

Kimchi Bacterial Affects against Common Sinusitis Bacteria

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Sinusitis is very common condition in the United States, afflicting 15% of the population each year. This study tested the antimicrobial/ inhibitory effects of Kimchi against the common Gram positive sinusitis bacteria *Staphylococcus aureus* ATCC 25923 and *Staphylococcus epidermidis* ATCC 12228, as well as the Gram negative bacterium, *Pseudomonas aeruginosa* ATCC 27853. The effects on *Exiquobacterium Mexicanum* ATCC 49676 (*Corynebacterium* ssp.) a normal gram positive nasal flora bacteria was also tested. Solid and Liquid Extractions were performed on whole Kimchi and used to test against the various organisms at varying concentrations in a microwell plate incubated for 24 hours aerobically at 37C.. This study succeeded in showing that Kimchi Solid and Kimchi Liquid extract have inhibitory effects against the common sinusitis bacteria *Staphylococcus Aureus* and a normal flora bacteria *Staphylococcus epidermidis* at a concentration of 25% or above. Kimchi Extract also showed increasing bacterial growth in the normal nasal flora *Exiquobacterium Mexicanum* at a 25% concentration, and no effects on the gram negative bacteria *Pseudomonas aeruginosa*. This could be due to active biological ingredients present in the Kimchi, and thus allow for a possible treatment for sinusitis without antibiotics.

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