

# Effect of ethanol ingestion on renal regulation of water and electrolytes

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Ethanol may alter the homeostasis of water and electrolytes before the occurrence of liver damage able to explain these disorders. How the kidney may become involved in water diuresis or sodium and potassium retention has not been well elucidated. During the last decade, an increasing body of evidence has guided interest toward the relevance of the biochemical basis of ethanol-induced injury to the kidney. Multiple functional abnormalities of renal tubules may be associated with ethanol-induced changes in membrane composition and lipid peroxidation of these epithelial cells. Ethanol interferes with the carrier function by decreasing (Na + K)-ATPase activity, but this activity is enhanced by chronic exposure. Recently, it was reported that ethanol oxidation by the kidney is favored in chronic ethanol-treated rats, thereby suggesting a pathogenic role for acetaldehyde in the nephrotoxic effect of ethanol ingestion. Also, increased reactive oxygen species, partly generated from acetaldehy