



## References

1. Alvestrand, A., and Bergstrom, J. 1984. Glomerular hyperfiltration after protein ingestion, during glucagon infusion, and in insulin-dependent diabetes is induced by liver hormone : deficient production of this hormone in hepatic failure causes hepatorenal syndrome. Lancet 1 : 195- 197.
2. Anderson, R.J., et al. 1975. Evidence for an in vitro antagonism between vasopressin and prostaglandin in the mammalian kidney J. Clin. Invest. 56 : 420- 426.
3. Appiani, A.C., et al. 1988. Proximal tubular function and hyperfiltration during amino acid infusion in man. Am. J. Nephrol. 8 : 96-101.
4. Beck, N.P., et al. 1971. Effects of vasopressin and prostaglandin E<sub>1</sub> on the adenylyl cyclase - cyclic 3', 5' - adenosine monophosphate system of the renal medulla of the rat. J. Clin. Invest. 50 : 2461- 2465.

5. Berl, T., et al. 1977. Prostaglandin synthesis inhibition and action of vasopressin : studies in man and rat : Am. J. Physiol. 232 : F529-F537.
6. Bolger, P.M., et al. 1978. Renal actions of prostacyclin. Nature 271 : 467-469.
7. Bohman, S.O. 1977. Demonstration of prostaglandin synthesis in collecting duct cells and other cell types of the rabbit renal medulla. Prostaglandins 14: 729-744.
8. Braunwald, E., and Ross, J. Jr. 1973. Control of cardiac Performance; in Berne RM(ed): Handbook of physiology ; section 2 the Cardiovascular System vol 1, pp 539-541.
9. Brenner, B.M., Meyer, T.W., and Hostetter, T.H. 1982. Dietary protein intake and the progressive nature of kidney disease : The role of hemodynamically mediated glomerular injury in the pathogenesis of progressive glomerular sclerosis in aging, renal ablation, and intrinsic renal disease. N. Engl. J. Med. 307 : 652-659.

10. Castellino, P., Coda, B., and DeFronzo, R.A. 1986. Effect of amino acid infusion on renal hemodynamics in humans. Am. J. Physiol. 251 : F132-F140.
11. Castellino, P., Hunt, W., and DeFronzo, R.A. 1987. Regulation of renal hemodynamics by plasma amino acid and hormone concentrations. Kidney Int. 32 Suppl 22 : S15-S20.
12. Castellino, P., et al. 1988. Effects of plasma amino acid and hormone levels on renal hemodynamics in humans. Am. J. Physiol. 255: F444-F449.
13. Chaiyabutr, N., Faulkner, A., and Peaker, M. 1980. Effects of starvation on the cardiovascular system, water balance and milk secretion in lactating goats. Res. Vet. Sci. 28 : 291- 295.
14. Chang, L.C., et al. 1975. Enhanced renal prostaglandin production in the dog II. Effects on intrarenal hemodynamics. Circ. Res. 36 : 204-207.

15. Christiansen, J.S., et al. 1981. Kidney function and size in normal subjects before and during growth hormone administration for one week. Eur. J. Clin. Invest. 11 : 487-490.
16. Crowshaw, K. 1971. Prostaglandin biosynthesis from endogenous precursors in rabbit kidney. Nature New Biology 231 : 240-242.
17. Daughaday, W. 1985. The Anterior Pituitary In Wilson, J.D., and Foster, D.W. (ed): Williams textbook of Endocrinology pp 581-582.
18. Davidson, W.D., and Sackner, M.A. 1963. Simplification of the anthrone method for the determination of inulin in clearance studies. J. Lab. Clin. Med. 62: 351-356.
19. Feigen, L.P., et al. 1976. The effect of indomethacin on renal function in pentobarbital - anesthetized dogs. J. Pharmacol. Exp. Ther. 198 : 457-463.
20. Fejes-Toth, G., Magyar, A., and Walter, J. 1977. Renal response to vasopressin after inhibition of prostaglandin synthesis. Am. J. Physiol. 232: F416-F423.

