



## Kidney and Urinary Tract Functions: Specifically Focusing on Individuals Aged 70 Years and above

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### Description

This study provides an in-depth understanding of how the kidney and urinary tract function in older individuals, specifically focusing on individuals aged 70 years and above. The aging process often brings about physiological changes that can impact renal function and urinary tract health. Through a detailed examination of the structure and function of the kidney and urinary system, this study aims to shed light on the specific challenges faced by older adults and the measures that can be taken to promote optimal kidney and urinary tract function in this population.

As individuals age, the kidney and urinary tract undergo changes that can affect their ability to maintain fluid balance, excrete waste products, and regulate electrolyte levels effectively. These changes can increase the vulnerability of older adults to various kidney-related disorders and urinary tract infections. Understanding the intricacies of the kidney and urinary tract function in this age group is essential for promoting healthy aging and preventing age-related complications.

### Kidney function in older adults

**Renal structure:** With aging, the kidneys undergo structural changes, including a decrease in renal mass, diminished blood flow, and alterations in the filtration system. These changes can affect the overall functionality of the kidneys.

**Glomerular Filtration Rate (GFR):** GFR tends to decline with age due to decreased renal blood flow, reduced number of functioning nephrons, and decreased sensitivity to regulatory hormones. This decline in GFR can lead to a decrease in the kidney's ability to filter waste products efficiently.

**Electrolyte and fluid balance:** Aging kidneys may experience impaired reabsorption and excretion of electrolytes, leading to disturbances in fluid and electrolyte balance. This can increase the risk of dehydration, electrolyte abnormalities, and subsequent health complications.

### Urinary tract function in older adults

**Bladder changes:** Aging affects bladder capacity and contractility. The bladder wall becomes less elastic, resulting in reduced storage capacity and increased urinary frequency. Additionally, weakened bladder muscles can lead to incomplete emptying and urinary retention.

**Urinary incontinence:** Older adults often experience urinary incontinence due to weakened pelvic floor muscles, reduced bladder control, or neurologic conditions. This can significantly impact the quality of life and necessitate appropriate management strategies.

**Urinary Tract Infections (UTIs):** UTIs are more prevalent in older adults due to factors such as decreased bladder emptying, urinary retention, and comorbid conditions. Prompt diagnosis and treatment of UTIs are important to prevent complications and improve outcomes.

### Promoting kidney and urinary tract health in older adults

**Hydration:** Encouraging adequate fluid intake can help maintain optimal renal function and reduce the risk of urinary tract infections.

**Balanced diet:** A healthy, balanced diet that includes appropriate amounts of protein, vitamins, and minerals is essential for supporting kidney health and preventing chronic kidney disease.

**Regular physical activity:** Engaging in regular exercise can improve blood flow to the kidneys, help maintain muscle tone, and promote overall urinary tract health.

**Medication management:** Close monitoring and appropriate management of medications that can potentially harm kidney function or exacerbate urinary tract symptoms are important in older adults.

### Conclusion

Understanding the changes in kidney and urinary tract function that occur with aging is vital for healthcare providers, caregivers, and older individuals themselves. By implementing strategies to promote kidney health and prevent urinary tract complications, it is possible to enhance the overall well-being and quality of life of older adults aged 70 years and above. Continued research and awareness are essential to further advance the understanding of kidney and urinary tract function in this population and develop effective interventions to support healthy aging.

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