves a trail that reveals the day's events.

Throughout the hunting season, many a hunter will find himself in a similar situation, with one major difference: Some hunters won't make it out of the woods, and others will find themselves en route to the hospital via an ambu-

lance. The culprit? A silent predator, otherwise known as a heart attack.

During the hunt, a hunter's focus is narrow; he thinks mostly of bagging a deer. Few ever wonder what happens to their hearts during a successful hunt. Thanks to research, we now know what does happen during a typical autumn day in the woods. Susan Haapaniemi, a researcher and registered clinical exercise physiologist at the William Beaumont Hospital in Detroit, conducted a study using 25 male volunteers from a local hunting club in Michigan. Each hunter was fitted with a device called a Holter monitor, which reads a person's heart activity, usually for a 24-hour period. In this case it was used to record heart activity during a hunt.

When the data were analyzed, they showed that just walking to the stand produced a vigorous response from the heart. In "Dying with Your Boots On," an article in *Field & Stream* magazine, author Jim Thornton revealed that heart rates averaged 94 percent of the maximum in 21 of 25 subjects just in their walk to the deer stand.



In order to understand the significance of these numbers, let's take a quick look at a military population. Occasionally in my work we take military personnel recovering from injuries on conditioning hikes. On these hikes—30 minutes at approximately 3 to 3½ mph while carrying a pack weighing 60 to 70 pounds—we monitor heart rates. Some subjects' heart rates reach only about 70 percent of the maximum.

Another factor to consider is the latest American Heart Association recommendations, which propose an exercise intensity of 50 to 75 percent of your maximum heart rate. A simple formula is used to determine what that number is. Subtract your age from 220 and then multiply the result by .50 and .75 to find the target heart rate for your exercise zone. An average heart rate percentage of 94 is dangerously high. However, it is worth mentioning that the article "Dying with Your Boots On" notes that study participants traversed terrain that was sometimes rough and hilly, and that temperatures were cold.

When deer approached, Thornton writes, the participants' heart rates averaged 114 percent of their maximum. This, too, is incredibly high, considering that the hunters were not moving much, if at all. The study documented one individual's heart rate rising from 78 to 168 beats per minute at the sight of a deer.

FULL-THROTTLE EXCITEMENT

Reflect on the moments before a deer is spotted. The hunter is typically sitting still, trying to be as quiet as possible. His heart rate is within a normal range, maybe somewhere between 70 and 80 beats per minute. A sudden increase in heart rate can be dangerous for a heart that hasn't been prepared ahead of time. In an exercise setting, the heart's rate increases gradually to allow the body to respond appropriately. In the case of the deer hunter, however, the change is immediate and thus potentially dangerous.

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After the deer has been shot, tracked and located, the carcass must be dragged to the vehicle. Pittsburgh cardiologist and big-game hunter Dean Wolz says this in the *Field & Stream* article: "I've done all types of manual labor in my life. I played football and lifted weights, but nothing has come close to dragging 100 to 200 pounds of dead weight on dry ground up a hill."

In another study, published by the Milwaukee Journal Sentinel, the University of Wisconsin-La Crosse recruited 16 students

aged 20 to 28 to drag a 125-pound deer carcass about a quarter of a mile. Researchers documented their heart rates jumping as high as 180 beats per minute, approximately 95 percent of their maximum. The spike in heart rate occurred after only about five minutes of dragging the deer carcass. Imagine the effects after an hour.

Carl Foster, professor of physiology in the Exercise and Sports Science Department at the University of Wisconsin-La Crosse, said in the article, "I've never done anything that intense in my life." Foster described himself as a "52-year-old who runs, cycles, skates and lifts weights." He compared dragging a deer to running a marathon without having trained for it.

"An ounce of prevention is worth a pound of cure" may be an understatement for people who have already experienced a heart attack. Too many times the wisdom of preventive measures rings true only after tragedy strikes. Physical training for deer season might make the difference between life and death for some hunters. The results of training are not evident overnight, just as the symptoms of atherosclerosis do not manifest themselves immediately. It develops over years and decades.



What is atherosclerosis? Imagine a drain in a bathtub or shower. After many uses, dirt and hair begin to clog the pipe, making the inside diameter smaller. Because of the decrease in pipe diameter, the water moves slower and slower, until one day it doesn't drain at all. When a person's arteries that supply oxygen to the heart become clogged, the result is a myocardial infarction — a heart attack. Some of the heart muscle can actually die, and the heart may even stop functioning.

What can you do to lower your chances of heart attack? First, know if you are at risk. According to the Centers for Disease Control, having high blood pressure or high cholesterol, smoking, or a history of previous heart attack, stroke or diabetes can increase a person's chances of suffering a heart attack. Consult your physician to see if you have any risk factors. Conditioning your body for the demands of deer hunting can also lower your risk. But be sure to consult your doctor prior to beginning any exercise regimen.

If your doctor gives you the thumbs up to begin exercising, start by choosing an appropriate goal. If you've never run 3 miles, don't choose that as your goal. Make the goal realistic. For example, try walking, even if only for a mile. As a hunter, you can use your walking as scouting sessions. Just watch out for chiggers and ticks. To become a more successful hunter, spend more time in the off-season not only improving your heart's fitness level but also scouting the areas where you will hunt on foot rather than by vehicle.

Once your original goal has been met consistently, you may want to progress, depending on the demands of your hunting situation. When you feel you have succeeded with your first goal, increase the time or distance by no more than 10 percent, as a general rule. If a hunter begins conditioning his heart in the spring, with a steady progression he could easily be walking several miles by the time fall comes around. Thus he will be able to cover a considerable amount of ground during a hunt.

When I was growing up and hunting with my dad, we usually had several members in our hunting party. Whenever one of us killed a deer, the others could be called upon to help with the chore of dragging the carcass. Usually they would make their way to our stand to admire the kill. Many hunters in eastern North Carolina are members of hunting clubs. This, too, makes for advantageous hunting. Not only are there others to call upon, but also the club members usually have a close relationship with landowners, who will allow them to drive as near to the deer as possible without damaging crops and other valuable property assets in order to retrieve the kill.

Technology is another way to ease the strain of the hunt. Some outdoor gear manufacturers market products to lessen the burden of wrestling a heavy deer. Some products have wheels similar to a wheelbarrow's to transport the carcass. My personal favorite is the cell phone. Not only can you call your hunting buddy to give you a hand, but you can also brag a little while he's on his way. A cell phone is a good idea in case you happen to experience a heart attack or other type of injury. I make it a habit to have my cell phone with me and to let my wife know where I will be in case a search party needs to find me. And considering my poor navigation skills, a search party may be needed, heart attack or not. ⊕

Jonathan Hewitt, an Elizabeth City native, is an athletic trainer and occasional contributor to WINC.



According to the Centers for Disease Control, the symptoms of a heart attack are as follows:

CHEST DISCOMFORT

The feeling of uncomfortable pressure, squeezing, fullness or pain. Discomfort in other areas of the upper body can include pain or discomfort in one or both arms or the back, neck, jaw or stomach.

SHORTNESS OF BREATH

This often comes along with chest discomfort but can occur before chest discomfort.

OTHER SYMPTOMS

These may include breaking out in a cold sweat or feeling nausea or lightheadedness.

If you think you or someone you know may be having a heart attack, call 911 immediately.

Don't let this hunting season make you a statistic for the ambulance service. With some planning and a commitment to your own health, the only statistic you will need to worry about is whether your buck scores in the Boone and Crockett record book.

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