

1: Benefits of Exercise | HowStuffWorks

Exercise is a stressor and the stresses of exercise have a catabolic effect on the body—contractile proteins within muscles are consumed for energy, carbohydrates and fats are similarly consumed and connective tissues are stressed and can form micro-tears.

The featured article in Huffington Post² highlights a number of biological effects that occur, from head to toe, when you exercise. This includes changes in your: To create more ATP, your body needs extra oxygen, so breathing increases and your heart starts pumping more blood to your muscles. Without sufficient oxygen, lactic acid will form instead. Tiny tears in your muscles make them grow bigger and stronger as they heal. The higher your VO₂ max, the fitter you are. As mentioned, your heart rate increases with physical activity to supply more oxygenated blood to your muscles. The fitter you are, the more efficiently your heart can do this, allowing you to work out longer and harder. As a side effect, this increased efficiency will also reduce your resting heart rate. Your blood pressure will also decrease as a result of new blood vessels forming. The increased blood flow also benefits your brain, allowing it to almost immediately function better. As a result, you tend to feel more focused after a workout. Furthermore, exercising regularly will promote the growth of new brain cells. In your hippocampus, these new brain cells help boost memory and learning. As stated in the featured article: Some of these are well-known for their role in mood control. Exercise, in fact, is one of the most effective prevention and treatment strategies for depression. Peak bone mass is achieved in adulthood and then begins a slow decline, but exercise can help you to maintain healthy bone mass as you get older. Weight-bearing exercise is actually one of the most effective remedies against osteoporosis, as your bones are very porous and soft, and as you get older your bones can easily become less dense and hence, more brittle -- especially if you are inactive. As your heart pressure increases, the brain thinks you are either fighting the enemy or fleeing from it. This BDNF has a protective and also reparative element to your memory neurons and acts as a reset switch. Simultaneously, your brain releases endorphins, another stress-related chemical. According to researcher MK McGovern, the endorphins minimize the physical pain and discomfort associated with exercise. The evidence shows that physical exercise helps you build a brain that not only resists shrinkage, but increases cognitive abilities. Exercise encourages your brain to work at optimum capacity by causing your nerve cells to multiply, strengthening their interconnections, and protecting them from damage. There are multiple mechanisms at play here, but some are becoming more well-understood than others. The rejuvenating role of BDNF is one of them. BDNF activates brain stem cells to convert into new neurons. It also triggers numerous other chemicals that promote neural health. Further, exercise provides protective effects to your brain through: These growth factors signal brain stem cells and muscle satellite cells to convert into new neurons and new muscle cells respectively. Interestingly enough, BDNF also expresses itself in the neuro-muscular system where it protects neuro-motors from degradation. The neuromotor is the most critical element in your muscle. Without the neuromotor, your muscle is like an engine without ignition. Neuro-motor degradation is part of the process that explains age-related muscle atrophy. So BDNF is actively involved in both your muscles and your brain, and this cross-connection, if you will, appears to be a major part of the explanation for why a physical workout can have such a beneficial impact on your brain tissue. It, quite literally, helps prevent, and even reverse, brain decay as much as it prevents and reverses age-related muscle decay. This also helps explain why exercise while fasting can help keep your brain, neuro-motors, and muscle fibers biologically young. For more information on how to incorporate intermittent fasting into your exercise routine for maximum benefits, please see this previous article. Sugar suppresses BDNF, which also helps explain why a low-sugar diet in combination with regular exercise is so effective for protecting memory and staving off depression. This Is Your Brain on Exercise BDNF and endorphins are two of the factors triggered by exercise that help boost your mood, make you feel good, and sharpen your cognition. So, how much do you have to exercise in order to maintain a sunnier disposition and better memory long-term? According to a study⁶ published in the journal *Neuroscience*, the "secret" to increased productivity and happiness on any given day is a long-term investment in regular exercise. And a little each day appears to go further than a lot

