Renal Handling of Glucose

Up to **180g/day of glucose can be filtered by the renal glomerulus** under normal circumstances.

Nearly 100% of the glucose load filtered by the glomerulus is is *reabsorbed in the proximal convoluted tubule.*

When blood glucose is abnormally elevated, (DM type II) the **renal threshold for glucose** can be exceeded leading to significant glucosuria.

Once the renal threshold has been exceeded, the proximal convoluted tubule becomes overwhelmed and glucose escapes into the loop of Henle.

Once glucose has escaped the proximal tubule it will be excreted into the urine as the *loop of Henle and the distal convoluted tubule are **impermeable to glucose.***

Glucose in the urine exerts an *osmotic pressure that causes diuresis leading to polyurea.*

Glucose

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