

A Comprehensive Review of Renal Failure: Causes, Symptoms, and Management

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Abstract: Renal failure, also known as kidney failure, is a significant global health concern characterized by the inability of the kidneys to adequately filter waste products from the blood. This review provides a detailed examination of the causes, symptoms, and management strategies associated with renal failure. The condition is broadly classified into acute renal failure (ARF) and chronic renal failure (CRF), each with distinct etiologies and clinical manifestations. Common causes include diabetes mellitus, hypertension, glomerulonephritis, and exposure to nephrotoxic substances. Symptoms often involve fatigue, fluid retention, electrolyte imbalances, and decreased urine output. Early diagnosis and intervention are crucial in preventing progression to end-stage renal disease (ESRD). Management approaches vary depending on the stage and type of renal failure but typically include lifestyle modifications, pharmacological treatments, dialysis, and kidney transplantation in severe cases. This review emphasizes the importance of preventive measures, including proper management of underlying conditions and regular monitoring of kidney function, to mitigate the risk of renal failure. Recent advancements in treatment options, as well as emerging therapies, are also discussed to provide a comprehensive overview of the current and future landscape of renal failure management.

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