once or twice a week. The reasons for this can perhaps be best perceived visually. Take a look at these images, showing the dramatic increase in brain activity after a 20 minute walk, compared to sitting quietly for the same amount of time. There is a minor caveat, however. The researchers also discovered that exercise does not affect the brains of all people in exactly the same way. The people with this BDNF variant did not improve their memory scores, even when exercising regularly, as significantly as those without this variant. Still, the research clearly suggests that "with individual variations as to the degree" regular exercise will cumulatively enhance your memory and other brain functions. In her book, *The First 20 Minutes: You get prolonged life, reduced disease risk - all of those things come in in the first 20 minutes of being active,*" she said in an interview⁸. If one of those people gets up and moves around for 20 minutes, they are going to get a huge number of health benefits, and everything beyond that 20 minutes is, to some degree, gravy. You can always do more. But the science shows that if you just do anything, even stand in place 20 minutes, you will be healthier. Interestingly, while their mood remained fairly constant even on non-exercise work days, their sense of inner calm deteriorated on those days. According to the authors: I believe it is also vital to engage in regular movement if you have a sitting job like most of us do, including me. I typically sit in front of a computer for more than 12 hours a day. What I have recently appreciated is that standing up every 10 minutes with the help of a timer and engaging in some type of brief exercise, is an enormously powerful habit to minimize the damage of long term sitting. Additionally, more recent research has really opened my eyes to the importance of non-exercise movement. It simply means, whenever you have a chance to move and stretch your body in the course of going about your day "do it! And the more frequently, the better. Everything from standing up, to reaching for an item on a tall shelf, to weeding in your garden and walking from one room to another, and even doing dishes count. To learn more about this important aspect of health, please see this previous article. That said, I recommend incorporating the following types of exercise into your program: This is when you alternate short bursts of high-intensity exercise with gentle recovery periods. You can also "up" the intensity by slowing it down. For more information about using super slow weight training as a form of high intensity interval exercise, please see my interview with Dr. This is not intuitively obvious, but emerging evidence clearly shows that even highly fit people who exceed the expert exercise recommendations are headed for premature death if they sit for long periods of time. Joan Vernikos goes into great detail why this is so, and what you can do about it. Personally, I usually set my timer for 10 minutes while sitting, and then stand up and do one legged squats, jump squats or lunges when the timer goes off. The key is that you need to be moving all day long, even in non-exercise activities. Your body has 29 core muscles located mostly in your back, abdomen and pelvis. This group of muscles provides the foundation for movement throughout your entire body, and strengthening them can help protect and support your back, make your spine and body less prone to injury and help you gain greater balance and stability. Foundation Training , created by Dr. Eric Goodman, is an integral first step of a larger program he calls "Modern Moveology," which consists of a catalog of exercises. Postural exercises such as those taught in Foundation Training are critical not just for properly supporting your frame during daily activities, they also retrain your body so you can safely perform high-intensity exercises without risking injury. Exercise programs like Pilates and yoga are also great for strengthening your core muscles, as are specific exercises you can learn from a personal trainer. My favorite type of stretching is active isolated stretches developed by Aaron Mattes. This technique also allows your body to repair itself and prepare for daily activity.

2: Exercise's Effects on the Human Body | Healthfully

The Top 10 Benefits of Regular Exercise Written by Arlene Semeco, MS, RD on February 10, Exercise is defined as any movement that makes your muscles work and requires your body to burn calories.

The longer, harder and more often you exercise, the greater the health benefits, including reducing the risk of diseases such as cancer and diabetes, according to the recommendations, which were based on a decade of scientific research. Studies have shown that people who engage in the amount of exercise recommended by the feds live an average of three to seven years longer than couch potatoes, according to William Haskell, a medical professor at Stanford University who chaired the HHS advisory committee. But how exactly does exercise accomplish this? Is there any truth to them? The reason, he says: This leads to subtle changes in the autonomic nervous system, which controls the contraction and relaxation of these vessels. This fine-tuning leads to a lower resting heart rate fewer beats to pump blood through the body, lower blood pressure and a more variable heart rate, all factors that lower the risk of developing cardiovascular disease, he says. Meyers says that exercise also limits inflammation associated with heart trouble, such as arteriosclerosis or hardening of the arteries around the heart, which may lead to heart attacks. Many recent studies have focused on C-reactive protein, a marker of inflammation. Meyers says that research showed that sedentary folks who embarked on three- to six-month exercise programs, on average, experienced a 30 percent dip in their C-reactive protein levels — about the same drop as someone given a statin a cholesterol and inflammation-lowering drug. In other words, in many people, exercise might be as effective as an Rx in tamping down inflammation, one of the key risk factors for cardiovascular disease. Exercise also boosts cardiovascular health by decreasing the amount of plasma triglycerides — fatty molecules in the blood that are associated with plaque build-up in the arteries — notes Haskell. Take, for example, HDL cholesterol. Most broad studies show physical exercise leads to up to a 5 percent increase in HDL levels, but a closer examination shows that the percentages vary from zero to 25 percent, depending on the study subject, he says, noting that only about half of the population seem to experience HDL increases as a result of exercise. Less cancer Several studies including the ongoing federal National Health and Nutrition Examination Survey following thousands subjects for several years, show that regular exercise lowers the risk for certain cancers, particularly breast and colon cancer, says Demetrius Albanes, a researcher at the National Cancer Institute in Bethesda, Md. Scientists have yet to pinpoint the mechanisms involved but have come up with several plausible explanations. Obese and overweight people, are more likely to develop insulin resistance, a condition in which the cells no longer respond to the hormone and absorb glucose. When this happens, the pancreas produces greater amounts to compensate, flooding the bloodstream with insulin; high levels of insulin in the blood have been linked to [some types of] cancer. Exercise may also help reduce levels of the female hormones estrogen and progesterone in the blood, potentially also lowering the risk of developing breast and uterine cancers linked to high levels of those hormones. Despite the apparent link between physical exercise and lower odds of cancer, Albanes acknowledges that there could be other factors at work. This force stimulates the bone to maintain or even build new tissue. But scientists have yet to figure out why. Diabetes type 2 is a disease in which the body begins to ignore or fails to produce enough insulin a condition called insulin resistance. If muscles and other tissues cannot absorb glucose from the blood, nerve and blood vessel damage ensues, paving the way for heart disease, stroke and infections. But physical activity helps reverse this process. Leon agrees, pointing to research demonstrating that exercise leads to varying decreases on visceral body fat the fat surrounding organs, one of the key risk factors for developing type 2 diabetes. Makes you smarter Researchers have long believed that exercise boosts smarts but there was not any hard scientific evidence until a few years ago. One such chemical is brain-derived neurotrophic factor BDNF, a molecule that promotes the growth and survival of brain cells as well as communication between them. Studies in rats show that physical exercise boosts BDNF levels in the hippocampus, a brain structure critical for learning and memory formation, which in turn helps them remember how to navigate their way through underwater mazes. A randomized clinical trial published recently in the Journal of the American Medical Association found that

