

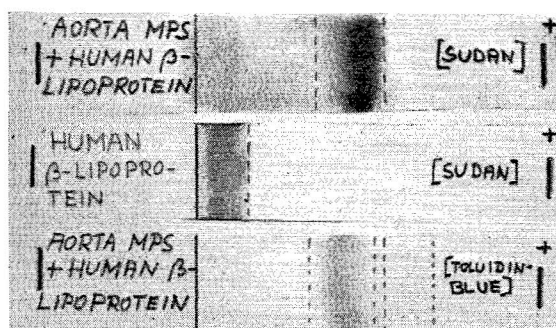


Fig. 1. Interaction of pure human β -lipoprotein with aortic mucopolysaccharides. Veronal buffer, pH 8.6, 16 hr., 200 V., 10 m.amp.

phorized the mixture we have found that the β -lipoprotein fraction of the plasma also in this case moved together with the mucopolysaccharide fraction of lower mobility. In this case, however, the interaction causes a retention because of the higher mobility of the native β -lipoprotein (Fig. 2). The mobility of plasma- α -lipoproteins does not show any change. This circumstance proves that mucopolysaccharides of the aortic intima did not bind the plasma- α -lipoproteins. It is in conformity with the fact that plasma- α -lipoprotein cannot be shown to be present in the sclerotic aortic intima with the method of immuno-electrophoresis.

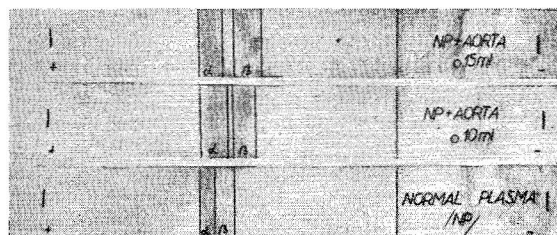


Fig. 2. Interaction of normal human plasma-lipoproteins with aortic mucopolysaccharides. Stained with sudan black. 400 V., 30 m.amp., 2 hr. Borate buffer, pH 8.6

The present investigations support our supposition that the basis of deposition of plasma- β -lipoproteins in the sclerotic aortic intima may be found in the ability of binding plasma- β -lipoprotein of some specific mucopolysaccharides of the aortic intima.

Details and discussions of these problems will be published elsewhere.

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Effect of Lysergic Acid Diethylamide on Larval Growth

LYSERGIC acid diethylamide is known to be hallucinogenic in man¹ and to produce behavioural aberrations in experimental animals. When administered to spiders², lysergic acid diethylamide improved the regularity and angles in the pattern of the web. In the liver fluke (*Fasciola hepatica*) lysergic acid diethylamide intensified the motility³. However, in most cases the effects of lysergic acid diethylamide decrease shortly after withdrawal of the drug. In humans the effects may persist as long as 24 hr. in many cases⁴. Increased resistance to lysergic acid diethylamide on repeated administration has been reported⁵. Our present investigation shows that incorporation of lysergic acid diethylamide with the food caused marked reduction in growth of larvae of *Tenebrio molitor*, which was not reversed by returning the larvae to normal diet.

Adult larvae of the same age and weight were carefully selected from a stock and divided into two groups of thirteen each. Group I received the basal diet consisting of 77 per cent corn meal, 15.4 per cent bran, 7.6 per cent wheat germ supplemented with 1 per cent of yeast extract. Group II received the same diet except that 2.5 mgm. of lysergic acid diethylamide were added per 10 gm. of diet. The larvae were returned to fresh diet every week. The growth-rates of these two groups are presented in Table 1, which shows the inhibitory effect of lysergic acid diethylamide on the growth of the larvae.

Experiments have been carried out to test the duration of the effect of lysergic acid diethylamide. Small larvae were selected and placed on the lysergic acid diethylamide diet for the first four weeks and then returned to the control diet. The results are presented in Table 2. The toxic effect of lysergic acid diethylamide on the growth of the larvae persists long after the withdrawal of the drug. This long-standing effect of lysergic acid diethylamide is different from that of a vitamin deficiency where fast growth-rate

Table 1. EFFECT OF LYSERGIC ACID DIETHYLAMIDE ON LARVAL GROWTH

No. of week	Average weight per larva	
	Group I (control)	Group II (fed with the drug)
Start 0	20.6	19.3
1	29.8	22.4
2	40.3	23.1
3	51.3	23.5
4	61.5	26.2
5	71.0	27.9

Table 2. IRREVERSIBILITY OF THE EFFECT OF LYSERGIC ACID DIETHYLAMIDE

No. of week	Average weight per larva		
	Group I Control	Group II Drug diet, first four weeks only	Group III Drug plus reserpine, first four weeks only
Start 0	2.8	3.0	2.5
1	3.7	3.6	2.9
2	4.8	4.2	3.0
3	6.6	4.3	3.5
4	8.9	4.9	4.2
5	12.4	5.8	4.7
6	16.7	7.0	5.3
7	20.6	8.8	5.9
8	27.8	11.3	6.3
9	36.1	14.1	7.2
10	45.0	17.7	8.4

