Enhancing the Effectiveness of the Antibiotic Ampicillin Against Escherichia coli

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Which variable will have the highest impact on increasing the effectiveness of antibiotics? Our goal was to find ways to increase antibiotic effectiveness. The real root of the issue is bacteria growing resistant to certain antibiotics. We hypothesized that with natural herbs or supplements taken parallel to antibiotics, it could increase their effectiveness. Over the course of two weeks, we measured the zones of inhibition after swabbing all Petri dishes with 5 drops of e.coli nutrient broth after placing ampicillin discs equidistant apart (3 in each). The additional variables added to each petri dish were, vitamin E, vitamin D3, vitamin K2, ginger, pepper, clove, thyme, oregano, Lactobacillus gasseri, Lactobacillus acidophilus, and Lactobacillus casei. After conducting our experiment, we recorded our data and began to analyze our results. We measured the diameter of the zone of inhibition of the three ampicillin discs in each of the three plates. Then, we averaged out the results and calculated the mean and standard deviation. This led us to which natural variable worked the best in increasing the effectiveness of ampicillin against E. coli. Through our results, we concluded that Lactobacillus acidophilus was the most effective additive in increasing the efficiency of the antibiotic ampicillin against E. coli.