people 50 years and older with memory problems scored higher on cognitive tests after a six-month workout regimen. Those study participants assigned to exercise programs scored 20 percent higher than their sedentary peers at the end of the six months, and maintained a 10 percent edge one year after the trial ended. But skeptics warn that not enough research has been done to confirm a link between exercise and human brain power. A recent review of studies on cognition in older adults primarily those age 65 and older by Dutch scientists published in the *Clinical Journal of Sport Medicine* concluded that "beneficial effects of various exercise programs on aspects of cognition have been observed in studies among subjects with and without cognitive decline. The majority of the studies, however, did not find any effect. Contrary to popular belief, working out at the gym every day will not necessarily lead to weight loss. But he cautions that exercise alone is unlikely to lead to the instant results most people want, leading them to become frustrated and give up. But even if calorie intake trumps exercise, this does not mean exercise does not play a key role in helping people stay trim. Some research suggests that it might lead to greater caloric intake, Stensel notes, but that does not necessarily translate into extra pounds. The increased calories, he says, are not enough to offset the calories burnedâ€”or energy consumedâ€”during exercising.

3: Exercise: 7 benefits of regular physical activity - Mayo Clinic

Healthy Mind, Healthy Body: Benefits of Exercise Moderator Myechia Minter-Jordan, MD, MBA President and CEO of The Dimock Center Clinical Instructor in Medicine, Harvard Medical School.

Sign up now Exercise: From boosting your mood to improving your sex life, find out how exercise can improve your life. By Mayo Clinic Staff Want to feel better, have more energy and even add years to your life? The health benefits of regular exercise and physical activity are hard to ignore. Everyone benefits from exercise, regardless of age, sex or physical ability. Need more convincing to get moving? Check out these seven ways exercise can lead to a happier, healthier you. Exercise controls weight Exercise can help prevent excess weight gain or help maintain weight loss. When you engage in physical activity, you burn calories. The more intense the activity, the more calories you burn. To reap the benefits of exercise, just get more active throughout your day – take the stairs instead of the elevator or rev up your household chores. Exercise combats health conditions and diseases Worried about heart disease? Hoping to prevent high blood pressure? No matter what your current weight, being active boosts high-density lipoprotein HDL , or "good," cholesterol and decreases unhealthy triglycerides. This one-two punch keeps your blood flowing smoothly, which decreases your risk of cardiovascular diseases. Regular exercise helps prevent or manage a wide range of health problems and concerns, including stroke, metabolic syndrome, type 2 diabetes, depression, a number of types of cancer, arthritis and falls. Exercise improves mood Need an emotional lift? Or need to blow off some steam after a stressful day? A gym session or brisk minute walk can help. Physical activity stimulates various brain chemicals that may leave you feeling happier and more relaxed. You may also feel better about your appearance and yourself when you exercise regularly, which can boost your confidence and improve your self-esteem. Exercise boosts energy Winded by grocery shopping or household chores? Regular physical activity can improve your muscle strength and boost your endurance. Exercise delivers oxygen and nutrients to your tissues and helps your cardiovascular system work more efficiently. And when your heart and lung health improve, you have more energy to tackle daily chores. Exercise promotes better sleep Struggling to snooze? Regular physical activity can help you fall asleep faster and deepen your sleep. Exercise puts the spark back into your sex life Do you feel too tired or too out of shape to enjoy physical intimacy? Regular physical activity can improve energy levels and physical appearance, which may boost your sex life. Regular physical activity may enhance arousal for women. Exercise can be fun – and social! Exercise and physical activity can be enjoyable. It gives you a chance to unwind, enjoy the outdoors or simply engage in activities that make you happy. Physical activity can also help you connect with family or friends in a fun social setting. So, take a dance class, hit the hiking trails or join a soccer team. Find a physical activity you enjoy, and just do it. Try something new, or do something with friends. The bottom line on exercise Exercise and physical activity are a great way to feel better, boost your health and have fun. Aim for at least minutes per week of moderate-intensity exercise, or 75 minutes per week of vigorous exercise. Try to engage in a combination of vigorous and moderate aerobic exercises, such as running, walking or swimming. Squeeze in strength training at least twice per week by lifting free weights, using weight machines or doing body weight exercises. Space out your activities throughout the week. If you want to lose weight or meet specific fitness goals, you may need to ramp up your exercise efforts.

4: 59 Benefits of Exercise for the Human Body | Healthints

Exercise can be used to improve the immune system in the human body. When you exercise, the antibody substances in your body will increase. It is these antibodies that form the immune system of the human body. If the antibodies increase only the immune system in the body will increase.

Regular exercise offers many positive benefits that will keep you living independently and reduce your risks of getting certain diseases and injuries. Although gyms and fitness boot camps are places where people typically exercise, you can strengthen your body by taking long hikes or walks, dancing a few hours of salsa or playing your favorite sport. Healthier and Happier Heart All forms of exercise improve the heart rate, blood flow and general heart health. Average, healthy adults have a heart rate of 60 to 80 beats per minute at rest. Moderate-intensity or high-intensity exercise will strengthen your heart, allowing it to pump more blood into your body, which can reduce the resting heart rate to 28 to 40 beats per minute, as in most elite endurance athletes. As your heart gets stronger, the stroke volume also increases, which is the amount of blood ejected per beat from the left ventricle of the heart. When the left ventricle is filled up with more blood, it is stretched further, which causes an elastic recoil to pump more blood out. Maximize Air Intake Like your heart, your lungs and the rest of the pulmonary system also adapt to exercise. This also increases your breathing rate, which speeds up the exchange of oxygen and carbon dioxide. The alveoli are tiny air sacs where gas exchange takes place between your blood and your lungs. As you adapt to high-intensity exercise, the number of alveoli also increases. This allows you to perform aerobic exercises longer without getting out of breath. Gain Weight the Right Way All forms of strength and power training will make your bones denser and your skeletal muscles larger. Weight-bearing exercises, such as fast walking, stair climbing, dancing and weight-training, cause your bones to constantly rebuild and adapt to make them stronger and resilient to fractures. Muscle growth, or hypertrophy, is a result from strength and power conditioning in which your muscle fibers increase in diameter. Eccentric training, which is the lengthening of muscle fibers under tension, elicits the greatest gains in muscle hypertrophy, according to exercise physiologist Len Kravitz. For example, after you lift a barbell during the arm curl, lower the weight at a rate of three to four seconds. Torch More Fat Your body continues to burn fat at an elevated rate even after you have stopped exercising. This condition is called excess post-exercise oxygen consumption, during which your body increases its metabolism to return itself to its resting state. EPOC can last from 15 minutes to 48 hours, depending on exercise intensity and duration, says Kravitz. This can help you burn fat more efficiently throughout the day without having to spend more than an hour at the gym.

5: Exercise - Wikipedia

While lower intensity exercise such as walking or gardening will not produce a large increase in exercise capacity, if performed for longer periods or more frequently, it seems to provide many of the health benefits derived from more vigorous exercise (e.g., facilitates weight control, bone mineral retention, etc.).

Written by Arlene Semeco, MS, RD on February 10, Exercise is defined as any movement that makes your muscles work and requires your body to burn calories. There are many types of physical activity, including swimming, running, jogging, walking and dancing, to name a few. Being active has been shown to have many health benefits, both physically and mentally. It may even help you live longer 1. Here are the top 10 ways regular exercise benefits your body and brain. It Can Make You Feel Happier Exercise has been shown to improve your mood and decrease feelings of depression, anxiety and stress 2. It produces changes in the parts of the brain that regulate stress and anxiety. It can also increase brain sensitivity for the hormones serotonin and norepinephrine, which relieve feelings of depression 1. Additionally, exercise can increase the production of endorphins, which are known to help produce positive feelings and reduce the perception of pain 1. Furthermore, exercise has been shown to reduce symptoms in people suffering from anxiety. It can also help them be more aware of their mental state and practice distraction from their fears 1. It seems that your mood can benefit from exercise no matter the intensity of the physical activity. In fact, a study in 24 women who had been diagnosed with depression showed that exercise of any intensity significantly decreased feelings of depression 3. The effects of exercise on mood are so powerful that choosing to exercise or not even makes a difference over short periods. One study asked 26 healthy men and women who normally exercised regularly to either continue exercising or stop exercising for two weeks. Those who stopped exercising experienced increases in negative mood 4. Exercising regularly can improve your mood and reduce feelings of anxiety and depression. It Can Help With Weight Loss Some studies have shown that inactivity is a major factor in weight gain and obesity 5 , 6. To understand the effect of exercise on weight reduction, it is important to understand the relationship between exercise and energy expenditure. Your body spends energy in three ways: While dieting, a reduced calorie intake will lower your metabolic rate, which will delay weight loss. On the contrary, regular exercise has been shown to increase your metabolic rate, which will burn more calories and help you lose weight 5 , 6 , 7 , 8. Additionally, studies have shown that combining aerobic exercise with resistance training can maximize fat loss and muscle mass maintenance, which is essential for keeping the weight off 6 , 8 , 9 , 10 , Exercise is crucial to supporting a fast metabolism and burning more calories per day. It also helps you maintain your muscle mass and weight loss. Exercise plays a vital role in building and maintaining strong muscles and bones. Physical activity like weight lifting can stimulate muscle building when paired with adequate protein intake. This is because exercise helps release hormones that promote the ability of your muscles to absorb amino acids. This helps them grow and reduces their breakdown 12 , As people age, they tend to lose muscle mass and function, which can lead to injuries and disabilities. Practicing regular physical activity is essential to reducing muscle loss and maintaining strength as you age Interestingly, high-impact exercise, such as gymnastics or running, or odd-impact sports, such as soccer and basketball, have been shown to promote a higher bone density than non-impact sports like swimming and cycling Physical activity helps you build muscles and strong bones. It may also help prevent osteoporosis. It Can Increase Your Energy Levels Exercise can be a real energy booster for healthy people, as well as those suffering from various medical conditions 17 , One study found that six weeks of regular exercise reduced feelings of fatigue for 36 healthy people who had reported persistent fatigue Furthermore, exercise can significantly increase energy levels for people suffering from chronic fatigue syndrome CFS and other serious illnesses 20 , In fact, exercise seems to be more effective at combating CFS than other treatments, including passive therapies like relaxation and stretching, or no treatment at all Engaging in regular physical activity can increase your energy levels. This is true even in people with persistent fatigue and those suffering from serious illnesses. Regular exercise has been shown to improve insulin sensitivity , cardiovascular fitness and body composition, yet decrease blood pressure and blood fat levels 23 , 24 , 25 , In contrast, a lack of regular exercise â€” even in

the short term “ can lead to significant increases in belly fat, which increases the risk of type 2 diabetes, heart disease and early death. Therefore, daily physical activity is recommended to reduce belly fat and decrease the risk of developing these diseases 27 , Daily physical activity is essential to maintaining a healthy weight and reducing the risk of chronic disease. This can damage their internal structures and deteriorate your skin. In the same way, exercise can stimulate blood flow and induce skin cell adaptations that can help delay the appearance of skin aging. Moderate exercise can provide antioxidant protection and promote blood flow, which can protect your skin and delay signs of aging. To begin with, it increases your heart rate, which promotes the flow of blood and oxygen to your brain. It can also stimulate the production of hormones that can enhance the growth of brain cells. Moreover, the ability of exercise to prevent chronic disease can translate into benefits for your brain, since its function can be affected by these diseases. Regular physical activity is especially important in older adults since aging “ combined with oxidative stress and inflammation “ promotes changes in brain structure and function 33 , This serves to increase mental function in older adults 33 , 34 , Regular exercise improves blood flow to the brain and helps brain health and memory. Among older adults, it can help protect mental function. Regular exercise can help you relax and sleep better 37 , In regards to sleep quality, the energy depletion that occurs during exercise stimulates recuperative processes during sleep. Moreover, the increase in body temperature that occurs during exercise is thought to improve sleep quality by helping it drop during sleep. Many studies on the effects of exercise on sleep have reached similar conclusions. Another showed that 16 weeks of physical activity increased sleep quality and helped 17 people with insomnia sleep longer and more deeply than the control group. It also helped them feel more energized during the day. You can be flexible with the kind of exercise you choose. It appears that either aerobic exercise alone or aerobic exercise combined with resistance training can equally help sleep quality. Regular physical activity, regardless of whether it is aerobic or a combination of aerobic and resistance training, can help you sleep better and feel more energized during the day. It Can Reduce Pain Chronic pain can be debilitating, but exercise can actually help reduce it. In fact, for many years, the recommendation for treating chronic pain was rest and inactivity. However, recent studies show that exercise helps relieve chronic pain. A review of several studies indicates that exercise helps participants with chronic pain reduce their pain and improve their quality of life. Additionally, physical activity can also raise pain tolerance and decrease pain perception 47 , It can also increase pain tolerance. Engaging in regular exercise can strengthen the cardiovascular system, improve blood circulation, tone muscles and enhance flexibility, all of which can improve your sex life 49 , Physical activity can improve sexual performance and sexual pleasure, as well as increase the frequency of sexual activity 50 , A group of women in their 40s observed that they experienced orgasms more frequently when they incorporated more strenuous exercise, such as sprints, boot camps and weight training, into their lifestyles. Also, among a group of healthy men, the men that reported more exercise hours per week had higher sexual function scores. Another study performed in 78 sedentary men revealed how 60 minutes of walking per day three and a half days per week, on average improved their sexual behavior, including frequency, adequate functioning and satisfaction. Exercise can help improve sexual desire, function and performance in men and women. It can also help decrease the risk of erectile dysfunction in men. The Bottom Line Exercise offers incredible benefits that can improve nearly every aspect of your health from the inside out. Regular physical activity can increase the production of hormones that make you feel happier and help you sleep better. Whether you practice a specific sport or follow the guideline of minutes of activity per week, you will inevitably improve your health in many ways.

6: Benefits of Exercise: MedlinePlus

Benefits of exercise. 1. Exercise can reduce the risk of heart attacks and stroke. Many studies have shown that a systematic and satisfactory physical exercise can significantly reduce the risk of heart attacks and strokes.

