

The analysis showed that almost all the salicyluric acid was excreted as salicyluric acid. The relative proportions of salicylic acid to salicyluric acid were approximately:

Case I.	Dietary, milk .....	1.25
	" milk and jelly ..	1.38
Case II.	" milk .....	1.30
	" milk and jelly ..	1.23
Case III.	" milk .....	1.28
	" milk and jelly ..	1.21

In no case was there more than one-tenth of a gram of uncombined salicylic acid found.

It will be observed that in cases II. and III. the proportion of free acid is greater with milk and jelly than with milk alone.

These experiments show that with the exhibition of 60 grains of salicylic acid a day, the salicylic acid is excreted almost wholly as salicyluric acid, and that the ingestion of foods rich in glycocoll does not increase the proportion of salicyluric acid. This has an important bearing on the selection of the dietary in acute rheumatism.

The question may be asked, what becomes of the glycocoll of the foodstuffs in excess of that required for the upbuilding of the serum proteins. In answer to this I may mention important facts bearing on this subject of metabolism:

1. Lang found that the pulp of intestine, liver and various other organs had the power to desaminate amino acids, especially glycocoll and leucine; and Walter Jones proved the existence of ferments, guanase and adenase, which liberate ammonia from respectively guanin and adenin.

2. Nencki and Zaleski found that the amount of ammonia in the portal blood is during digestion much greater than that in the systemic blood.

These observations afford an explanation of what becomes of the excess of any amino acid above that required for protein building. According to this hypothesis the intestinal mucosa uses as much of the amino acids as required for the synthesis of the proteins of the blood serum, and decomposes the remainder into ammonia and fatty acid. The ammonia is converted by the liver into urea and the fatty acids are oxidized or used to build sugar or higher fatty acids.

If the glycocoll of salicyluric acid is not derived from food we must look for a source during intermediary and final