the less strength and also were more susceptible to the influence of copper sulphate.

46 (302)

The relative specificity of anaphylaxis.

By **F. P. GAY** and **E. E. SOUTHARD.**

[*From the Pathological Laboratory of the Harvard Medical School.*]

The anaphylaxis in guinea-pigs caused by the previous injection of any one of the protein substances, horse serum, egg white, or milk is only relatively specific. The maximum reaction on second injection is always obtained when the substance which has sensitized is used, but in certain combinations intoxication can be produced by the other two substances. This intoxication, by a heterologous protein is "partial" and does not occur if the "complete" intoxication, produced by the homologous protein, has been effected; when "partial" intoxication has been produced by one or both of the heterologous substances, "complete" intoxication may still be effected by the homologous substance. The intensity of an homologous intoxication, after anaphylaxis by a single substance, would seem to vary somewhat with the substance used, the order of toxicity ranging, egg white, serum and last of all milk. After combined anaphylaxis, produced by initial injection of all three substances, the first intoxication, allowing of course a proper incubation period, may be produced by any one of the substances in question. When intoxications are effected with each substance in turn the serial set of symptoms varies according to the order in which the substances are injected on the subsequent days. When injected as the second or third of the series, egg white alone produces maximal symptoms at all times; horse serum is diminished in toxicity if used after either egg or milk and loses markedly if used after injection with both substances. Milk is very slightly toxic if given second in order and absolutely non-toxic if given third; this would compare with the actual toxic power of each substance as noted after homologous sensitization. The mixed anaphylaxis then is only relatively specific, since egg and horse serum will completely preëmpt the possibility of intoxication by milk if this substance is given last.