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Balance plays an important role in well-being. In fact, it's central to our very survival. Homeostasis is a process that allows the body to maintain a stable internal environment. While we often think of this in terms of the physical mechanisms involved, homeostasis also plays a vital part in maintaining mental health and wellness. If the brain and body systems that regulate mood, sleep, stress, and energy levels are thrown out of equilibrium, we become more susceptible to mental health challenges. Keep reading to learn more about how homeostasis works, what happens when it is disrupted, and the biological factors that can affect our mental well-being. Homeostasis refers to the body's need to reach and maintain a certain state of equilibrium. The term was first coined by a physiologist named Walter Cannon in 1926. More specifically, homeostasis is the body's tendency to monitor and maintain internal states, such as temperature and blood sugar, at fairly constant and stable levels. Homeostasis refers to an organism's ability to regulate various physiological processes to keep internal states steady and balanced. These processes take place mostly without our conscious awareness. Your body has set points for a variety of statesincluding temperature, weight, sleep, thirst, and hunger. When the level is off (in either direction, too much or too little), homeostasis will work to correct it. For example, to regulate temperature, you will sweat when you get too hot or shiver when you get too cold. Another way to think of it is like the thermostat in your house. Once set at a certain point, it works to keep the internal state at that level. When the temperature drops in your house, your furnace will turn on and warm things up to the preset temperature. In the same way, if something is out of balance in your body, a physiological reaction will kick in until the set point is once again reached. Here's how the primary components of homeostasis work: Stimulus: A stimulus from a change in the environment kicks something out of balance in the body.Receptor: The receptor reacts to the change by informing the control unit.Control unit: The control unit then communicates the change needed to bring the body back into balance.Effector: The effector receives this information and acts on the change that is needed. A negative feedback loop will work to decrease the effect of the stimulus, whereas a positive feedback loop will increase it. In homeostasis, negative feedback loops are most common, as the body is typically attempting to decrease the effect of the stimulus to get the body back to equilibrium. There are three main types of homeostatic regulation that happen in the body. Though their names might be unfamiliar, you probably experience them every day. When you think about homeostasis, temperature might come to mind first. It is one of the most important and obvious homeostatic systems. Regulating body temperature is called thermoregulation. All organisms, from large mammals to tiny bacteria, must maintain an ideal temperature to survive. Some factors that influence this ability to maintain a stable body temperature include how these systems are regulated and the organism's overall size. Endotherms: Some creatures, known as endotherms or "warm-blooded" animals, accomplish this via internal physiological processes. Birds and mammals (including humans) are endotherms.Ectotherms: Other creatures are ectotherms (aka "cold-blooded") and rely on external sources to regulate their body temperature. Reptiles and amphibians are both ectotherms. The colloquial terms "warm-blooded" and "cold-blooded" do not actually mean that these organisms have different blood temperatures. These terms simply refer to how these creatures maintain their internal body temperatures. Thermoregulation is also influenced by an organism's size, or more specifically, the surface-to-volume ratio. Large organisms: Larger creatures have a much greater body volume, which causes them to produce more body heat.Small organisms: Smaller animals, on the other hand, produce less body heat but also have a higher surface-to-volume ratio. They lose more body heat than they produce, so their internal systems must work much harder to maintain steady body temperature. This is even true of babies, especially those born prematurely. Osmoregulation strives to maintain the right amount of water and electrolytes inside and outside cells in the body. The balance of salt and water across membranes plays an important role, as in osmosis, which explains the name "osmoregulation." In this process, the kidneys are responsible for getting rid of any excess fluid, waste, or electrolytes. Osmoregulation also affects blood pressure. Your body regulates other chemical mechanisms as well to keep systems in balance. These use hormones as chemical signalsfor example, in the case of blood sugar levels. In this situation, the pancreas would release either insulin, when blood sugar levels are high, or glucagon, when blood sugars are low, to maintain homeostasis. Homeostasis involves both physiological and behavioral responses. In terms of behavior, you might seek out warm clothes or a patch of sunlight if you start to feel chilly. You might also curl your body inward and keep your arms tucked in close to your body to keep in the heat. As endotherms, people also have a number of internal systems that help regulate body temperature. When your body temperature dips below normal, a number of physiological reactions respond to help restore balance. Blood vessels in the body's extremities constrict in order to prevent heat loss. Shivering also helps the body produce more heat. The body also responds when temperatures go above normal. Have you ever noticed how your skin becomes flushed when you are very warm? This is your body trying to restore temperature balance. When you are too warm, your blood vessels dilate in order to give off more body heat. Perspiration is another common way to reduce body heat, which is why you often end up flushed and sweaty on a very hot day. Like the body, the mind seeks its own type of homeostasis and attempts to compensate when out of balance. For example, one prominent theory of human motivation, known as drive-reduction theory, suggests that homeostatic imbalances create needs. These needs, in turn, motivate behavior in an attempt to restore homeostasis. The body's stress response system is another example of the connection between homeostasis and mental health. When we encounter a perceived threat in our environment, the body's hypothalamic-pituitary-adrenal (HPA) axis releases cortisol and other stress hormones. This response is helpful in the short term because it helps us respond quickly to the threat. But when we experience prolonged stress and that system remains activated for too long, it can throw the body out of balance. Over time, this dysregulation can result in mental health challenges, including fatigue, emotional reactivity, anxiety, and depression. Homeostasis also affects other elements that impact our mental, emotional, and physical well-being, including appetite, sleep, and energy levels. Our sleep-wake cycle, for example, is influenced by a variety of hormones and neural signals. If it is disrupted, we can experience problems with brain fog, depression, irritability, and insomnia. If neurotransmitter levels in the body are disrupted, such as the balance of serotonin and dopamine, it can affect aspects of well-being like mood, motivation, pleasure, and emotional stability. Homeostasis is essential for physical well-being but also critical for mental health. It allows us to return to a baseline after stressors and disruptions. These processes help the mind and body maintain a balance and highlight the importance of utilizing lifestyle factors, such as getting enough sleep, eating a balanced diet, getting regular physical activity, and using stress management techniques, to support mental balance. BioExplorer shares breaking science news and articles on a variety of topics from the leading universities and research institutions around the globe. It is your ultimate guide to Biological Web Resources ranging from DNA to Plants, Animals, and everything in-between.This site was originally developed for the researchers involved in biological studies, but we want to make the science more enjoyable to even a common man too. Stay tuned for the exciting gardening, book reviews, science news articles to be updated here regularly. Read More Welcome to the world of Botany! Explore all types of plants and flowers for your next garden project here. 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Here, we explore the top ten most spectacular birds of Florida, which are native to the state of Florida, from Scrub-Yay to Killdeer and much more. Monkeys are divided into two groups; the Old World and New World monkeys. Explore what do monkeys eat, monkeys diet by types and what eats monkeys here. ,the free encyclopedia that anyone can edit.117,937 active editors 7,001,389 articles in EnglishThe English-language Wikipedia thanks its contributors for creating more than seven million articles! Learn how you can take part in the encyclopedia's continued improvement.GL Mk.II transmitter vanRadar, Gun Laying, MarkI, or GL Mk.I for short, was an early World WarII radar system developed by the British Army to provide information for anti-aircraft artillery. There were two upgrades, GL/EF (elevation finder) and GL Mk.II (pictured), both improving the ability to determine a target's bearing and elevation. GL refers to the radar's ability to direct the guns onto a target, known as gun laying. The first GL sets were developed in 1936 using separate transmitters and receivers mounted on gun carriages. Several were captured in 1940, leading the Germans to believe falsely that British radar was much less advanced than theirs. The GL/EF attachment provided bearing and elevation measurements accurate to about a degree: this caused the number of rounds needed to destroy an aircraft to fall to 4,100, a tenfold improvement over early-war results. The Mk.II, which was able to directly guide the guns, lowered the rounds-per-kill to 2,750. About 410 Mk.Is and 1,679 Mk.IIs were produced. 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GaillardPeter DavidAlan YentobGerry ConnollySebastio SalgadoNominate an articleMay 30: Statehood Day in Croatia (1990)Johann Sebastian Bach1431 Hundred Years' War: After being convicted of heresy, Joan of Arc was burned at the stake in Rouen, France.1723 Johann Sebastian Bach (pictured) assumed the office of Thomaskantor in Leipzig, presenting the cantata Die Elenden sollen essen in St.Nicholas Church.1922 The Lincoln Memorial in Washington, D.C., featuring a sculpture of the sixteenth U.S. president Abraham Lincoln by Daniel Chester French, opened.1963 Buddhist crisis: A protest against pro-Catholic discrimination was held outside the National Assembly of South Vietnam in Saigon, the first open demonstration against President Ng nh Dim.2008 The Convention on Cluster Munitions, prohibiting the use, transfer, and stockpiling of cluster bombs, was adopted.Ma Xifan (d.947)Colin Blythe (b.1879)Norris Bradbury (b.1909)Wynonna Judd (b.1964)More anniversaries: May 29May 30May 31ArchiveBy emailList of days of the yearAboutSeventeen performing "Oh My!" in 2018South Korean boy band Seventeen made their debut on May 26, 2015, when they performed a showcase for their debut EP 17 Carat in front of a crowd of 1,000 people. Since then, the group have held 9 concert tours, 13 fan meetings, and have performed at a number of music festivals and awards shows. Their concert tours include the Right Here World Tour, which sold over one million tickets, and the Follow Tour, which was noted by Billboard as being the top grossing K-pop tour of 2023. In 2024, Seventeen made their first appearances at festivals in Europe, when they were the first South Korean act to perform at Glastonbury Festival's Pyramid Stage and as headliners for Lollapalooza Berlin. Seventeen's live performances are well regarded by fans and critics alike, and garnered them the award for Top K-pop Touring Artist at the 2024 Billboard Music Awards. (Fulllist...)Recently featured: Accolades received by Top Gun: MaverickNational preserve76th Primetime Emmy AwardsArchiveMore featured listsIgnace Tonen (1840 or 1841 15 March 1916), also known as Nias or by his Ojibwe name Maiagizis ('right/correct sun'), was a Teme-Augama Anishnabai chief, fur trader, and gold prospector in Upper Canada. He was a prominent employee of the Hudson's Bay Company. Tonen was the elected deputy chief before being the lead chief and later the life chief of his community. In his role as deputy, he negotiated with the Canadian federal government and the Ontario provincial government, advocating for his community to receive annual financial support from both. His attempts to secure land reserves for his community were thwarted by the Ontario premier Oliver Mowat. Tonen's prospecting triggered a 1906 gold rush and the creation of Kerr Addison Mines Ltd., although one of his claims was stolen from him by white Canadian prospectors. This photograph shows Tonen in 1909.Photograph credit: William John Winter; restored by Adam CuerdenRecently featured: Australian white ibisHell Gate BridgeAnemonoides blandaArchiveMore featured picturesCommunity portal The central hub for editors, with resources, links, tasks, and announcements.Village pump Forum for discussions about Wikipedia itself, including policies and technical issues.Site news Sources of news about Wikipedia and the broader Wikimedia movement.Teahouse Ask basic questions about using or editing Wikipedia.Help desk Ask questions about using or editing Wikipedia.Reference desk Ask research questions about encyclopedic topics.Content portals A unique way to navigate the encyclopedia.Wikipedia is written by volunteer editors and hosted by the Wikimedia Foundation, a non-profit organization that also hosts a range of other volunteer projects: CommonsFree media repository MediaWikiWiki software development Meta-WikiWikimedia project coordination WikibooksFree textbooks and manuals WikidataFree knowledge base WikinewsFree-content news WikiquoteCollection of quotations WikisourceFree-content library WikispeciesDirectory of species WikiversityFree learning tools WikivoyageFree travel guide WiktionaryDictionary and thesaurusThis Wikipedia is written in English. 