

Rabbits exhibit little or no resistance towards a virulent strain of *Bacillus avisepticus* while dogs are not affected by a subtoxic dose. These bacteria are not agglutinated in the circulation of rabbits and soon begin to multiply and produce a fatal septicemia. In dogs, on the other hand, they are agglutinated and rapidly disappear from the circulation and no true septicemia follows, and as stated, a subtoxic dose causes no symptoms in these animals.

Hence, in the several instances studied, agglutination of bacteria within the circulation of the infected animal is followed by an abrupt disappearance of the bacteria from the blood stream, by accumulation of the agglutinated bacteria within the internal organs, and by phagocytosis of the bacterial clumps by the polymorphonuclear leucocytes, and a true septicemia does not arise.

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Accumulation of nitrogen in the tissues in renal disease.

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The retention of nitrogen as a manifestation of certain types of renal disease is a well-recognized phenomenon. When the conditions of study are carefully controlled with accurate analyses of the food and excreta the amounts of nitrogen retained in the body is, with severe cases, very large—two grams per day for periods of two weeks is not an exceptional amount. Since these patients are usually quite sick and commonly manifest no sign of improvement so long as the retention persists it is inconceivable that this nitrogen is retained for tissue growth in a physiological sense. On the other hand while the blood of these patients often shows on analysis an increase in non-protein nitrogen the figure may not rise to any significant degree and never becomes sufficiently high so as to account for more than a small fraction of the nitrogen retained. We have also noted with several patients during metabolism studies a flushing out of nitrogen so that there resulted large minus balances during periods of improve-

ment in the patient's condition. It seemed that the explanation of these phenomena is that the tissues withdraw from the blood a large part of the katabolic products which compose the retained nitrogen and that this would be disclosed by analyses of organs and tissues obtained at autopsy.

TISSUE ANALYSES.

No.	Diagnosis.	Water Content Per Cent.	Total Nitrogen Per Cent.	Extract Nitrogen Per Cent.	Extract Nitrogen, per 100 g. Dry Substance.
<i>Psoas Muscle.</i>					
4.	Pancreatitis	72.9	2.92	0.24	0.88
10.	Peritonitis	72.8	3.06	0.23	0.84
11.	Cerebral thrombus	73.8	2.99	0.24	0.90
12.	Pneumonia	77.2	3.08	0.32	0.97
<i>Liver.</i>					
4.	Pancreatitis	74.4	2.52	0.18	0.70
10.	Peritonitis	62.1	2.34	0.17	0.44
11.	Cerebral thrombus	73.7	3.27	0.30	1.14
12.	Pneumonia	74.8	3.35	0.26	1.03
<i>Psoas Muscle.</i>					
19.	Nephritis with edema	84.5	2.83	0.223	1.43
21.	Nephritis with edema	79.8	3.11	0.214	1.05
		82.1	2.97	0.218	1.24
<i>Liver.</i>					
19.	Nephritis with edema	78.8	2.56	0.14	0.67
21.	Nephritis with edema	76.6	3.02	0.195	0.83
		77.7	2.79	0.167	0.75
<i>Psoas Muscle.</i>					
3.	Nephritis with N retention	77.7	3.01	0.370	1.65
13.	Nephritis with N retention	78.4	3.23	0.340	1.14
16.	Nephritis with N retention	78.8	3.04	0.383	1.80
		78.3	3.09	0.36	1.53
<i>Liver.</i>					
3.	Nephritis with retention	76.5	3.10	0.36	1.53
13.	Nephritis with retention	73.6	3.32	0.20	0.75
16.	Nephritis with retention	76.7	2.95	0.30	1.28
		75.6	3.12	0.28	1.18

For over two years we have been making these analyses as opportunity presented. Certain technical deficiencies are met with which make the accuracy of these results only comparative. The chief among these is due to the fact that as soon as tissues such as liver are minced a separation of fluid (blood and lymph) occurs. This is not the case with muscle but is to some degree true with all organs.

We have not utilized materials unless the autopsy occurred soon after death. The following brief table abstracted from a considerable number of analyses is fairly representative.

The results given in the table for cases where no conspicuous renal disease was present are the highest we have noted rather than the average figures. For example, case II, cerebral thrombosis and arterio-sclerosis, there might here have been a difference of opinion as to whether there was renal disease or not, as evidenced in the sections. With pneumonia the analyses gave usually higher results than in any other disease not associated with frank nephritis.

With cases of nephritis with nitrogen retention there is a notable accumulation of extract nitrogen in both muscle and liver tissue, which, for muscle amounts to over 50 per cent increase above the highest normal. With liver the increase is an average and not invariably to be demonstrated. Nephritis with oedema gives inconstant results although the effort was made to select cases where nitrogen retention could be excluded. This, however, appears difficult since pure chlorid retention in our experience is exceedingly uncommon; there being usually a slight tendency to retain nitrogen which is disclosed only in long continued metabolism experiments.

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The utilization of " reactor " milk in tuberculo-medicine.

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We cannot in the study of tuberculosis get away from the disconcerting observation that it is the infected individual who is immune