

Physiology week 11- Cardiovascular (extra) VIVAs

<p>Cardiovascular compensations for shock</p>	<p>Describe the cardiovascular compensations to acute blood loss.</p> <p>Describe the other physiologic compensations to acute blood loss.</p>	<p>Tachycardia; Vasoconstriction; Venoconstriction.</p> <p>Tachypnoea PLUS increases in any 3 from the following list: adrenaline/noradrenaline (sympathetic); vasopressin; glucocorticoids; renin/angiotensin/aldosterone; erythropoietin; plasma protein synthesis.</p>
<p>Cardiovascular compensations for fluid overload</p>	<p>What hormone systems are involved in the maintenance of Extracellular fluid volume?</p> <p>What are the effects of Atrial Natriuretic Peptide in response to fluid overload?</p>	<p>Renin, angiotensin aldosterone/vasopressin</p> <p>Increase sodium secretion from the kidneys Diuresis</p>
<p>Describe the factors controlling blood flow through skeletal muscle during exercise.</p>	<p>[Key items marked with*]</p> <p>*Increased flow mainly local regulation Due to chemical effects on muscle arterioles leading to vasodilatation.</p> <p>*Response to reduction in oxygen in muscle tissue. Hypoxic releases vasodilatory substances [especially adenosine], arterioles cannot maintain contraction in hypoxic conditions. Other vasodilatory chemicals: potassium ions, ATP, lactic acid and carbon dioxide.</p> <p>Other controlling factors: Sympathetic vasoconstrictor nerves, circulating adrenaline</p>	<p>Local regulation due to tissue hypoxia. At least 2 mediators</p>
<p>What other circulatory changes occur in the body during exercise and why?</p>	<p>*Increased cardiac output [rate and contractility] 2° sympathetic discharge.</p> <p>Contraction of peripheral arterioles not in skeletal muscle 2° sympathetic discharge. Coronary and cerebral systems spared.</p> <p>Contraction of capacitance vessels eg veins 2° sympathetic discharge giving increased venous return, filling pressure, cardiac output. Nett results, increased blood flow and increased arterial pressure.</p>	<p>Changes to cardiac output plus explanation</p> <p>Changes to venous return/ filling pressure</p>