Sorbitol is a hexa-hydrate polyalcohol which is converted to fructose in the liver by sorbitol dehydrogenase. If infused in concentrated solutions at too rapid a rate, it can be converted to lactate instead of glucose, and has been known to cause lactic acidosis. It is still used as a calorie source (1g=4cals) in some combined Total Parenteral Nutrition solutions which are provided commercially - such as Aminoplex 5, where the quantities present are 125g sorbitol/l and 5% ethanol, as the calorie source.

Sorbitol is used instead of glucose, only because the protein solution can be autoclaved in the presence of sorbitol, without charring, however there is no evidence to show sorbitol has any advantage, otherwise, over glucose, and in most centre T.P.N. is administered from simultaneous infusion of separate containers of amino acids, glucose and fat, or as is done more frequently from the 3 litre 'big bag' whereby the solutions are aseptically mixed in pharmacy - immediately prior to use.

I hope this answers your question satisfactory.

Yours sincerely,

M K A Irvine (Mrs)
Staff Pharmacist