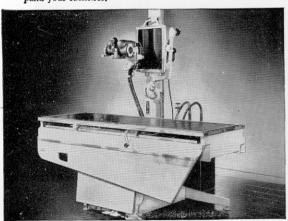
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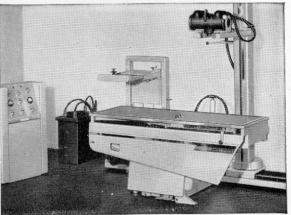
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- 1. Bauer, Gunnar: Nine Years' Experience with Heparin in Acute Venous Thrombosis. Angiology. Vol. 1, No. 2, (Apr.) 1950.
- 2. Smiles, William J.: Long-Acting Heparin Preparation: A Useful Adjunct in Anticoagulant Therapy. U. S. Armed Forces Med. J., Vol. II, No. 1 (Jan.) 1951.

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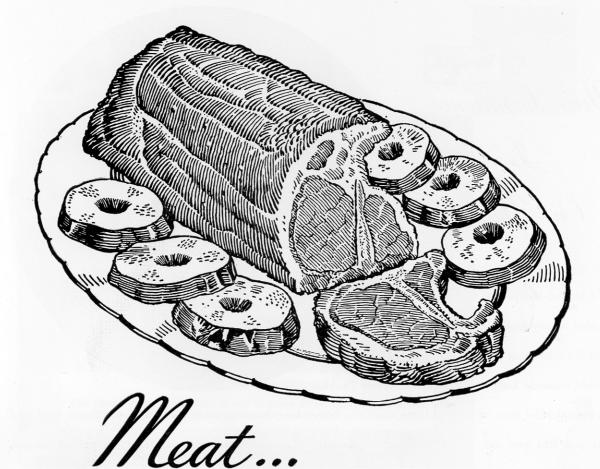
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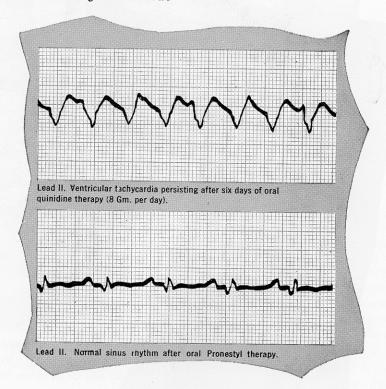


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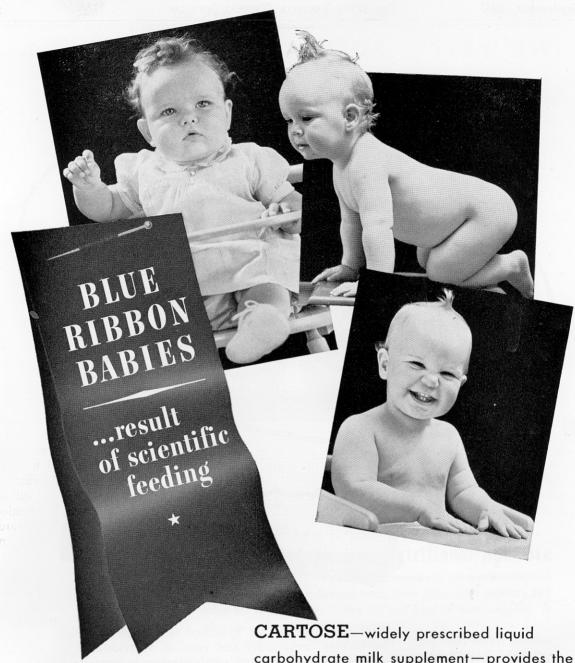


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### ACTH AND CORTISONE THERAPY OF OCULAR CONDITIONS\*

By CHARLES M. POLAN, M. D., Huntington, W. Va.

The epochal work of Hench and his co-workers in the use of ACTH and cortisone in the treatment of inflammatory joint diseases that was first reported about two years ago has led to a very rapidly developing and widespread use of these agents in the treatment of many diseases, including inflammatory eye diseases. In the past year an ever increasing number of reports on the use of ACTH and cortisone in treating all varieties of ocular lesions has been appearing. The March 1951 issue of the Archives of Ophthalmology was devoted entirely to the use of these drugs.

ACTH (adrenocorticotropic hormone) is a substance extracted from hog and beef pituitary glands. It is produced by Armor and Company and has not been produced synthetically. Cortisone acetate is a steroid compound that has been produced by synthesis and is marketed by Merck and Company under the trade name of Cortone.<sup>R</sup>

Both of these substances, when administered to individuals, give a beneficial response by inhibiting reaction in mesenchyneal structures. Cellular exudation of polymorphonuclear neutrophiles, round cells and eosinophiles is reduced. There is a reduction of capillary permeability to proteins in areas of inflammation. Production of fibrotic reaction in the course of healing is reduced.

The exact mechanisms by which ACTH and

cortisone produce their effects in the body are not known but it is apparent that they do not act directly against the injurious agent, be it bacterial, allergenic, or whatnot; but the beneficial response is obtained by altering or blocking tissue response to those injurious substances. Therefore, in treating ocular lesions in general one should use every therapeutic agent in his armamentarium that he is accustomed to using in treating inflammatory lesions. Mydriatics, antibiotics and chemotherapeutic agents still retain their usefulness and one should not neglect nor abstain from using them. A diligent search for foci of infection must still be made and any found should be eradicated.

ACTH and cortisone when used systemically can have serious deleterious side-effects and these should be kept in mind and watched for constantly. Water retention due to disturbance of the electrolyte balance probably is the most important thing to be watched for. Hypertension may be produced. Latent diabetes may show up during therapy. The insulin requirements of diabetics is greatly increased and these patients must be watched carefully. Acneform and pustular lesions may appear. A condition resembling Cushing's syndrome with the appearance of a round face, increased body hair and pigmented straie may result. Heart failure may be precipitated by overexertion.

It does not appear necessary to resort to elaborate precautions to prevent these complications. Careful watching of a few simple tests is all that is necessary to prevent trouble. The fasting blood sugar level should be checked for all patients before starting systemic treatment. Daily afternoon urinary sugar determinations should be made for a few days. Daily

<sup>\*</sup>Presented before the West Virginia Academy of Ophthalmology and Otolaryngology, at White Sulphur Springs, April 28, 1951.