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Studies on the action of certain antiseptics, toxic salts, and alkaloids against the bacteria and protozoa of the intestine of the rabbit

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The authors believe from theoretical considerations that there is a difference in the susceptibility of bacteria and protozoa to the action of antiseptics. This difference is found to exist between the intestinal bacteria and the intestinal protozoa (*Giardia cuniculi*) of the rabbit, when treated with certain dilutions of chloramine T, brilliant green, "Halazone" and copper sulphate.

In these cases the protozoa are more resistant than the bacteria. Therefore bacterial-free material containing live protozoa is easily obtained.

This behavior does not hold for free living protozoa which are more sensitive to the action of these same antiseptics than the bacteria which accompany them in nature. Free living protozoa are also less resistant when compared with parasitic protozoa.

Increase in temperature greatly increases the effect of the antiseptics, especially against the protozoa.

The authors conclude:

(1) In the intestinal content of the rabbit, it is possible to show that resistance of *Giardia cuniculi* against the action of certain antiseptic substances is markedly greater than the resistance of the intestinal bacteria. It is possible by making use of this difference in resistance to obtain *Giardia* free from all living bacteria, but attempts to subsequently grow them in pure culture have not succeeded. (2) The *Giardia* are more resistant to the action of these toxic substances than are the free living protozoa studied. (3) A technical method has been developed which we believe will be useful in demonstrating the applicability of intestinal antiseptics against both the protozoa and the bacteria of the intestine.