chiefly of lettuce and cabbage, especially the former, caused a decrease in the metabolic level in spite of the fact that there was a drop in weight while the animals were fed lettuce or cabbage alone.

Since lettuce or cabbage alone constitutes an unbalanced diet, we made various extracts of lettuce (which seemed to produce a greater depression than cabbage) with ether, alcohol and water and fed each to guinea pigs. When animals were then fed on a balanced diet it was found that an alcoholic or aqueous extract of lettuce would cause a depression of the animal's basal metabolism. The ether extract did not appear to be so effective. Each animal was fed extract from an amount of lettuce equal to about ½ to 1 pound of the green vegetable per kilo of body weight per day. On several occasions the average metabolic curve under such feedings averaged between —10% and —20% below the preliminary base line. Most of these animals showed a slight gain in weight during the observations.

When desiccated thyroid is fed along with the lettuce extract there appears to be a definite tendency for the extract to diminish the effect of the thyroid, but in no instance did the extract completely counteract the effect of the thyroid. However, it appears to be more difficult to protect the animal against thyroxin by this means.

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Experimental Trichiniasis Infections in Monkeys.*

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Apparently no experimental infections with *Trichinella spiralis* have been attempted in monkeys. In a summer's program of work at the Gorgas Memorial Laboratory, Panama, the following 7 species of Central American monkeys were found susceptible to infection with this parasite: the white-throated monkey, *Cebus capucinus,* the black spider, *Ateles dariensis,* the red spider, *Ateles geoffroyi,* the brown and black howler, *Alouatta palliata palliata* and *A. palliata inconsonans,* the marmoset, *Leontocebus geoffroyi,* the yellow titi, *Saimiri örstedii,* and the night monkey, *Aotus zonalis.*

All infections were given according to the body weight of the

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animals with counted numbers of trichina larvae obtained free from infected muscle by artificial digestion, and administered through a stomach tube. Doses of 5 larvae or more per gm. of body weight were invariably fatal, death occurring in from 3 to 41 days, depending on the size of the dose (Table I). Symptoms of fever, edema, and a marked eosinophilia, which characterize trichiniasis in human beings, did not develop in the monkeys. It will be noted (Table I) that considerable numbers of adult worms were still present in the intestines of monkeys that died 4 to 6 weeks after infection.

TABLE I.
Course of Infections with *Trichinella spiralis* in the White-Throated Monkey, *Cebus capucinus*.

Monkey No.	Larvae per gm. body wt.	No. larvae fed	Result	No. adults in intestine	% of larvae fed
119	40	59,000	Died in 3 days	—	—
123	20	31,600	" " 14 "	14,000	44
120	10	11,600	" " 6 "	—	—
192	10	8,000	" " 25 "	4,900	61
207	7	8,000	" " 26 "	7,300	91
122	5	10,100	" " 20 "	7,700	77
117	5	8,000	" " 32 "	3,100	38
118	5	5,600	" " 41 "	2,500	45
124	2	4,000	Survived	—	—
121	2	1,900	"	—	—
116	2	2,100	"	—	—

The number of larvae that developed in the muscles in 6 monkeys was determined by grinding up and digesting the whole carcass. The relation of the number of larvae in the muscle to the number of larvae fed to the these monkeys ranged from 396 times to 1,108 times the infecting dose and averaged 698 times. These figures indicate that each female trichina produced about 1,500 larvae during the course of the infection.

Other experiments[1] have shown that rats develop a very definite immunity to reinfection with *Trichinella spiralis*. Attempts to demonstrate a similar immunity in 12 monkeys that had recovered from trichiniasis were not uniformly successful. However, in 5 monkeys including 2 that had received repeated infections, there was evidence that a partial immunity had developed. A more complete report of these experiments will be made later.

[1] McCoy, O. R., *Am. J. Hyg.*, 1931, **14**, 484.