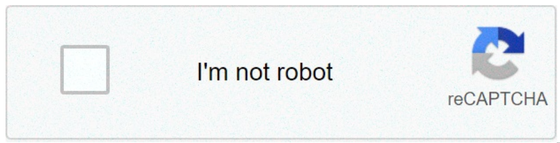

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My heart beat for u

Special cells often referred to as "pacemaker" cells produce electricity in the body by rapidly changing their electrical charge from positive to negative and back again. When the heart muscle is relaxed the cells are electrically polarized, meaning the inside of each cell has a negative electrical charge. The environment outside the cells is positive. Cells depolarize as some of their negative atoms are allowed through the cell membrane, and it's this depolarization that causes electricity in the heart. Once one cell depolarizes it sparks a chain reaction and electricity flows from cell to cell. When cells return to normal it's called repolarization, and the process is repeated with every heartbeat.The SA node is regulated by the autonomic nervous system, which controls all of the automatic functions of the body including heartbeat, breathing and digestion. The sympathetic nervous system and the parasympathetic nervous system are part of the autonomic nervous system and work together to control how fast the pacemaker cells spontaneously depolarize and increase and decrease the rate the SA node sends out electrical signals."The sympathetic nervous system is responsible for increasing the heart beat during exercise, while the parasympathetic nervous system lowers the pulse during periods of rest," explains Marshal Fox, M.D., electrophysiology cardiologist at Baystate Health in Massachusetts.When the SA node fires off an electrical impulse the pulse of electricity first travels through the top chambers of the heart and continues through the AV node where it's slowed down. By slowing down the electrical signal the AV node allows time for the upper chambers of the heart to contract first, before the ventricles. Once through the AV node's gate the pulse continues to move through the bundle branches and Purkinje fibers and then finally ends in the ventricles, which contract and pump blood through the body."People may have different intrinsic resting pulse rates and the reason for this is due to the balance between the sympathetic and parasympathetic nervous systems," explains Fox. "Athletes, for instance, develop higher parasympathetic tone with continued training and therefore while at rest will have a lower pulse than their counterpart couch potatoes."Chambers and Valves1,000+ Heart-healthy RecipesVideo: Your Target Heart RateWhat determines the rhythm of your heart?How your heart works Heart Health Do you ever feel that your heart is pounding, skipping, or racing so fast that you're certain it will explode from your chest at any moment? That's how many people describe the experience of heart palpitations. In the most literal sense, palpitations are simply an awareness of your heart beating, says Dr. William Stevenson, professor of medicine at Harvard-affiliated Brigham and Women's Hospital. The most familiar trigger for palpitations is heavy exercise, such as when you pedal extra hard to summit the last computerized hill in your indoor cycling class. Skipping a beat Although common, palpitations alarm many people, in part because they tend to come on unexpectedly. Isolated palpitations typically occur when a small rush of adrenaline courses through your body, causing your heart to beat more forcefully than usual. These surges can be generated by a strong emotion such as excitement, fear, or anger. They also can come on after consuming a stimulant such as caffeine. Another common source of palpitations is premature contraction of the atria. When the heart's upper chambers squeeze a fraction of a second earlier than they should, they rest an instant longer afterward to get back to their usual rhythm. This feels like a skipped beat. It is often followed by a noticeably forceful contraction as the ventricles clear out the extra blood they accumulated during the pause. These premature beats are almost always benign, meaning they aren't life-threatening or the sign of a heart attack in the making. "Everyone has a few of these premature beats once in a while, and they tend to increase with age," says Dr. Stevenson. More serious concerns The sensation of abnormal heartbeat can also be a warning sign of a heart rhythm problem. A sustained fast or irregular heart rhythm originating in either the upper or lower chambers can result in distressing symptoms such as lightheadedness, dizziness, or shortness of breath. At their most serious, these rhythm abnormalities may lead to complications such as stroke and even sudden death if the ventricles contract so chaotically that blood doesn't move out of the heart. So if you start having palpitations or irregular heartbeats that you haven't noticed before, it's wise to get checked out, says Dr. Stevenson. This is especially important if you are having worrisome symptoms such as shortness of breath or chest pain. When listening to your heart, your doctor may hear a murmur or other sound suggesting a problem with one of the heart's valves, which can cause palpitations. Testing may also reveal a thyroid imbalance, signs of anemia, low potassium, or other problems that can cause or contribute to palpitations. Your exam may also include electrocardiography (ECG) and echocardiography, an ultrasound of the heart, to assess your heart's electrical activity and pumping ability. However, since palpitations tend to come and go, there's a good chance they won't turn up during your doctor's visit, and your doctor may need to do more detective work. A portable ECG recorder (called a Holter