Human body proportions template

Here is a look at the chemical composition of the human body, including the abundance of elements and how each element is used. Items are listed in order of decrease in abundance, with the most common element (by mass) first. About 96% of body weight consists of only four components: oxygen, carbon, hydrogen and nitrogen. Calcium, phosphorus, magnesium, sodium, potassium, chlorine and sulphur are macronutrients or elements that the body needs in large quantities. Liquid oxygen is blue. Warwick Hillier, Australia National University, Canberra En masse, oxygen is the most abundant element in the human body. If you think about it, it makes sense, since most of the body consists of water or H2O. Oxygen accounts for 61-65% of the mass of the human body. Even though there are many more hydrogen atoms in your body than oxygen, each oxygen atom is 16 times more massive than a hydrogen atom. Oxygen is used for cellular respiration. Graphite, one of the forms of elemental carbon. De Agostini Picture Library /Getty Images All living organisms contain carbon, which forms the basis of all organic molecules in the body. Carbon is the second most abundant element in the human body, accounting for 18% of body weight. All organic molecules (fats, proteins, carbohydrates, nucleic acids) contain carbon. Carbon is also found in the form of carbon dioxide or CO2. You inhale air that contains about 20% oxygen. The air you exhale contains much less oxygen, but is rich in carbon dioxide. Hydrogen is a colourless gas that glows purple when ionized. Wikimedia Creative Commons Hydrogen accounts for 10% of the mass of the human body. As about 60% of your body weight is water, much of the hydrogen exists in water, which works to carry nutrients, eliminate waste, lubricate organs and joints, and regulate body temperature. Hydrogen is also important in the production and use of energy. The H-ion can be used as a hydrogen ion or proton pump to produce ATP and regulate many chemical reactions. All organic molecules contain hydrogen in addition to carbon. Cory Doctorow About 3% of the mass of the human body is nitrogen. Proteins, nucleic acids and other organic molecules contain nitrogen. Nitrogen gas is found in the lungs because the primary gas in the air is nitrogen. Calcium is a metal and a third of the mass of the human body comes from calcium, after the water has been removed. Tomihahndorf / Creative Commons Calcium represents 1.5% of human body weight. Calcium is used to give the skeletal system its rigidity and strength. Calcium is found in and teeth. The Ca2 ion is important for muscle function. Dorling Kindersley/Getty Images About 1.2% to 1.5% of your body consists of phosphorus. Phosphorus is important for bone structure and is part of the primary energy molecule in the body, ATP or adenosine triphosphate. Most of the phosphorus in the body is found in bones and teeth. Potassium is a soft, white silvery metal that oxidizes quickly. Potassium Potassium 0.2% to 0.35 per cent of the adult human body. Potassium is an important mineral in all cells. It works as an electrolyte and is particularly important for conducting electrical impulses and for muscle contraction. The abundance of Ben Mills Sulfur is 0.20% to 0.25% in the human body. Sulphur is an important component of amino acids and proteins. It is present in keratin, which forms the skin, hair and nails. It is also necessary for cellular respiration, allowing cells to use oxygen. Sodium is a soft, silvery reactive metal. About 0.10% to 0.15% of your body mass is the sodium element. Sodium is an important electrolyte in the body. It is an important component of cellular fluids and is necessary for the transmission of nerve impulses. It helps regulate fluid volume, temperature and blood pressure. Warut Roonguthai / Wikimedia Commons Metallic magnesium accounts for about 0.05% of human body weight. About half of the body's magnesium is found in the bones. Magnesium is important for many biochemical reactions. It helps regulate heart rate, blood pressure and blood glucose levels. It is used in protein synthesis and metabolism. It is necessary to support the proper immune system, muscle and nerve function. Go to the main contentRD.COM Knowledge Brain GamesDan Saelinger/Trunk ArchiveWe humans are programmed to become stronger, faster and smarter; to climb higher, live longer, and populate every last inch of real estate. We have broken dozens of world records in recent decades, but when does our progress peak? No