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|  | In conclusion, the tests provide evidence to support the hypothesis that garlic can act to some degree as an antibacterial substance. When there was any amount of garlic added to the chromatography paper a visible zone of inhibition was produced after incubation with the bacteria for one day. Our results indicated that over time the antibacterial effects of garlic will degenerate at a relatively high rate while the antibacterial effects of the antibiotic erythromycin on Bacillus cereus will not. The results also indicate that a concentration of approximately 1.35 mg/ul of garlic has similar antibacterial effects on Bacillus cereus as the antibiotic erythromycin in a 1.35 mg/ml concentration. In other word 1000 times more garlic is needed to produce the approximate results as the antibiotic. Normally, the antibiotic is taken two to three times a day in 400mg installments. Using the 1000 times ratio, one would need about 400 grams of garlic juice each time. To get that much garlic juice one would have to eat about 30 medium bulbs of garlic each time.  However, our results also indicate that the effectiveness of garlic as an antibacterial substance rises dramatically with increased concentrations while the effectiveness of the antibiotic does not. Therefore perhaps not so much garlic is needed. Also, we do not know what fraction of the garlic we used was the active ingredient. If only a small portion of the garlic juice contained the allicin or what caused the antibacterial effects, then one would have to ingest only a little bit of the extracted active substance, perhaps similar to the amount of antibiotic needed. Garlic should still be seriously considered as a possible alternative to antibiotics even with the high amounts of garlic needed to obtain similar results as an antibiotic. That is because, while bacteria can and are developing resistance to antibiotics, it would be impossible for them to develop resistance against garlic. For the bacteria to develop the resistance they would have to change the structure of the enzymes that make it possible for them to exist.  Overall, from this study we can conclude:   * Garlic has certain antibacterial effects * The antibacterial effects of garlic are affected to a great extent by the concentration of garlic used * The antibacterial effects of garlic degenerate at a high rate in comparison to antibiotics over time * An approximate 1.35 mg/ul concentration of garlic has similar antibacterial effects as a 1.35 mg/ml concentration of the antibiotic erythromycin on the bacterium Bacillus cereus   This study, although not conclusive on whether garlic could be an alternative to antibiotics, can serve as a basis for further research.  Even if garlic cannot kill the bacteria to a desirable extent, its should not be overlooked. In addition to being a herb that can give food more taste, garlic has many medical benefits. It is our belief that continued consumption of garlic could help to establish conditions in body fluids that would be undesirable to bateria lowering an individuals chances acquiring an infection. Other beneficial properties of garlic include its ability to lower levels of LDL, and to destroy agents believed to cause tumors. It is believed that the antioxidant properties of garlic can slow the degeneration of liver and brain cells. Studies also have shown that garlic has the ability to prevent blood from clotting, and thus preventing heart attacks and strokes. Though there appears to be many advantages of the consumption of garlic, it should be noted that it may cause bleeding problems in patients under treatments of anticoagulant drugs such as aspirin. Such patients and pregnant women are advised to consult their physicians about the use of garlic. |

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