

RELATION OF URINARY CREATININE AND VITAMINS TO NUTRITIONAL STATUS IN PRE-SCHOOL CHILDREN. Guillermo Arroyave, Harold Sandstead, and Ralph Schumacher (intr. by R. L. Squibb). Institute of Nutrition of Central America and Panama, Guatemala.

Eight children 3-6 yr (low-income families) with the following estimated dietary intakes: 30 gm protein; 11 gm fat; 1032 calories; 0.44 mg riboflavin; 5.6 mg niacin; 21 mg ascorbic acid (Group A) were compared with eight children 2-5 1/2 yr (upper-income families) whose reported diets provided daily: 68 gm protein; 79 gm fat; 1846 calories; 2.98 mg riboflavin; 9.9 mg niacin; 110 mg ascorbic acid (Group B). Individuals of A were markedly lighter and shorter than those of B. Group A excreted 140 mg creatinine and 31 mg creatine in 24 hr. The corresponding excretions for B were 286 and 118 mg. Creatinine excretions in mg/kg body weight were for A 11.1 and for B 15.6, and per cm body length 1.5 and 2.8 mg respectively. Urinary 24 hr vitamin excretions of A and B were: riboflavin, 68 and 724 ug; N-methyl-nicotinamide, 0.7 and 2.6 mg; ascorbic acid, 8 and 24 mg. Expressed per gm of creatinine, differences were minimized but not eliminated. Urinary xanthurenic acid and N-methyl-nicotinamide measurements in both groups before and after a load-dose of tryptophan failed to reveal B₆ deficiency. Five children hospitalized with kwashiorkor showed very reduced urinary creatinine (6.7 mg/kg body weight and 0.7 mg/cm body length), but excretions of vitamins were not lower than in Group A. (Assisted by funds from the Williams-Waterman Fund of the Research Corporation and the Nutrition Foundation, Inc.)