URL of this page: You can start slowly, and find ways to fit more physical activity into your life. To get the most benefit, you should try to get the recommended amount of exercise for your age. If you can do it, the payoff is that you will feel better, help prevent or control many diseases, and likely even live longer. What are the health benefits of exercise? Regular exercise and physical activity may Help you control your weight. Along with diet, exercise plays an important role in controlling your weight and preventing obesity. To maintain your weight, the calories you eat and drink must equal the energy you burn. To lose weight, you must use more calories than you eat and drink. Reduce your risk of heart diseases. Exercise strengthens your heart and improves your circulation. The increased blood flow raises the oxygen levels in your body. This helps lower your risk of heart diseases such as high cholesterol , coronary artery disease , and heart attack. Regular exercise can also lower your blood pressure and triglyceride levels. Help your body manage blood sugar and insulin levels. Exercise can lower your blood sugar level and help your insulin work better. This can cut down your risk for metabolic syndrome and type 2 diabetes. And if you already have one of those diseases, exercise can help you to manage it. Help you quit smoking. Exercise may make it easier to quit smoking by reducing your cravings and withdrawal symptoms. It can also help limit the weight you might gain when you stop smoking. Improve your mental health and mood. During exercise, your body releases chemicals that can improve your mood and make you feel more relaxed. This can help you deal with stress and reduce your risk of depression. Help keep your thinking, learning, and judgment skills sharp as you age. Exercise stimulates your body to release proteins and other chemicals that improve the structure and function of your brain. Strengthen your bones and muscles. Regular exercise can help kids and teens build strong bones. Later in life, it can also slow the loss of bone density that comes with age. Doing muscle-strengthening activities can help you increase or maintain your muscle mass and strength. Reduce your risk of some cancers, including colon , breast , uterine , and lung cancer. Reduce your risk of falls. For older adults, research shows that doing balance and muscle-strengthening activities in addition to moderate-intensity aerobic activity can help reduce your risk of falling. Exercise can help you to fall asleep faster and stay asleep longer. Improve your sexual health. Regular exercise may lower the risk of erectile dysfunction ED in men. For those who already have ED, exercise may help improve their sexual function. In women, exercise may increase sexual arousal. Increase your chances of living longer. Studies show that physical activity can reduce your risk of dying early from the leading causes of death, like heart disease and some cancers. How can I make exercise a part of my regular routine? Make everyday activities more active. Even small changes can help. You can take the stairs instead of the elevator. Wash the car yourself. Park further away from your destination. Be active with friends and family. Having a workout partner may make you more likely to enjoy exercise. You can also plan social activities that involve exercise. You might also consider joining an exercise group or class, such as a dance class, hiking club, or volleyball team. Keep track of your progress. Keeping a log of your activity or using a fitness tracker may help you set goals and stay motivated. Make exercise more fun. Try listening to music or watching TV while you exercise. Also, mix things up a little bit - if you stick with just one type of exercise, you might get bored. Try doing a combination of activities. Find activities that you can do even when the weather is bad. You can walk in a mall, climb stairs, or work out in a gym even if the weather stops you from exercising outside.

7: Does Exercise Really Make You Healthier? - Scientific American

One of the key health benefits of exercise is that it helps normalize your glucose, insulin, and leptin levels by optimizing insulin/leptin receptor sensitivity. This is perhaps the most important factor for optimizing your overall health and preventing chronic disease.

