

sulin shocks usually occur in the early morning hours. It was found that in practically every case a single dose of globin insulin would regulate the moderately severe and mild cases. In several severe cases, uncontrollable with protamine insulin, fair regulation was obtained with the globin compound. An illustrative table is included.

Thanks are due Drs. Edgar Stillman, Bertram J. Sanger, Henry E. Marks and Rudolph Scharf for their coöperation.

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Insulin Preparations with Prolonged Activity. I. Globin Insulin.

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It is believed that an insulin preparation with prolonged activity is usually in the form of a suspension insoluble at the pH of the blood. When insulin was mixed with globin, the solution remained clear at about pH 4 or less, and precipitated between pH 5 and 8. Both the clear and precipitated globin insulin combinations produced a prolonged hypoglycemia when injected into normal animals. The duration of this hypoglycemia is longer in dogs and humans than in rabbits. When 0.2-0.3 mg of zinc was added to a preparation containing 3.8 mg of globin per 100 units of insulin, the duration of the hypoglycemia was more than twice as long as that produced by standard insulin containing the same amount of zinc. As a rule the presence of zinc in the globin mixture intensified and prolonged the hypoglycemia. It was found that the most convenient way to test insulin preparations was to inject into fasting rabbits an amount that failed to produce convulsions in at least 90% of the animals. For comparison the same dose of standard insulin was injected in 2 portions 5 hours apart. The duration of hypoglycemia after injection of globin insulin was not as long as that produced by protamine zinc insulin, but the development of hypoglycemia was very much faster. The characteristic blood sugar curves for rabbits indicate that the hypoglycemia is most intense a few hours after injection and that it disappears gradually.