Renal glycosuria, also known as renal glucosuria, is a rare condition in which the simple sugar glucose is eliminated (excreted) in the urine despite normal or low blood glucose levels. With normal kidney (renal) function, glucose is excreted in the urine only when there are abnormally elevated levels of glucose in the blood. However, in those with renal glycosuria, glucose is abnormally eliminated in the urine due to improper functioning of the renal tubules, which are primary components of the filtering units of the kidneys (nephrons). In most affected individuals, the condition causes no apparent symptoms (asymptomatic) or serious effects. When renal glycosuria occurs as an isolated finding with otherwise normal kidney function, the condition is thought to be inherited as an autosomal recessive trait. Renal glycosuria is a rare condition that appears to affect males and females in equal numbers. Reported cases of the disorder include affected individuals in several multigenerational families (kindreds). In most individuals with renal glycosuria, no associated symptoms are apparent (asymptomatic). Less commonly, under certain conditions, such as during pregnancy or starvation, serious symptoms and findings may become apparent (e.g., dehydration, ketosis). Renal glycosuria is diagnosed based upon laboratory tests that confirm the presence of glucose in the urine in association with normal or low blood glucose levels. (Such testing is typically conducted after overnight fasting.)