How much strength training do you need to do each week? Performing strength-training exercises at least two to three times per week. For each strength workout, aim to do eight to 10 different exercises, varying the muscles that each one targets. Here are several ways that doing bodyweight exercises can help you maintain better cognitive, immune, cardiovascular and hormonal health: Muscle mass plays a significant role in maintaining a healthy weight and general metabolic functions – for example, helping with insulin sensitivity, thyroid function and hormonal balance. Ever notice that muscular athletes can get away with eating a lot? Bodyweight exercises can also result in increased growth hormone production. Lifting weights of any kind gives you enhanced strength and performance, which provides more power for all sorts of exercises. Improve Heart Health Exercise of any kind causes the heart to pump blood stronger and more effectively, which reduces blood pressure levels naturally and improves circulation. Strength-training exercises are also tied to healthier blood cholesterol levels and less risk for a heart attack or stroke. Reduce Risk for Diabetes Exercise is a natural remedy for diabetes since it helps with removal of glucose sugar from the blood, ushering the glucose into your muscles to be as stored as glycogen and used for energy at a later time. Another benefit of this process is that it prevents a high level of glycation end products from accumulating in the bloodstream, which over time can damage blood vessels, organs and tissues. The hormone BDNF, which is stimulated by exercise, helps brain cells regenerate even as someone becomes older. Improve Health of Joints and Bones Increasing muscle mass offers protection of joints and bones, since stronger muscles mean that you rely less on your joints to move around. Exercising has been shown to help improve pain in the back, ankles, knees and hips, while also increasing bone strength and density. Weight Machines One of the common reasons that people avoid weight training, especially women, is that it can be intimidating. Weight machines at the gym, or even free weights you can use in your home, offer all the same benefits of bodyweight exercises because they build strength, but they also require an investment into buying the equipment and a bit more knowledge about how to use the equipment properly, which might mean needing to meet with a trainer. That brings us to a good point. How about doing cardio workouts aimed at burning calories – how do those compare to strength-training or bodyweight exercises? In fact, cardio can have the opposite effect, especially if you do too much of it without enough rest. Long cardio workouts might increase oxidative stress and joint damage, which leads to injuries, pains and illness. Ordinary steady-state cardio workouts – like running, swimming or cycling – are great ways to improve endurance, stamina and heart health while busting stress, but alone they can leave you prone to muscle-wasting due to aging and overtraining. Some studies have found that adults who do lots of cardio exercise such as avid runners can maintain general fitness well from aerobic activity, but they also tend to lose a certain amount of muscle mass from their untrained areas. For example, in runners, their muscles might stay the same size and carry the same strength in their legs, but muscle mass can decrease in their core and arms. Long-term cardio, such as running marathons, might also have other effects over time like joint wear-out, bone loss, or altering hormone levels and neurotransmitter function. Build muscle throughout the whole body while also preventing injuries, boredom or burn-out by alternating cardio workouts with strength or bodyweight training. Lowered cortisol levels help repair insulin sensitivity, which boosts your natural fat-burning potential. Cardio workouts especially when you overtrain are notorious for making people hungrier, which means long aerobic exercises might actually be antagonistic to weight loss. Even when working on building muscle does make someone hungrier, luckily muscle mass requires more calories than fat and can come in handy if you increase your calorie intake. And the slower your thyroid is working, the less likely you are to lose or maintain your weight since the thyroid hormone is crucial for an efficient metabolism. Overall, the idea is for you to integrate exercises that build strength all over, ideally by doing moves that use more than one body part like push-ups, squats or burpees. Try creating your own circuit workout by

THE BENEFITS OF EXERCISE ON THE HUMAN BODY pdf

combining 5-10 different bodyweight exercises below. Each can be done one after the other for the best results, without much rest in between. This gets your heart rate up quickly and gives you the benefits of a cardio workout at the same time. If not, this is simply something to work toward. Do bodyweight exercise circuits 3-4 times per week, taking rest days in between or alternating with cardio to give your body time for proper muscle recovery. Bodyweight exercises to try include:

8: What Effect Does Healthy Eating & Exercise Have on the Body? | Healthfully

Exercise involves physical activity, exerting the body with movement so that the pulse rate goes up, and it is vital for conserving and enhancing the body. The result is an improved level of.

Some studies indicate that exercise may increase life expectancy and the overall quality of life. Physical fitness Individuals can increase fitness following increases in physical activity levels. Children who have more proficient motor skills early on are more inclined to being physically active, and thus tend to perform well in sports and have better fitness levels. Early motor proficiency has a positive correlation to childhood physical activity and fitness levels, while less proficiency in motor skills results in a tendency to partake in a more sedentary lifestyle. Cardiovascular fitness The beneficial effect of exercise on the cardiovascular system is well documented. There is a direct correlation between physical inactivity and cardiovascular mortality, and physical inactivity is an independent risk factor for the development of coronary artery disease. Low levels of physical exercise increase the risk of cardiovascular diseases mortality. The greatest potential for reduced mortality is in the sedentary who become moderately active. Studies have shown that since heart disease is the leading cause of death in women, regular exercise in aging women leads to healthier cardiovascular profiles. Persons who modify their behavior after myocardial infarction to include regular exercise have improved rates of survival. Persons who remain sedentary have the highest risk for all-cause and cardiovascular disease mortality. Epidemiological evidence suggests that moderate exercise has a beneficial effect on the human immune system ; an effect which is modeled in a J curve. However, another study did not find the effect. Immune cell functions are impaired following acute sessions of prolonged, high-intensity exercise, and some studies have found that athletes are at a higher risk for infections. Studies have shown that strenuous stress for long durations, such as training for a marathon, can suppress the immune system by decreasing the concentration of lymphocytes. Athletes may have slightly elevated natural killer cell count and cytolytic action, but these are unlikely to be clinically significant. In individuals with heart disease, exercise interventions lower blood levels of fibrinogen and C-reactive protein, an important cardiovascular risk marker. According to the review, "[there] was consistent evidence from 27 observational studies that physical activity is associated with reduced all-cause, breast cancerâ€™specific, and colon cancerâ€™specific mortality. There is currently insufficient evidence regarding the association between physical activity and mortality for survivors of other cancers. There is clear evidence of exercise treatment efficacy for major depressive disorder and attention deficit hyperactivity disorder. The Cochrane Collaboration review on physical exercise for depression noted that, based upon limited evidence, it is more effective than a control intervention and comparable to psychological or antidepressant drug therapies. Without proper rest, the chance of stroke or other circulation problems increases, [82] and muscle tissue may develop slowly. Extremely intense, long-term cardiovascular exercise, as can be seen in athletes who train for multiple marathons, has been associated with scarring of the heart and heart rhythm abnormalities. These changes further result in myocardial cell damage in the lining of the heart, leading to scar tissue and thickened walls. During these processes, the protein troponin increases in the bloodstream, indicating cardiac muscle cell death and increased stress on the heart itself. For many activities, especially running and cycling , there are significant injuries that occur with poorly regimented exercise schedules. Injuries from accidents also remain a major concern, [87] whereas the effects of increased exposure to air pollution seem only a minor concern. Unaccustomed overexertion of muscles leads to rhabdomyolysis damage to muscle most often seen in new army recruits. One result of detrimental overtraining is suppressed immune function, with an increased incidence of upper respiratory tract infection URTI. While one set of joints and muscles may have the tolerance to withstand multiple marathons , another body may be damaged by 20 minutes of light jogging. This must be determined for each individual. Too much exercise may cause a woman to cease menstruation, a symptom known as amenorrhea.