21. Fulgraff, G., Brandenbusch, G., and Heintze, K., 1974. Dose-response relation of the renal effects of  $\text{PGA}_1$ ,  $\text{PGE}_2$  and  $\text{PGF}_{2\alpha}$ . Prostaglandins 8 : 21-30.
22. Grantham, J.J., and Orloff, J. 1968. Effect of prostaglandin  $\text{E}_1$  on the permeability response of the isolated collecting tubule to vasopressin, adenosine 3', 5'-monophosphate and theophylline. J. Clin. Invest. 47 : 1154-1161.
23. Hart, D., and Lifschitz, M.D. 1987. Renal physiology of the Prostaglanins and the effects of Non-steroidal Anti-inflammatory Agents on the kidney. Am. J. Nephrol. 7 : 408-418.
24. Herbaczynska - Cedro, K., and Vane., J.R. 1973. Contribution of intrarenal generation of prostaglandin to autoregulation of renal blood flow in the dog. Circ. Res. 33 : 428-436.
25. Herrera, J., et al. 1988. Urinary prostaglandin E and kallikrein activity in glomerular hyperfiltration induced by a meat meal in man. Clin. Nephrol. 30 : 151-157.

26. Hirschberg, R.R., and Kopple, J.D. 1987. Role of growth hormone in the amino acid-induced acute rise in renal function in man. Kidney Int. 32 : 382-387.
27. Hirschberg, R.R., et al. 1988. Glucagon and prostaglandins are mediators of amino acid-induced rise in renal hemodynamics. Kidney Int. 33 : 1147-1155.
28. Hostetter, T.H. 1986. Human renal response to a meat meal. Am. J. Physiol. 250 : F613-F618.
29. Johannesen, J., Lie, M., and Kiil, F. 1977. Effect of glycine and glucagon on glomerular filtration and renal metabolic rates. Am. J. Physiol. 233 : F61-F66.
30. Lee, J.B., et al. 1971. Hypertension and the renomedullary prostaglanins : A human study of the hypotensive effect of PGE<sub>1</sub>. Ann. NY. Acad. Sci. 180 : 218-240.
31. Lee, K.E., and Summerill, R.A. 1982. Glomerular filtration rate following administration of individual amino acids in conscious dogs. O. J. Exp. Physiol. 67: 459-465.

32. Levenson, D.J., Simmons, C.E., and Brenner, B.M. 1982. Arachidonic acid metabolism, prostaglandin and the kidney. Am. J. Med. 71 : 354-374.
33. Leyssac, P.P., et al. 1975. Indomethacin blockade of renal PGE-synthesis : Effect on total renal and tubular function and plasma renin concentration in hydropenic rats and on their response to isotonic saline. Acta. Physiol. Scand. 94 : 484-496.
34. Lifschitz, M. 1981. The Prostaglandins and the renal blood flow-in vivo studies. Kidney Int. 19: 781-785.
35. Lipson, L.C., and Sharp, G.W. 1971. Effect of prostaglandin E1, on sodium transport and osmotic water flow in toad bladder. Am. J. Physiol. 220 : 1046-1052.
36. Lonigro, A.J., et al. 1973. Dependency of renal blood flow on prostaglandin synthesis in the dog. Circ. Res. 32 : 712-717.
37. Lucchesi, B.R. 1968. Cardiac actions of glucagon. Circ. Res. 22 : 777-787.

