

# A Clinical Prediction of Renal Injury in Children with Congenital Solitary Functioning Kidney

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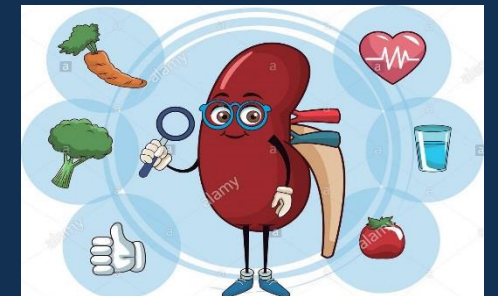
*Mashhad University of Medical Sciences*

*Mashhad, IRAN*

# Solitary Kidney

- Around 1/1000 people have a solitary kidney
- ❖ **Congenital conditions:**
  - ✓ Multicystic dysplastic kidney
  - ✓ Unilateral renal aplasia/agenesis
- ❖ **Acquired conditions:**
  - ✓ secondary to nephrectomy for urologic structural abnormalities, severe parenchymal infection, renal trauma, renal or pararenal tumors

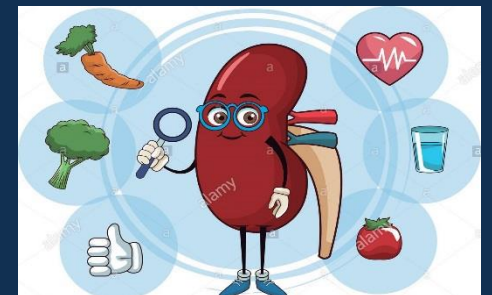
- Steven G. Docimo. Textbook of clinical pediatric urology. Sixth edition 2018



# Solitary Kidney

- Children born with congenital solitary kidney have a better long-term GFR than those secondary to nephrectomy
- Acute and chronic adaptation processes lead to:
  - ✓ Hyperfiltration followed by fibrosis in the remnant kidney
  - ✓ Further risk of albuminuria,
  - ✓ Arterial hypertension,
  - ✓ Impaired renal function

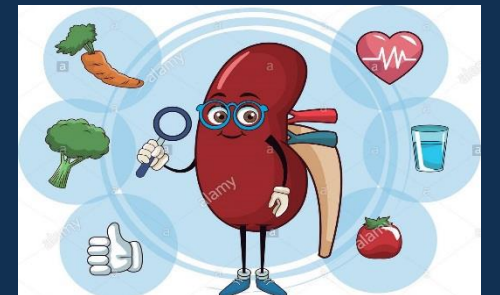
- Pierre Cochat ,Oliva Febvey,Justin Baccetta et al. Toward adulthood with a solitary kidney. Pediatric Nephrology 2019, Volume 34, issue 11,pp 2311-2323



# Non-pharmacological

- ❑ Controlled protein and sodium intake
- ❑ Avoidance/limitation of nephrotoxic agents
- ❑ Keeping normal body mass index
- ❑ Limitation of tobacco exposure

➤ There is no current consensus for indication and timing of pharmacological intervention

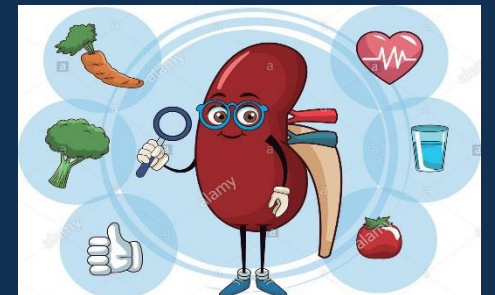


# Lifelong monitoring

- ❖ Lifelong monitoring should include:
  - Blood Pressure
  - Albuminuria
  - GFR estimation in case of abnormal values
  
- ❖ In the absence of additional risk factors to solitary kidney, such assessment can be proposed

every 5 years

- Pierre Cochat ,Oliva Febvey,Justin Baccetta et al. Toward adulthood with a solitary kidney. Pediatric Nephrology 2019, Volume 34, issue



A cartoon illustration of SpongeBob SquarePants, a yellow sponge character with large blue eyes and a wide smile. He is wearing his signature white shirt and red tie. The background is a light blue sky with a white starburst in the upper left. The text is overlaid on the image in a white, bold, sans-serif font with a black outline.

THANK YOU FOR YOUR  
ATTENTION

PLEASE DONT ASK  
TOUGH QUESTIONS