

**TABLE 7.2.1** Some of the physiological effects of adrenergic receptors.

<b>Receptor Subtype</b>	<b>Location</b>	<b>Effect</b>
$\alpha_1$	Blood vessels Heart	Smooth muscle contraction $\longrightarrow$ Vasoconstriction Increased cardiac contraction and rate
$\alpha_2$	Blood vessels	Smooth muscle relaxation $\longrightarrow$ Vasodilation
$\beta_1$	Heart Kidney	Increased cardiac contraction and rate Activation of renin-angiotensin-aldosterone system $\longrightarrow$ $\text{Na}^+ - \text{K}^+$ exchange $\longrightarrow$ $\text{Na}^+$ retention
$\beta_2$	Blood Vessels Heart GI tract Pancreas	Smooth muscle relaxation $\longrightarrow$ Vasodilation Increased heart rate and output Smooth muscle relaxation Glucagon secretion $\longrightarrow$ glycogen breakdown and gluconeogenesis
$\beta_3$	Liver	Lipid breakdown