monitor or an event monitor) that you wear continuously from 24 to 48 hours or up to one month captures episodes of abnormal heart activity as you go about your daily routine. There's even an implantable recorder that can invisibly monitor the heart for a year or more. This device may be needed if your bouts of irregular rhythms are particularly sporadic. When treatment is needed Once serious causes have been ruled out, most people who have isolated palpitations simply need reassurance that nothing dire is happening, says Dr. Stevenson. If you're still bothered by unexplained palpitations, start with simple things first. Low blood sugar can trigger palpitations, so make a point of eating regularly. Drinking plenty of fluids and getting enough sleep may also help. Since stress and anxiety are a source of palpitations in many people, breathing exercises, meditation, or other relaxation techniques may do the trick. Nicotine can cause palpitations, as can alcohol and over-the-counter decongestant medications that contain pseudoephedrine or phenylephrine. When self-care measures aren't enough, certain drugs may help. Beta blockers that quell the effects of adrenaline on the heart can successfully combat most types of fast heart rhythms. Some people may get relief with anti-anxiety medicines. If your ECG shows a particular type of abnormal heart rhythm, your doctor may suggest a procedure called catheter ablation to correct it. A thin tube (catheter) is guided into the heart, and a jolt of radiofrequency energy is applied to destroy a faulty electrical pathway in the heart muscle that is responsible for the erratic signaling. For potentially fatal rhythm abnormalities coming from the ventricles, an implantable cardiac defibrillator that resets those rhythms can be a lifesaver. Stress, anxiety, or panic Dehydration Low potassium or magnesium Low blood sugar Too much alcohol or caffeine Nicotine Exercise Fever Menopause Heartburn Street drugs such as cocaine and amphetamines Medications such as diet pills, some cough and cold remedies, some antibiotics, thyroid hormone, digoxin, or asthma remedies Dietary supplements such as ephedra, ginseng, bitter orange, valerian, or hawthorn As a service to our readers, Harvard Health Publishing provides access to our library of archived content. Please note the date of last review or update on all articles. No content on this site, regardless of date, should ever be used as a substitute for direct medical advice from your doctor or other qualified clinician. Brothers and sisters often share traits like facial features, body shape, certain turns of phrase, or a fondness for peanut butter and banana sandwiches. Add heart trouble to the list. A report from the second-generation Framingham Offspring Study indicates that having a sibling with cardiovascular disease increases your chances of having it, too. The increase is on a par with having a parent with cardiovascular disease. The study covered a lot of territory, defining cardiovascular disease as angina (chest pain), heart attack, needing a procedure to bypass or open a narrowed or blocked artery, stroke or transient ischemic attack (mini-stroke), peripheral artery disease, or death due to a heart or circulation-related problem. As a service to our readers, Harvard Health Publishing provides access to our library of archived content. Please note the date of last review or update on all articles. No content on this site, regardless of date, should ever be used as a substitute for direct medical advice from your doctor or other qualified clinician. If you take a cholesterol-lowering statin, you may be able to slash the cost of the drug in half by doing what the Veterans Affairs medical system is doing: Buy an inexpensive pill splitter (see figure, below) and get a prescription for the next higher dose. Some of the statins are priced so that you pay nearly the same amount for a higher dose as you do for a lower one (see "Statin costs" below). For example, if you only need 40 milligrams (mg) of Lipitor a day, splitting an 80-mg tablet could save you almost $600 a year. As a service to our readers, Harvard Health Publishing provides access to our library of archived content. Please note the date of last review or update on all articles. No content on this site, regardless of date, should ever be used as a substitute for direct medical advice from your doctor or other qualified clinician. While the country may be politically divided into red states and blue states, when it comes to heart disease there are only red states and redder states. A survey of more than 350,000 people by the federal Centers for Disease Control and Prevention shows that about 14.5 million Americans over age 18 are living with heart disease. The percentage varies from a low of 4.8% in Colorado to a high of 10.4% in West Virginia. Many of the states with the highest rates are clustered in the lower Mississippi and Ohio River valleys. Maps like these aren't merely a geographer's whim. The regional differences they reveal can help researchers identify constellations of risk factors that might contribute to heart disease. As a service to our readers, Harvard Health Publishing provides access to our library of archived content. Please note the date of last review or update on all articles. No content on this site, regardless of date, should ever be used as a substitute for direct medical advice from your doctor or other qualified clinician. If the thought of having a heart attack or cardiac arrest sends a chill down your spine, having one could lead to chills all over. An