

Oral Immunization against Diphtheria and Tetanus Infections by Fluid Diphtheria and Tetanus Toxoids

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The safety and neutralizing antibody responses of animal and human volunteers to oral immunization with purified diphtheria and/or tetanus toxoids associated with egg yolk or an adjuvant-like medicinal plant, London Rocket Seed, are discussed in the study. Purified diphtheria toxoid incorporated in egg yolk and mixed with a medicinal plant seed was used to orally immunize rabbits against diphtheria infection. Animals were partially immunized against a lethal diphtheria toxin challenge. The immunity was complete when gastric enzyme juices were inhibited before oral vaccination by aprotinin, a natural protease inhibitor. Rabbits and monkeys were orally immunized against both diphtheria and tetanus in the same way by pre-treatment with aprotinin. Adult volunteers receiving protease inhibitor before administration of oral toxoids have shown a significant rise in specific circulating antitoxins.

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