



Collagen type IV dysregulation in renal glomeruli, following the consumption of nitrate-containing drinking water in rat

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Evidence shows that chemical fertilizers used in agriculture have high levels of nitrate. These agricultural products consumed by livestock are the most important source of nitrate. The contamination of surface and underground water with nitrate in some agricultural and urban areas has turned into a considerable environmental problem. Type-IV collagen is found primarily in the base membrane and is significantly vital for the performance of this membrane in the kidney. The dose of nitrate in drinking water (up to 45 mg/L) had no significant effect on the content of type-IV collagen. On the other hand, the excessive concentrations of nitrate limited the distribution of collagen IV and led to potential side effects on the glomerular base membrane

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Urology and Medical Studies
Renal Study and Nephrology Studies

[International Conference on Urology and Andrology, November 09-10,2020](#)

8. Abstract Citation : [Dr. Mohammad Reza Nikraves, Collagen type IV dysregulation in renal glomeruli, following the consumption of nitrate-containing drinking water in rat, International Conference on Urology and Andrology, November 09-10,2020](#)