

91. SERUM HIGH DENSITY LIPOPROTEINS IN PREGNANCY INDUCED HYPERTENSION
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Serum cholesterol Triglycerides and High Density Lipoproteins were measured in a study group of 75 women aged 18-37 who had pregnancy induced hypertension and in 75 controls age matched. Concentration of Triglycerides and Cholesterol had no statistically significant changes in the tested group (125 + V S 117 + 9mg/100ml, 248 + 232 + 14mg/100ml) versus the controls. The serum levels of High Density Lipoproteins in the study group were statistically significant decreased (48mg/100ml V S 65mg/100ml) versus the controls. A number of groups have reported that increased levels of High Density Lipoprotein and Cholesterol are associated with reduced risks of coronary artery disease.

92. EFFECT OF NEOMYCIN ON HYPERTENSION IN NORMAL AND S.H.R. RATS

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Steroids in rats are excreted in bile and the metabolites are modified by intestinal bacteria before reabsorption in the enterohepatic circulation. We have examined in normal and genetically hypertensive (SHR) rats the development of hypertension when the intestinal flora was changed with oral neomycin which is not absorbed from the gut. Over 5 days corticosterone alone (4 mg/day, IM) raised the blood pressure of normal rats from 108 ± 2 mm.Hg to 133 ± 1 mm.Hg (mean \pm SEM, n=6). Daily injections of ACTH alone (Synacthen, 100ug) raised the blood pressure of normal rats from 109 ± 2 mm.Hg to 151 ± 7 mm.Hg. For 12 days, neomycin was added to the drinking water for a further 12 rats to provide an average daily intake of 11mg/kg. Over 7 days the antibiotic alone had no effects on blood pressure or body weights. When these rats were additionally challenged for 5 days with ACTH (n=6) or corticosterone (n=6) the blood pressures increased to 118 ± 1 mm.Hg and 121 ± 9 mm.Hg respectively. Neomycin was likewise given to SHR rats. At 2 and 3 weeks there were significantly lower blood pressures in antibiotic treated rats compared with controls. In all these studies changes in body and adrenal weights and plasma sodium were not affected by neomycin. Thus, changes in the intestinal flora presumably interrupt the sequence of steroid transformations and reduce the nature and quantity of steroids in the enterohepatic circulation

10. STEROID RECEPTORS

93. STABILIZATION OF RAT UTERINE PROGESTERONE RECEPTORS FOR BIOCHEMICAL ANALYSIS.
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A method was developed for quantitative recovery of the labile rat uterine progesterone (Pg)-binding receptor components. Pg receptors appeared at 6-8S on low salt sucrose gradients (10-30%) in cytosol either ^3H -R5020(R) prelabeled or ^3H -Pg prelabeled followed by postlabeling (^3H -R or ^3H -Pg) after centrifugation. Recovery of Pg receptor binding was improved by ^3H -R prelabeling and with 1.5 mM EGTA and high tissue concentrations. ^3H -R dissociated from Pg receptors upon analysis by gel filtration (Agarose A0.5M or A1.5M) whether \pm 20 mM NaMoO_4 , due to the large elution volume. However, $97.2 \pm 6.7\%$ receptor recovery resulted from including 10 nM unlabeled Pg in all preparation and elution buffers. Receptors in the column fractions were detected by exchange incubation with 5 nM ^3H -R for 3-6 h at 40C and hydroxylapatite assay. This method resulted in a consistent elution pattern suggestive of receptor heterogeneity. These receptor component(s) were not changed by 2 uM cortisol both in cytosol and during the postlabeling-exchange. Neither the qualitative nor quantitative results of the column profiles were changed in the presence of molybdate (20 mM). Although the rat uterine Pg receptor structure has yet to be established, both computer curve fitting statistical procedures and rechromatography suggested that multiple Pg-binding components may be present.