The ecosystem inside

The Ecosystem Inside Within the adult human body, there are approximately two hundred trillion microbes, with each microbe hosting roughly one thousand different species. As such, a person is not considered to be just a single human body, but a superorganism made up of a variety of ecosystems. These little ecosystems, and each individual microbe, are essential to the well-being of the human body. The purpose of the Duke study, which the article focuses on, is to see how these microbes can be controlled to positively impact our health. The Duke study, as well as many others, are proving that the microbes can be beneficial to our health, and we should cease dumbing them down with medications to fully understand what they are capable of in the human body. The microbiome in the human gut remains to be healthy only as long as the rest of the species within are also healthy, as is the case with an actual ecological system. A balance must be maintained for everything to function as it should to provide the best, and healthiest, results. While some diseases are caused by a single organism that produces an infection, there are many diseases that are caused simply due to an imbalance in the organisms that transmit with the host. Using premature infants, a team of doctors, ecologists, and researchers set out to determine which species thrive the most in the early stages of the human microbiome, and what part they play in critical diseases that effect infants and people later in life. Many people connect microbes with disease, and while this may be the case in some situations, microbes are more commonly connected with health. For example, every person has E. coli in them, but not everyone is effected by it. It all comes down to the balance of the microbe. A greater healthier population of the microbes can throw off the unhealthy population, proving to be beneficial to the health of the human

being. If the larger population consists of unhealthy microbes, then the person risks becoming sick or developing numerous types of infections. The premature infants in the study are born with virtually no microbes, which is due to the fact that the majority of them were born as cesarean sections and do not go through the birth canal. When one of these infants developed an infection, they were given antibiotics. This has allowed the doctors and researchers to understand how much risk comes with implementing antibiotics into the human body. Not only can antibiotics cause antibiotic resistance, but they are also capable of upsetting the balance of the microbial community, which makes it easier for the disease to take over. Antibiotics have also been proven to prevent the growth of bacterial communities that could be beneficial to the health of the infants. Tending to the healthy state of the microbiome instead of attempting to kill it with antibiotics has brought about positive results that can change the way people heal from disease and infection. The goal of understanding how the microbiome works will hopefully lead to doctors and researchers helping people to fight off disease without having to resort to the harmful effects of antibiotics. Works Cited Tennesen, Michael. “ The Ecosystem Inside.” Discover Mar. 2011: 34-34. Print.