9: Aerobic exercise: Top 10 reasons to get physical - Mayo Clinic

Aerobic exercise activates your immune system in a good way. This may leave you less susceptible to minor viral illnesses, such as colds and flu. Reduce your health risks Aerobic exercise reduces the risk of many conditions, including obesity, heart disease, high blood pressure, type 2 diabetes, metabolic syndrome, stroke and certain types of cancer.

Read now Finding time to exercise Many people who do not exercise say they do not have the time. However, it is possible to increase the amount of time you are physically active, even if you are extremely busy. See how many trips you take by car and decide which ones could be replaced by walking or cycling. This does not have to be a black or white measure. It could include parking your car half a mile from your destination and walking the rest of the way. Traffic experts throughout most of the world say that the majority of car trips are very short. If you are using public transport, try getting off at an earlier stop and walking the rest of the way. When you are in a building and want to go upstairs, try walking it, rather than taking the elevator or escalators. A study found that interactive video games - such those played on the Nintendo Wii - may raise heart rate and provide exercise intensity levels high enough to meet federal physical activity guidelines. If you do not have time to exercise but have time to watch TV, think about how much of that TV time could be replaced by some physical activity. Even short second bursts of exercise may improve metabolism. There are several gentle exercises you can do while watching TV. Tips on adding exercise to your routine Walking a dog is a form of exercise that benefits both pet and owner. Experts say that for a physically inactive person to become active and remain active for the long-term, the activity needs to be convenient and enjoyable. The activity needs to be something you can easily fit into your routine for several days each week. Even adding just 30 minutes of physical activity to your day, will be beneficial. Some of the examples below are the easiest to fit into a daily routine: Go for a brisk minute walk five times each week. Ideally, it should be done in one session. Walk your dog more often. If you do not have a dog but know a nearby friend who has one, offer to walk it for them. Find out whether there are any swimming pools nearby. Try to add some swimming to your weekly routine. This does not have to be every day. During your lunch break at work, go for a walk. Join some exercise classes. Join a martial arts club. If you do housework, do it a bit more vigorously and turn it into an exercise session. Beginners must remember that the secret is "little and often. Make sure your progress is gradual. Make sure you drink plenty of water during and after you exercise. Check with your doctor if you are not sure about your health. Experts say an exercise program should include both aerobic and anaerobic activities. However, if you are currently inactive, anything is better than nothing. Advice for starting an exercise program When people start an exercise program, they may experience various emotions, from elation to anxiety about not being able to keep it up. Remember the following tips to achieve long-term success: Remember why you started: Keep remembering why you started as this will help keep you motivated. Do everything at your own pace: If you have to compete, compete with your past self. Check your weight, heart rate, and blood pressure - then take it again in about 3 weeks and see the difference. There are so many activities to choose from. Perhaps there is an activity you really enjoyed when you were a child. Join a club with a friend: Some people prefer not to have the stress of someone else around. This depends on you. Experts can be very useful: This is important for your motivation and also for best results. The body improves faster if you change your program now and again. This does not mean you have to change walking or running to something else. It could mean changing your speed and distance, and pacing yourself in a different way, perhaps altering your route. Be realistic about your goals: If you need goals, make sure they are realistic - and work towards them. The longer you keep it up, the longer you will continue to do it: Even if you find it a bit of a chore at first, remember that after a few weeks, it will really become a habit. Intense exercise and calorie consumption A study found that you can burn an extra calories within 2 or 3 minutes if you incorporate sprint interval training in your exercise routine, this can considerably reduce the time you need for a workout. The sports scientists compared how much energy volunteers disbursed on two separate days. They concluded that there was a slight increase in the number of calories burned when intense exercise was incorporated into their routine. Study leader, Kyle Sevits said that

THE BENEFITS OF EXERCISE ON THE HUMAN BODY pdf

when people work out, they spend a long time at it. Exercise is time-consuming, a fact that puts many people off ever starting, as well as a common reason for individuals to drop out of exercise programs. We hope if exercise can be fit into a smaller period of time, then they may give exercise a go and stick with it. The team found that a brief spurt of intense training that works the lungs and heart has the same effect on preventing weight gain as 10 minutes or more of normal exercise. The benefits of regular physical activity are wide-reaching and well worth making an effort for.

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