

### Virulence of *Trichinella Spiralis* in a Natural and in an Experimental Host.

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Measurements were made by passing an active strain of *Trichinella spiralis* consecutively through 2 series of white rats and rabbits at regular intervals. In one series (Series A) comprising 14 rats and 10 rabbits, the strain was passed successively from rat to rat and from rabbit to rabbit for a period of 7 months at intervals of 20 days each. The initial dose of trichinous meat was taken from an experimentally infested rabbit, and in each case consisted of a sub-lethal dose, determined previously on another series of animals. At the end of the 20-day period, the rat and rabbit were killed, and a sub-lethal quantity of their trichinous flesh was then fed to a normal rat and rabbit respectively, *i. e.*, the rat flesh to the rat, and the rabbit flesh to the rabbit. This process was repeated until the *Trichinella spiralis* strain had completely died out or could not be detected in the rabbits, which happened after the fifth feeding, but in the white rats, on whom the same technique had been used, the number of worms progressively increased and the worms retained their power to reinfect normal rats after having been passed through rats in succession for nine months.

In the second series (Series B) of 13 rabbits and 22 rats, the same experiments were made as before, except that in this case the initial trichinous meat was taken from a rat instead of from a rabbit. In this series, as in the former experiment, the strain died out in the rabbits at the end of the fifth feeding, while again, in the rats the number of worms per gram of meat continued to increase, and retained their power of penetrating the muscles of new hosts after a period of 11 months.

From this experiment, we may conclude that when the worms invade the natural host they adapt themselves to conditions in the living body and retain their virulence and power to penetrate muscles. They seem to lose virulence and numbers on successive passage through the experimental or unnatural host.