

roentgenological rickets has been observed in any infant, although one baby has shown some evidence of decreasing bone density. The rate of growth in length of the group was definitely lower than the average growth of the infants given larger amounts of vitamin D.

The findings in this preliminary study indicate that for well infants, the amount of calcium retained from a given intake of milk will be determined in part by the quantity of vitamin D ingested, and that a given rat unitage of this vitamin from any one of the 3 sources studied is equivalent to the same rat unitage from either of the other 2 sources.

7482 P

Dinitrophenol in Diet, on Growth and Duration of Life of the White Rat.*

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In connection with the present extensive clinical use of dinitrophenol (2-4 or alpha) in treating metabolic disorders or obesity, an important problem is the possible influence of the drug on the rate of growth and duration of life. Experiments on this problem have been in progress for 18 months in this laboratory and may be reported in a preliminary way now.

Three separate series of feeding experiments are being conducted, using white rats from the same strain. The rats are fed a standard adequate diet, to which are added the required amounts of alpha dinitrophenol with thorough mixing to ensure homogeneity. Food and water consumption and weights of rats are recorded at 3-day intervals. The rats are divided into groups of 5 or 6 and given the dinitrophenol in concentrations ranging from 0.0002 to 0.24%, starting shortly after weaning.

All the rats on 0.24% died before the 90th day, and 3 of those on 0.12% died by the 275th day. The lower concentrations were well tolerated as far as fatalities were concerned. Inspection of Table I shows that there was a small degree of slowing of rate of growth in the higher dosage groups. The greatest retardation at any time, with concentrations of 0.08% or less, was never more than 19%.

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TABLE I.
Effect of Various Concentrations of Alpha Dinitrophenol in Diet on Growth of White Rats.

Concentration of Dinitrophenol in Diet	No. Rats in Group	Aver. Wt., Gm.						
		Start	50 days	100 days	150 days	250 days	350 days	450 days
Control	5	25	166	236	268	298	296	318
.0002 %	5	24	152	222	252	280	296	312
.001 %	5	24	140	224	260	290	290	335
.005 %	5	24	136	220	255	274	281	323
Control	6	35	185	258	296	354	368	375
.001 %	6	30	175	259	292	346	380	379
.005 %	6	34	169	254	294	347	376	396
.01 %	6	33	162	250	278	294	350	357
.02 %	6	34	150	242	275	305	364	372
Control	6	33	150	207	233	273	275	
.02 %	6	36	159	226	240	285	329	
.04 %	6	34	143	197	207	255	292	
.06 %	6	33	135	191	207	232	262	
.08 %	6	31	125	176	202	239	255	
.12 %	6	35	112	167	181	217	255	
.24 %	6	32	60	all dead				

The final weights of the surviving animals do not vary significantly from the weights of the controls.

The metabolic rates of these rats, their food and water intakes, duration of life, pathologic changes in tissues, etc., will be presented in detail at the conclusion of the study.

Conclusions. Alpha dinitrophenol, added to the diet of white rats in up to maximum non-fatal concentrations, slowed down the rate of growth not more than about 19%, and did not significantly modify the body weight reached at the end of from 350 to 450 days, or in about $\frac{1}{3}$ to $\frac{1}{2}$ the span of life.

7483 P

Cultivation of Facultative Acid-Fast Bacteria from Filtrates of Leprosy.

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Bacteriologists and leprologists generally have regarded the facultative acid-fast organism cultivable from leprosy as a contaminant or a secondary invader of leprous lesions. Our filtration experi-