approved but little-used technique known as therapeutic hypothermia â€” rapid cooling of the body â€” improves survival and limits brain damage from cardiac arrest, the sudden cessation of an effective heartbeat. Cooling slows chemical reactions and cell metabolism. This reduces a tissue's need for oxygen. Think of it as artificially induced hibernation. Surgeons have long used this trick to protect the heart, brain, and other organs during open-heart surgery. A handful of medical centers have used rapid cooling for people resuscitated after a cardiac arrest. Researchers are testing its benefits, and risks, during emergency artery-opening angioplasty to halt a heart attack. It is also being eyed as a way to protect the brain during and after a stroke. As a service to our readers, Harvard Health Publishing provides access to our library of archived content. Please note the date of last review or update on all articles. No content on this site, regardless of date, should ever be used as a substitute for direct medical advice from your doctor or other qualified clinician. Published on May 18, 2021 We have two ears and one mouth for a reason—effective communication is dependent on using them in proportion, and this involves having good listening skills.The workplace of the 21st century may not look the same as it did before COVID-19 spread throughout the world like wildfire, but that doesn’t mean you can relax your standards at work. If anything, Zoom meetings, conference calls, and the continuous time spent behind a screen have created a higher level of expectations for meeting etiquette and communication. And this goes further than simply muting your microphone during a meeting.Effective workplace communication has been a topic of discussion for decades, yet, it is rarely addressed or implemented due to a lack of awareness and personal ownership by all parties.Effective communication isn’t just about speaking clearly or finding the appropriate choice of words. It starts with intentional listening and being present. Here’s how to improve your listening skills for effective workplace communication.Listen to Understand, Not to Speak There are stark differences between listening and hearing. Listening involves intention, focused effort, and concentration, whereas hearing simply involves low-level awareness that someone else is speaking. Listening is a voluntary activity that allows one to be present and in the moment while hearing is passive and effortless.Which one would you prefer your colleagues to implement during your company-wide presentation? It’s a no-brainer. Listening can be one of the most powerful tools in your communication arsenal because one must listen to understand the message being told to them. As a result of this deeper understanding, communication can be streamlined because there is a higher level of comprehension that will facilitate practical follow-up questions, conversations, and problem-solving. And just because you heard something doesn’t mean you actually understood it.We take this for granted daily, but that doesn’t mean we can use that as an excuse.Your brain is constantly scanning your environment for threats, opportunities, and situations to advance your ability to promote your survival. And yet, while we are long past the days of worrying about being eaten by wildlife, the neurocircuitry responsible for these mechanisms is still hard-wired into our psychology and neural processing.A classic example of this is the formation of memories. Case in point: where were you on June 3rd, 2014? For most of you reading this article, your mind will go completely blank, which isn’t necessarily bad.The brain is far too efficient to retain every detail about every event that happens in your life, mainly because many events that occur aren’t always that important. The brain doesn’t—and shouldn’t—care what you ate for lunch three weeks ago or what color shirt you wore golfing last month. But for those of you who remember where you were on June 3rd, 2014, this date probably holds some sort of significance to you. Maybe it was a birthday or an anniversary. Perhaps it was the day your child was born. It could have even been a day where you lost someone special in your life.Regardless of the circumstance, the brain is highly stimulated through emotion and engagement, which is why memories are usually stored in these situations. When the brain’s emotional centers become activated, the brain is far more likely to remember an event. And this is also true when intention and focus are applied to listening to a conversation. Utilizing these hard-wired primitive pathways of survival to optimize your communication in the workplace is a no-brainer—literally and figuratively.Intentional focus and concentrated efforts will pay off in the long run because you will retain more information and have an easier time recalling it down the road, making you look like a superstar in front of your colleagues and co-workers. Time to kiss those note-taking days away! Effective Communication Isn’t Always Through Words While we typically associate communication with words and verbal affirmations, communication can come in all shapes and forms. In the Zoom meeting era we live in, it has become far more challenging to utilize and understand these other forms of language. And this is because they are typically easier to see when we are sitting face to face with the person we speak to.Body language can play a significant role in how our words and communication are interpreted, especially when there is a disconnection involved. When someone tells