TABLE I.
Antitoxic Content of Horse Serums.

Horse No.	Units Indicated by Flocculation of: Concentrated NY 5 Toxin 28.8 Lf	Concentrated NY 5 Toxin 37.2 Lf	Unconcentrated 594 Toxin 36 Lf
623	230	232	225
629	240	232	232
633	144	146	144
638	160	162	156
666	113	113	112

50 cc. of toxin (36 Lf/cc.) two horses developed over 25 units of antitoxin within 3 weeks. This antitoxin readily neutralized NY 5 toxin both *in vivo* and *in vitro*. In all cases the same unit values were obtained with the NY 5 toxin and the homologous 594 toxin.

Summary. The highly toxicogenic property of a strain of hemolytic streptococcus is described. The general employment of this toxin for antitoxin production must await the results of additional research on the multivalency of the antitoxin.

9361 P

Sodium-d-Lactate Blood Clearance as a Test of Liver Function.*

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We have described[1, 2] the metabolism of sodium-d-lactate in normal individuals and in patients with acute diffuse parenchymal disease of the liver. The results obtained suggested the possibility of the use of this substance as a test for liver function. It should be emphasized that the metabolism of sodium-d-lactate is quite different from that of the racemic or the l-salt with which all previous work has been done.

The test is performed before breakfast, and consists of the intravenous injection of 75 mg. per kilo of body weight of a 10 to 14%

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1 Soffer, L. J., Dantes, D. A., Newburger, R., and Sobotka, H., *Arch. Int. Med.* In press.

2 Soffer, L. J., Dantes, D. A., and Sobotka, H., *Arch. Int. Med.* In press.

solution of sodium-d-lactate. A control sample of blood, collected in fluoride, is obtained just before the injection of the salt, and again 30 minutes after the injection, and blood lactic acid determinations are made.[3] All determinations are done in duplicate.

In normal individuals the blood lactic acid either falls below or remains very slightly above the control level at the end of 30 minutes, whereas in patients with hepatitis there occurs a distinct delay in the utilization of the injected d-lactate. We consider an elevation of 5 mg. % or more above the control blood lactic acid level at the end of ½ hour as evidence of liver damage.

The advantage of this test lies in the fact that it may be used in the presence of jaundice and thus serve in the differentiation between extrahepatic obstructive and non-obstructive icterus.

TABLE I.
Deviation of Blood Lactic Acid from Control Level 30 Minutes after Injection.

No. of Cases	Diagnosis	Deviation in mg. %		
12	Normal	—7.3	—1.1	+1.4
		—5.5	—0.8	+2.1
		—4.4	—0.2	+3.0
		—1.3	+0.5	+3.2
6	Catarrhal Jaundice	+8.3	+9.9	+12.2
		+9.4	+10.8	+17.6
4	Arsphenamine Jaundice	+6.3	+9.6	
		+7.8	+26.1	
2	Common-Duct Obstruction Carcinoma of Head of Pancreas	—5.5	—4.4	
1	Common-Duct Stone	—1.3		
3	Diabetes Mellitus	—3.5	—0.8	+4.4
1	Myotonia Congenita	—1.1		
1	Myasthenia Gravis	—0.8		

Our limited investigations at present suggest that the results obtained with this test are not influenced by either the coincidental presence of diabetes mellitus or muscular disease. The conversion of the injected lactate is entirely dependent on the integrity of the liver.

No undue reactions were observed in any of our patients.

[3] Friedemann, T. E., Cotonio, M., and Shaffer, P. A., *J. Biol. Chem.*, 1927, **73**, 335.