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"Adore U" serves as the lead single for the EP.17 Carat features five tracks written, co-written, and co-produced by Seventeen's group members. "Adore U" was chosen as the lead single for the EP and was performed on multiple music shows by the group. "Shining Diamond" was used as a pre-single on the group's reality debut show. The group stated that the tracklist was chosen to reflect Seventeen's core concept of "boys' passion".[1] The album has two physical versions: one with a "black" themed photo card set, and the other with a "white" themed photo card set. All copies include a CD containing the songs and a fold-up poster/lyric sheet."Adore U" is the lead single of the extended play. It was written by Woozi, S.Coups, and Yeon Dong-geon.[2] The Korea Herald states "'Adore U' is a funky pop song about a teenage boy trying to navigate through puppy love."[3] It marks the beginning of the group's trilogy composed of the singles Adore U, Mansae, and Pretty U about a boy meeting, falling in love and asking out a girl. The track was composed and arranged by Woozi, Bumzu, and Yeon Dong-geon. The music video for the single was released on May 29, 2015, and was directed by Dee Shin. The dance choreography accompaniment to the song was choreographed by Hoshi and focuses on "storytelling, and on highlighting each member's strengths onstage".[4] The single has sold more than 38,000 digital copies and peaked at number 13 on the Billboard US World Chart.The EP has sold over 82,972 copies in South Korea.[5] It peaked at number 4 on the Korean Gaon Album Chart[6] and number 8 on the US World Billboard Chart.[7]Year-end listsCritic/publicationListRankRef.BillboardThe 10 Best K-pop Album of 2015Placed[8]Hoshi participated in the choreography of "Adore U" and "Shining Diamond", Dino choreographed "Jam Jam".[9]Official track list[10]No.TitleLyricsMusicArrangementsLength1."Shining Diamond"WooziVernonS.CoupsKim Min-jeongWooziMasterKeyRishiMasterKeyRishi3:242.""Adore U"" (; Akkinda)WooziVernonS.CoupsBumzuWooziBumzuYeon Dong-geonWooziBumzuYeon Dong-geon3:073."Ah Yeah" (Hip-Hop unit)S. CoupsVernonWonwooMingyuCream DoughnutRishiCream DoughnutRishi3:294."Jam Jam" (Performance unit + Vernon)WooziHoshiDinoVernonWooziCream DoughnutCream Doughnut3:255."20" (Vocal unit)WooziWooziWon Yeong-heonWon Yeong-heonDong Ne-hyeong3:23Weekly chart performance for 17 CaratChart (2015-2023)PeakpositionJapanese Albums (Oricon)[11]46South Korean Albums (Gaon)[12]4US World Albums (Billboard)[13]8Year-end chart performance for 17 CaratChart (2015)PeakpositionSouth Korean Albums (Gaon)[14]47^ "Seventeen hopes to shine like diamonds with '17 Carat'". The Korea Herald. 26 May 2015. Retrieved 30 November 2016.^ "Adore U". Color Coded Lyrics. 29 May 2015. Retrieved 29 November 2016.^ "Seventeen hopes to shine like diamonds with '17 Carat". The Korea Herald. 26 May 2015. Retrieved 30 November 2016.^ "Seventeen hopes to shine like diamonds with '17 Carat'". The Korea Herald. 26 May 2015. 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Retrieved February 17, 2024.Retrieved from " 3The following pages link to 17 Carat External tools(link counttransclusion countsorted list) See help page for transcluding these entriesShowing 50 items.View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Main Page (links | edit)Pledis Entertainment discography (links | edit)List of 2015 albums (links | edit)2015 in South Korean music (links | edit)Seventeen (South Korean band) (links | edit)S.Coups (links | edit)Vernon (rapper) (links | edit)Wonwoo (links | edit)List of awards and nominations received by Seventeen (links | edit)Seventeen discography (links | edit)Love & Letter (links | edit)Joshua (singer) (links | edit)Seventeen TV (links | edit)17 carat (redirect page) (links | edit)Going Seventeen (links | edit)List of Seventeen live performances (links | edit)Teen, Age (links | edit)Al1 (links | edit)Bumzu (links | edit)Boys Be (EP) (links | edit)You Make My Day (links | edit)You Made My Dawn (links | edit)Jun (Chinese entertainer) (links | edit)List of Stray Kids live performances (links | edit)The8 (links | edit)An Ode (links | edit)Seungkwan (links | edit)Fallin' Flower (links | edit)Heng:gar (links | edit)Semicolon (EP) (links | edit)Your Choice (links | edit)Going Seventeen (web series) (links | edit)Not Alone (Seventeen song) (links | edit)Attacca (EP) (links | edit)Rock with You (Seventeen song) (links | edit)Woozi (links | edit)Hoshi (South Korean singer) (links | edit)Don't Wanna Cry (Seventeen song) (links | edit)Darl+ing (links | edit)Face the Sun (links | edit)Left & Right (Seventeen song) (links | edit)24H (EP) (links | edit)We Make You (links | edit)Hot (Seventeen song) (links | edit)Dream (Seventeen EP) (links | edit)BSS (band) (links | edit)FML (EP) (links | edit)Super (Seventeen song) (links | edit)Always Yours (album) (links | edit)Seventeenth Heaven (links | edit)View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Retrieved from " WhatLinksHere/17_Carat"Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.Standard BreakdownThere are 3 major concepts that should be demonstrated by the investigation:HomeostasisHomeostasis can be thought of as an organisms fight to stay alive. As the temperature gets colder outside, your body increases circulation to keep your important organs at the right temperature. Another good example is maintaining sugar levels within the bloodstream after a meal. This delicate balance must be maintained for cells to get the nutrients, oxygen, and water that they need while waste products cells produce are removed.HomeostasisA more formal definition of homeostasis is the ability of an organism to resist change or overcome disruptions in equilibrium in order to maintain a stable internal environment. This is true whether you are talking about a single-celled organism or a blue whale. Typically, internal conditions are contained by either negative feedback loops or positive feedback loops.Negative Feedback LoopA negative feedback loop counteracts a stimulus. So, if your blood pressure goes up, a negative feedback loop brings it back down. If your blood sugar rises, a negative feedback loop brings it back down. Negative feedback loops work through a number of different biochemical methods, though the general outline is always the same. Some condition (blood pressure, oxygen level, temperature) causes a process to activate. This process then counteracts the condition that set it off. This serves to keep a number of conditions in your body at a set level. While they will go up and down a little bit, they are largely constrained within a set of boundaries. It should be noted that the feedback mechanisms work by reversing the stimulus, whichever direction that stimulus is going. In the blood sugar example, the pancreas releases insulin when blood sugar levels are increasing. This causes blood sugar levels to decrease, reversing the trend back to normal. When blood sugar levels are low and decreasing, another negative feedback mechanism tries to increase blood sugar levels. This reverses the original stimuli until the system is back at equilibrium.Positive Feedback MechanismsOrganisms cannot always live in equilibrium, and some process must be carried out until completion. Good examples of this in an individual organism are giving birth, sending signals through nerves, and blood clotting all of which must be carried out to completion for organisms to survive. Positive feedback mechanisms work in the opposite direction, compared to negative feedback mechanisms. Instead of reversing a stimulus, positive feedback mechanisms enhance or increase the stimulus. Blood clotting is a good example. Injured tissue releases a chemical that causes clotting factors in your blood to activate. These factors activate blood platelets which start to stick together. These platelets recruit more platelets to the injured site. This process reinforces itself until a blood clot has completely sealed off the wound, stopping the release of chemicals from injured cells. The important aspect of positive feedback mechanisms is that some processes must be completed in order to return to a state of homeostasis.Injury inflammation biological human body responseA little clarification:The standard contains this clarification statement: Examples of investigations could include heart rate response to exercise, stomate response to moisture and temperature, and root development in response to water levels. Though there are many other examples, lets take a quick look at each of these suggestions:Heart Rate and ExerciseWhen you begin exercising, your muscle cells start using tremendous amounts of oxygen. This activates many