

Administration of T.P. or castration caused abortion, degeneration of placenta and death, maceration and absorption of fetuses in pregnant rats. Administration of P to the pregnant rats, however, mitigated these changes. It was impossible, however, to maintain the complete gestation by admin-

istration of V.E combined with P. Considerable amounts of ^{14}C -V.E were found to be incorporated into placentas in this experiment. Results of ^{14}C -V.E incorporation into hypophyse, liver, adrenal, kidney, ovaries, uterus and serum showed the same reported already by other workers.

Metabolism of ^3H Labeled Nitroglycol

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Little is known as to the metabolism of nitroglycol which is volatile and has been shown to be hematologically toxic. To elucidate information in this regard, tritiated nitroglycol was prepared from ^3H ethylene glycol. The procedure involved addition of carrier to the labeled ethylene glycol, dropwise mixing with nitric acid and sulfuric acid, and removal of the acids. The tritiated nitroglycol had a specific activity of approximately 5 mCi/1.3 ml, was subsequently dissolved in 40 ml of olive oil, and 0.1 ml or 0.2 ml was given subcutaneously to mice or rabbit. For the beta measurement, the dioxane-naphthalen solvent system was used to facilitate the use of aqueous materials at the sacrifice of counting efficiency due to solvent

quenching. The treatment of tissue and urine for measurement was the same as that described in #102.

Tissue concentration of ^3H was the greatest 1-3 hours after the administration and the liver contained about 9% of the dose per gram. The spleen uptake was of interest in that the peak of uptake was at 2 hours showing a tremendous concentration of 22.5% per gram, immediate to fall thereafter. This phenomenon might represent splenic uptake and sequestration of damaged erythrocytes. Tissue concentration after 24 hours was very low and urinary elimination of ^3H was quick. In rabbits, 12% of the dose was excreted in urine in 6 hours and 25% in 24 hours.

Studies on the Metabolism of Radioiodine Labeled Human Serum 7S Gammaglobulin (IgG)

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The present report is concerned with the metabolic studies of radioiodine labeled human serum 7S gammaglobulin (IgG) in human subjects.

A) IgG from pooled normal human sera were labeled ^{125}I in Abbott Laboratories or ^{131}I in Dinabot Radioisotope Laboratory. Doses of four to $100\mu\text{Ci}$ of ^{125}I - or ^{131}I -labeled-IgG were injected intravenously in 32 cases of normal subjects and patients with various

disorders.

Serum and urinary samples were collected, and their radioactivity was measured for 2 to 4 weeks long.

$\text{T}_{1/2}$ in normal subjects (8 cases) averaged 12.1 ± 1.6 days. The metabolism of IgG was accelerated in collagen diseases and nephrosis, and prolonged in hypogammaglobulinemia. Obtained $\text{T}_{1/2}$ values in various disorders were as follows: