



<b>Vitamin A - Retinol</b>	
<b>Description</b>	A fat-soluble vitamin, stored mainly in the liver. The UK Dietary Reference Values express the requirement for vitamin A in terms of retinol equivalents
<b>Function</b>	Vital for maintenance of good eyesight, particularly for the normal function of the retina and visual adaptation to darkness, and healthy skin. It is also important for growth in children.
<b>Human Requirements</b>	EU RDA: 800mcg
<b>Dietary Intake</b>	In the UK, the average adult diet provides (retinol equivalents): for men, 911mcg daily; for women, 671mcg <sup>1</sup> .
<b>Food Sources</b>	The richest natural sources are fish liver oils. It is also very concentrated in animal liver. Other sources include oily fish, egg yolk, fortified margarine, butter and full fat milk.
<b>Deficiency Symptoms</b>	Vitamin A deficiency is prevalent in young children in developing countries and is associated with general malnutrition in these countries. In the UK, deficiency is relatively rare (especially in adults). Deficiency symptoms include an increased susceptibility to infections, scaly skin, flaking scalp, brittle, dull hair; poor eyesight and night vision, loss of appetite.
<b>Precautions / Contra-Indications</b>	Just before, or during the first three months of pregnancy, women are advised by the Department of Health that they should not eat liver, or take vitamin A supplements which contain more than the 800mcg RDA unless under medical supervision. As vitamin A (retinol) is teratogenic, it may induce developmental abnormalities in a foetus if taken in high amounts just before, or during the first three months of pregnancy. However, too little vitamin A in pregnancy can also cause problems. Safe Upper Level: 1500mcg <sup>2</sup>
<b>Pregnancy &amp; Breastfeeding</b>	The Department of Health recommends that women who are (or may become) pregnant <b>should not</b> take dietary supplements that contain vitamin A (including fish liver oil), except on the advice of a doctor or antenatal clinic, and should also avoid eating liver and products containing liver (e.g. liver pate and liver sausage).
<b>Adverse Effects</b>	<u>Acute toxicity</u> may be induced by single doses of 300mg retinol in adults, 60 mg retinol in children or 30 mg retinol in infants. Signs and symptoms are usually temporary (usually occurring about 6 hours after ingestion of acute dose and disappearing after 36 hours) and include severe headache (due to raised intracranial pressure), sore mouth, bleeding gums, dizziness, vomiting, blurred vision, irritability and (in infants) bulging of the fontanelle. <u>Signs of chronic toxicity</u> may appear when daily intake is >15mg retinol in adults and 6 mg in infants and young children. Signs may include dryness of the skin, dermatitis, skin rash, skin scaliness, disturbed hair growth, bone and joint pain, headache, fatigue, irritability, insomnia, anorexia, nausea, vomiting, diarrhoea, and weight loss.
<b>Interactions<sup>1</sup></b>	Seek medical advice before taking Vitamin A, if you are taking anticoagulants, retinoids, or statins.



**References**

1. Mason, P. Dietary Supplements. Pharmaceutical Press, London, 2001.
2. Expert Group on Vitamins and Minerals, 2003.