38. Lum, G.M., et al. 1977. In vivo effect of indomethacin to potentiate the renal medullary cyclic AMP response to vasopressin. J. Clin. Invest. 59 : 8-13.
39. Martinez- Maldonado, M., et al. 1972. Renal actions of prostaglandins: Comparison with acetylcholine and volume expansion. Am. J. Physiol. 222 : 1147-1152.
40. Meyer, T.W., et al. 1983. The renal hemodynamic response to amino acid infusion in the rat. Trans. Assoc. Am. Physicians. 96 : 76-83.
41. Muirhead, E.E., et al. 1972. The renomedullary antihypertensive function in accelerated (malignant) hypertension: With observations on the renomedullary interstitial cells. J. Clin. Invest. 51 : 181-190.
42. Orloff, J., Handler, J.S. and Bergstrom, S. 1965. Effect of prostaglandin (PGE<sub>1</sub>) on the permeability response of toad bladder to vasopressin, theophylline and adenosine 3', 5'- monophosphate. Nature ; 205 : 397-398.



43. Parmley, W.W., Glick, G., and Sonneblick, E.H. 1968. Cardiovascular effects of glucagon in man. N. Engl. J. Med. 279 : 12-17.
44. Parving, H.H., et al. 1980. The effect of glucagon infusion on kidney function in short-term insulin-dependent juvenile diabetics. Diabetologia 19 : 350-354.
45. Piper, P.J. and Vane, J.R. 1969. Release of additional factor in anaphylaxis and its antagonism by antiinflammatory drugs. Nature 223 : 29-35.
46. Pitts, R.F. 1944. The effect of infusing glycine and of varying the dietary protein intake on renal hemodynamics in the dog. Am. J. Physiol. 142 : 355-365.
47. Premen, A.J. 1985. : Importance of the liver during glucagon - mediated increases in canine renal hemodynamics. Am. J. Physiol. 249 : F319-F322.
48. Rocha, D.M., Faloona, G.R., and Unger, R.H. 1972. Glucagon-stimulating activity of 20 amino acids in dogs. J. Clin. Invest. 51 : 2346-2351.

49. Roman, R.J., et al. 1978. Inhibition of renal prostaglandin synthesis and metabolism by indomethacin in rats. Proc. Soc. Exp. Biol. Med. 159 : 165-170.
50. Ruilope, L.M., et al. 1987. Influence of a low sodium diet on the renal response to amino acid infusions in human. Kidney Int. 31 : 992-999.
51. Smith, H.W. 1960. Principle of Renal Physiology. pp. 212-213, New York: Oxford University Press.
52. Swain, J.A., et al. 1975. Prostaglandin control of renal circulation in the unanesthetized dog and baboon. Am. J. Physiol. 229 : 829-830.
53. Terragno, N.A., Terragno, D.A., and McGiff, J.C. 1977. Contribution of prostaglanins to the renal circulation in conscious, anesthetized, and laparotomized dogs. Circ Res 40 ; 590-595.
54. Ter Wee, P.M., et al. 1985. Testing renal reserve filtration capacity with an amino acid solution. Nephron 41 : 193-199.

55. Thureau, K. 1964. Renal hemodynamics . Am. J. Med.  
36: 698-719.
56. Venuto, R.C., et al. 1975. Prostaglandins and renal  
function II. The effect of prostaglandin inhibition  
on autoregulation of blood flow in the intact kidney  
of the dog. Prostaglandins 9 : 817-828.
57. Woods, L.L., Mizelle, H.L., and Hall, J.E. 1987.  
Role of liver in renal hemodynamic response to amino  
acid infusion. Am. J. Physiol. 252 : F981-F985.
58. Woods, L.L., et al. 1986. Mechanisms controlling  
renal hemodynamics and electrolyte excretion during  
amino acids. Am. J. Physiol. 251 : F303-F312.
59. Zin, G.R. 1975. Renal prostaglandins. Am. J. Med.  
58:14-24.
60. Zusman, R.M. and Kaiser, H.R. 1977. Prostaglandin  
biosynthesis by rabbit renomedullary interstitial  
cells in tissue culture stimulation by angiotensin  
II, bradykinin and arginine vasopressin. J. Clin.  
Invest. 60 : 215-223.

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