matter how we enhance our natural capabilities, our potential is bound by certain scientific principles — the laws of physics, biomechanics and thermodynamics — that do not give in to human ambition. Here, scientists define for us exactly where these limits lie. Most of the weight we can lift: 1000 pounds The world's most powerful weightlifters can lift 1,000 pounds, but Todd Schroeder, a biocinesologist at the University of Southern California, thinks they are wimping. Our brain limits the number of muscle fibers activated at any time to prevent us from hurting ourselves. Turn that security off, and you can produce a lot more force, Says Schroeder. He believes that optimal training, including mental training, can help athletes harness up to 20 percent more strength. Larger we can grow: 8 feet 11.1 inches In the 1930s, Robert Pershing Wadlow, aka the Illinois giant, reached this world record due to an overactive pituitary gland. His imposing stature severely stressed his circulatory (he could not feel his feet) and placed structural pressure on his bones (he wore pins when he walked). Because of these physical limitations, engineer Thomas Samaras estimates that if the average man has grown out of better nutrition, we will eventually level ourselves at about seven feet. His studies have also found that every inch above five feet shaves 1.3 years out of a lifetime, although others dispute this claim. Most we can remember: 1 million gigabytes If your brain is a Storage neurons held a memory each, you could have only a few gigabytes of storage space, similar to a USB stick, says Paul Reber, a psychologist at Northwestern University. But each neuron actually forms about 1000 connections to other neurons, exponentially increasing the brain's storage capacity to about a million gigabytes. The bottom line is that storage is not the problem: Our ability to record and retrieve data is. Smartest We Can Get: IQ of 198 This honour goes to Abdesselam Jelloul, who set this record in an adult IQ test in 2012. But a few wonders aside, if your score is close to Einstein's 160, you're probably within reach of humanity. Our brains are functioning close to their ability to process information, says Simon Laughlin, a neurobiologist at the University of Cambridge. This is due to a range of electrical compromises: If the human brain were to become larger, it would be less effective. Fastest possible: 10.5 metres per second After Olympic sprinter Usain Bolt broke the 100-metre world record at the 2008 Olympics, Stanford University biologist Mark Denny wondered if Lightning Bolt sprinted as fast as a human can go? After charting 100-metre records in the 1920s, Denny predicts that humans will plateau at about 9.48 seconds for this meter mark, 0.10 seconds faster than Bolt's current record, much faster in a sport where differences are measured by the 100th of a second. Most friends we can have: 150 friends We're not talking about Facebook friends, but the real ones you can count on. With these criteria, 150 is the maximum, says Robin Dunbar, a psychologist at the University of Oxford. Dunbar reviewed census data on tribal groups, which averaged 148 members. The same number regularly returns to modern affairs. Even more famously, the founder of GoreTex insisted on separate factory units of 150 workers so that people would be more likely to be buddies. Longer We Can Go Without Sleep: 11 Days In 1964, Randy Gardner, a 17-year-old in San Diego, woke up at 6 a.m.m. to begin his scientific project: an attempt to break the world record for sleepless days. He did it. Gardner did up to 11 days while William Dement, a psychiatrist at Stanford University, monitored his vital signs. Gardner remained lucid, albeit irritable. Since then, studies have shown that closed-eyed rats will die within 30 days, and a rare condition called deadly familial insomnia, which prevents people from azing at all, causes death within a few months to a few years. Longer we can go without solid food: 382 days Of course, feat is easier to accomplish if you are obese to begin with, which was the case with Patient A.B. The 27-year-old, under observation at the University of Dundee in Scotland, weighed 456 pounds when he began fasting in the 1973 study. With a purely noncaloric diet of food like yeast and multivitamins, it fell to 180 by the time the study ended, more than a year later. Needless to say: Don't try this at home. House. Published: June 22, 2015Originally Published in Reader's Digest Enjoy the BEST stories, tips and jokes! Jokes!