different feedback mechanisms. To contract, muscle cells must create and utilize ATP. To create ATP, cells need oxygen, which they rapidly absorb from the bloodstream. This downward movement of oxygen levels stimulates areas in your brain to increase breathing and heart rate. If you maintain high levels of exercise, your heart rate and breathing will stay elevated to counteract the usage of oxygen. When you stop, the negative feedback mechanism is turned off, and your heart rate returns to baseline.Stomate Response to Moisture and TemperatureStomates are the tiny openings on the leaves of plants that allow water to exit, allowing more water to be drawn up in the roots in the process of transpiration. Stomates are thought to operate with feedback mechanisms that keep the internal water levels, carbon dioxide levels, and oxygen levels within particular bounds. Opening the stomates allows water to exit, and carbon dioxide to enter. When plants are actively photosynthesizing, they need more carbon dioxide to create sugar. In most plants, this process is driven by sunlight acting as a positive feedback mechanism to hold the stoma open. You can see this process in the image below:Structure of stomatal complex with open and closed stomaRoot Development to Water LevelsRoots grow toward water a process that operates on a positive feedback mechanism. When water is discovered by a root tip, more growth occurs. More growth drives the root towards the water source, causing it to get into more water and subsequently grow more. This is essentially how roots find not only water but sources of nutrients and minerals as well.Other Homeostasis Mechanisms in the BodySympathetic and parasympathetic nervous systemThis image shows a number of different mechanisms used to preserve homeostasis, controlled by both the parasympathetic and sympathetic nervous systems.What to AvoidThis NGSS standard also contains the following Assessment Boundary: Assessment does not include the cellular processes involved in the feedback mechanism. Heres a little more specificity on what that means:Cellular Processes in Feedback Mechanisms:This assessment boundary is fairly straightforward. Simply stop at the level of the cell. You can even say what specific cells contribute to the process, but leave out any complicated cellular machinery involved in the process. For instance, in talking about blood sugar levels you can discuss the actions of the pancreas and liver and how cells in those organs release insulin and glucagon (respectively). However, you should not discuss how insulin binds to insulin receptors on cells, causing them to bring glucose-importing proteins to the surface of the cell to intake glucose. Likewise, you dont need to cover the process of how glucagon causes the liver to convert glycogen into glucose that it releases into the bloodstream. Biology is the study of living things. It is broken down into many fields, reflecting the complexity of life from the atoms and molecules of biochemistry to the interactions of millions of organisms in ecology. This biology dictionary is here to help you learn about all sorts of biology terms, principles, and life forms. Search by individual topic using the alphabetized menu below, or search by field of study using the menu on the left.Trending Biology TopicsThe list below contains the most popular biological concepts. You can also view the complete list of biology terms here. Homeostasis: During the study of life, one of the most important attribute to be aware of is the concept of internal balance or homeostasis. But what exactly is homeostasis, how does it occur, and why is it important in living organisms?Find out the answers to these questions below. What is Homeostasis? Walter CannonThe word homeostasis comes from the Greek words[1] homoios which means same, and stasis which means steady or standing still. In 1930, the term was officially coined by American physiologist Walter Cannon[2] in one of his books entitled The Wisdom of the Body[3].Cannons definition of the term is solely focused on the ability of the human body to regulate certain factors like temperature and concentration of substances in the body.By definition, homeostasis refers to the characteristic of a system that maintains the balance and stability between the internal and external environment. Almost all living organisms widely exhibit homeostasis. It is constantly happening which is almost impossible to find any organism that does not perform it. The following are just a few examples from the human body and our ecosystems.1. Maintenance of Body Temperature One of the most common examples of homeostasis is the regulation of body temperature[4]. In humans, the normal range falls on 37 degrees Celsius or 98. 