than those receiving either the high carbohydrate or the basal ration. 3. The effect of terramycin upon counts of all organisms studied was found to be independent of ration in which the terramycin was incorporated (lack of statistically significant interaction between diet and terramycin). 4. The effects here reported were compared to the effects observed in a previous study.

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Failure of Certain Vitamins to Affect the Survival of the Eviscerate Rat. (20431)

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It was considered possible that vitamin deficiencies might ensue rapidly in the eviscerate animal and thereby limit survival. Eviscerate rats were injected with different preparations of vitamins without a favorable effect upon survival.

Methods. Male rats of the Sprague-Dawley strain were maintained on Archer Dog Pellets. The technic of aseptic evisceration has been described(1). When the animals reached 250 ± 2 g, they were anesthetized (intraperitoneal injection of 18 mg of cyclopal sodium) and subjected to the second stage of evisceration. Sterile solutions containing 0.9% NaCl, glucose, insulin, crystalline penicillin G, and streptomycin sulfate with and without vitamins were administered by a 6-place continuous injection machine which delivered fluid into the saphenous vein of the right hind leg at the rate of 20 ml per 24 hours. The initial glucose load was 44 mg per 100 g of rat per hour and was decreased to 36 mg after 48 hours. The insulin dose was 4 units per rat per 24 hours. The dose of penicillin was 10,000 units per rat per 24 hours, and the streptomycin dose was 20 mg per rat per 24 hours. Temperature was 26.5 ± 0.5°C. Survival time was determined by a device which amplified the D.C. potential generated by the heart to actuate a recording mechanism.

The following vitamins were used. A mixture of B vitamins contained the following amounts per ml: Vit. B_{12}, 1 μg; folic acid, 1 mg; thiamine hydrochloride, 2 mg; riboflavin, 2 mg; pyridoxine hydrochloride, 1 mg; pantothenate sodium, 10 mg; and nicotinamide, 25 mg. Rutin and ascorbic acid were mixed together in a 1 to 1 weight ratio. The above substances were added to the solutions given by continuous intravenous injection. The oil soluble vit. A, D, and E were given together by continuous subcutaneous injection at the rate of 1 ml per rat per 24 hours. Cod liver oil was the source of vit. A and D; mixed tocopherols were added.

Experiments and results. Eviscerate rats given vitamins were compared simultaneously with eviscerate rats not given vitamins but

TABLE I. Survival of Eviscerate Rats with and without the Administration of Vitamins.

Vit dose/24 hr/rat	Min survival — Vitamins N	Avg	Range	No vitamins N	Avg	Range
ml						
B-complex .05	10	6102	4491-7310	11	6202	5169-7511
.125	12	6367	5441-7447	12	6424	5914-7528
.25	12	5540	4792-6566	12	5753	4670-7226
.50	12	5804	4538-6761	12	6167	5010-7178
Rutin 1 mg; ascorbic acid 1 mg	15	5938	4717-7631	14	5955	4514-7493
" 2 "; " " 2 "	10	6279	5078-6940	11	6193	5221-7759
A— 80 u; D—12 u; E—4 mg	12	5749	5256-6805	11	5892	4680-6875
A—160 u; D—24 u; E—8 mg	10	5537	4214-6925	10	5687	4894-6493

otherwise treated in an identical manner. The data on treatment, number of rats per group and times of survival are summarized in Table I. The results were negative.

Discussion. These data do not exclude the possibility that other vitamins or combination of vitamins not tested here would affect the survival of the eviscerate rat. It has been suggested to us that exogenous vitamins may be unable to act in the eviscerate rat without the addition of their coenzymes. The mitochondria fraction of rat liver extracts has been added to exogenous vitamins in a few animals on the assumption that this would provide the coenzymes of vitamins but the results of these preliminary tests were negative. Several extracts of beef liver have been tested in the eviscerate rat without a favorable effect upon survival. One of the control eviscerate rats of this series survived for 138 hours, the longest survival of any eviscerate mammal of which we are aware.

Summary. Male eviscerate rats were fed intravenously with solutions of 0.9% NaCl, glucose, insulin, streptomycin, and penicillin with and without the following mixtures of vitamins: B_{12}, folic acid, thiamine, riboflavin, pyridoxine, pantothenate and nicotinamide; rutin and ascorbic acid; and vit. A, D, and E. The results were negative.

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Effect of Phenylbutazone on Uric Acid Excretion in Patients with Gout and Rheumatoid Arthritis. (20432)

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Phenylbutazone* (3,5 dioxo-1,2-diphenyl-4-n butylpyrizolidine sodium) is one of the newer drugs used in the treatment of gout and rheumatoid arthritis. Although phenylbutazone is not a steroid it seems to promote a sense of well-being in certain gouty and arthritic patients, over and above its simple analgesic action(1).

The experience in both this and other clinics is that the institution of phenylbutazone therapy is usually followed by a noticeable decrease in the serum urate level. Studies have been undertaken in this laboratory to see if this effect can be explained on the basis of simple uricosuric action. A preliminary study is reported in this paper.

Methods. Two patients with gout and 3 with rheumatoid arthritis were hospitalized. They consumed a diet uniformly low in purines and constant in nitrogen and caloric content.

* Butazolidin kindly supplied by Geigy Pharmaceuticals Division of the Geigy Co., New York City.