you one thing, yet their body language screams something completely different, it’s challenging to let that go. Our brain immediately starts to search for more information and inevitably prompts us to follow up with questions that will provide greater clarity to the situation at hand. And in all reality, not saying something might be just as important as actually saying something.These commonly overlooked non-verbal communication choices can provide a plethora of information about the intentions, emotions, and motivations. We do this unconsciously, and it happens with every confrontation, conversation, and interaction we engage in. The magic lies in the utilization and active interpretation of these signals to improve your listening skills and your communication skills.Our brains were designed for interpreting our world, which is why we are so good at recognizing subtle nuances and underlying disconnect within our casual encounters. So, when we begin to notice conflicting messages between verbal and non-verbal communication, our brain takes us down a path of troubleshooting. Which messages are consistent with this theme over time? Which statements aren’t aligning with what they’re really trying to tell me? How should I interpret their words and body language?Suppose we want to break things down even further. In that case, one must understand that body language is usually a subconscious event, meaning that we rarely think about our body language. This happens because our brain’s primary focus is to string together words and phrases for verbal communication, which usually requires a higher level of processing. This doesn’t mean that body language will always tell the truth, but it does provide clues to help us weigh information, which can be pretty beneficial in the long run.Actively interpreting body language can provide you with an edge in your communication skills. It can also be used as a tool to connect with the individual you are speaking to. This process is deeply ingrained into our human fabric and utilizes similar methods babies use while learning new skills from their parents’ traits during the early years of development.Mirroring a person’s posture or stance can create a subtle bond, facilitating a sense of feeling like one another. This process is triggered via the activation of specific brain regions through the stimulation of specialized neurons called mirror neurons. These particular neurons become activated while watching an individual engage in an activity or task, facilitating learning, queuing, and understanding. They also allow the person watching an action to become more efficient at physically executing the action, creating changes in the brain, and altering the overall structure of the brain to enhance output for that chosen activity.Listening with intention can make you understand your colleague, and when paired together with mirroring body language, you can make your colleague feel like you two are alike. This simple trick can facilitate a greater bond of understanding and communication within all aspects of the conversation. Eliminate All Distractions, Once and for All As Jim Rohn says, “What is easy to do is also easy not to do.” And this is an underlying principle that will carry through in all aspects of communication. Distractions are a surefire way to ensure a lack of understanding or interpretation of a conversation, which in turn, will create inefficiencies and a poor foundation for communication. This should come as no surprise, especially in this day in age where people are constantly distracted by social media, text messaging, and endlessly checking their emails. We’re stuck in a cultural norm that has hijacked our love for the addictive dopamine rush and altered our ability to truly focus our efforts on the task at hand. And these distractions aren’t just distractions for the time they’re being used. They use up coveted brainpower and central processes that secondarily delay our ability to get back on track.Gloria Mark, a researcher at UC Irvine, discovered that it takes an average of 23 minutes and 15 seconds for our brains to reach their peak state of focus after an interruption. Yes, you read that correctly—distractions are costly, error-prone, and yield little to no benefit outside of a bump to the ego when receiving a new like on your social media profile.Meetings should implement a no-phone policy, video conference calls should be set on their own browser with no other tabs open, and all updates, notifications, and email prompt should be immediately turned off, if possible, to eliminate all distractions during a meeting.These are just a few examples of how we can optimize our environment to facilitate the highest levels of communication within the workplace. Actions Speak Louder Than Words Effective communication in the workplace doesn’t have to be challenging, but it does have to be intentional. Knowledge can only take us so far, but once again, knowing something is very different than putting it into action.Just like riding a bike, the more often you do it, the easier it becomes. Master communicators are phenomenal listeners, which allows them to be effective communicators in the workplace and in life. If you genuinely want to own your communication, you must implement this information today and learn how to improve your listening skills. Choose your words carefully, listen intently, and most of all, be present in the moment—because that’s what master communicators do, and you can do it, too! More Tips Improving Listening SkillsFeatured photo credit: Mailchimp via unsplash.com