6 degrees Fahrenheit. In order to maintain this, the body controls temperature either by producing heat or releasing excess heat. When the body temperature goes beyond 98.6F, the person would get fever and if it drops below this limit, the person would get hypothermia. 2. Maintenance of Glucose Level A special type of sugar in our bloodstream called Glucose[5] and it needs to be level for the person to be healthy. If this sugar level gets too high, then the pancreas releases a hormone called insulin to balance the Glucose in the bloodstream. On contrast, if the sugar level drops too low, then stored Glycogen (form of sugar) in liver and muscles get converted into Glucose to maintain the optimal balance. 3. Protection From infection The immune system[6] kicks in to maintain the homeostasis when a rogue virus or bacteria gets into the body; it fights and protects from getting infections before they make the person ill. 4. Maintenance of Blood Pressure The healthy blood pressure (BP) for humans is 120/80 (120 systolic pressure / 80 diastolic pressure). If the BP is too high, then brain sends signals to heart to slow down the heart pumping to normalize the pressure. Similarly, if the BP is too low, then the heart compensates by increasing the pressure in arteries to keep the balance. This whole orchestration is done via the nervous and endocrine systems. 5. Maintenance of Fluid Volume Homeostasis is also important to regulate fluid (i.e. water) as well as the concentration of ions in the body. In animals, the main organs assigned for this task are the kidneys. Aside from the said functions, the kidney also maintains homeostasis by holding essential substances (e.g. sugars and proteins) so they are not flushed out of the body. 6. Maintenance of Breathing Patterns Breathing is an involuntary action and the nervous system helps to keep the homeostasis by ensuring the body gets its most essential oxygen (O2) by proper breathing patterns. 7. Removal of Wastes/Toxins The lymphatic system[7] (network of tissues and organs to help get rid of toxins from the body) maintains homeostasis by getting rid of toxins such as urine, feces, CO2, bile, sweat and worn out cells from the body. 8. Regulation of Light Entry in Eyes The way Homeostasis is maintained by the eyes is by contracting the pupil when excess light enters; on contrast, the pupil expands when exposed to darkness to get a sense of the visual. 9. Stable Population in An Ecosystem In an ecological perspective[9] , an ecosystem maintains equilibrium in a different way. An ecosystem in homeostasis occurs when there is a relatively stable number of population of organisms. An example of this occurs when a huge number in the population gets wiped out due to natural disasters of anthropogenic activities. Importance of Homeostasis Based from the aforementioned examples, you may probably already have understood how important homeostasis is. Living organisms need to maintain homeostasis constantly in order to properly grow, work, and survive. In general, homeostasis is essential for normal cell function, and overall balance.In the human body, chemicals like Oxygen (O2), Carbon dioxide (CO2) and digested food enter and exit the cells using the concept called diffusion and osmosis. For this process to function properly, homeostasis helps our body to keep both water and salt balance level.Enzymes in the cell help in the speedy chemical reactions to order to keep the cells alive but these enzymes need to be in an optimal temperature to function properly. Again, homeostasis plays a crucial role in maintaining a constant body temperature (37C/98.6F) for enzymes to do their jobs.Mechanisms to attain homeostasis are stable as they need to resist any change that happens within and outside the organisms environment. These mechanisms vary depending on the individual and may either be positive or negative feedback. It is important to note that homeostasis occurs naturally when a system is stable and functions correctly. This can be achieved by continuously making systems work together in harmony. Key ReferencesHomeostasis. The ancient Greek origin of a modern scientific principle. PubMed NCBI. Accessed September 17, 2017. Link.The Importance of Homeostasis | Conquer Fear and Live Free!. Accessed September 17, 2017. Link.editions:ISBN0393002055 Google Books. Accessed September 17, 2017. Link.What is Homeostasis? Scientific American. Accessed September 17, 2017. Link.Glucose Homeostasis. Accessed September 17, 2017. 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