## Vitamin D - Are you getting enough?

Most people know about vitamin D role in the health of bones. Vitamin D stimulates absorption of calcium in the intestines and also helps the bone grow and maintain strength. Vitamin D is also involved in muscle strength, regulates blood sugar levels, immune function and assisting, brain function and has been shown to be cancer protective.

Cholecalciferol (D3) is the form of Vitamin D found in animal products or fish oils, such as codliver oil.

## Who is at risk?

People at high risk of vitamin D deficiency include the elderly, those with skin conditions where avoidance of sunlight is required, dark skinned people (particularly women during pregnancy or if veiled) and patients with malabsorption, eg. Celiac disease or fructose malabsorption.

## Food sources

Cod liver oil is the best food source of vitamin D. Small amounts are also found in oily fish such as herring, salmon and sardines. Beef, eggs and animal liver also contain small amounts of vitamin $D$.

## How do we get it from the sun?

For most people, deficiency can be prevented by 5-15 minutes exposure of face and upper limbs to sunlight 4-6 times per week. The sunlight must be direct on the skin and not obstructed by glass or partial shade.

Sunlight activates a cholesterol based precursor in the skin and converts this to an active form of vitamin $D$ (cholecalciferol) over 2 to 3 days.

Short periods of exposure are more beneficial than one large period as UV from the sun can inactivate newly formed vitamin D.

## Supplements

If adequate sun exposure is not possible then a vitamin $D$ supplement of at least 400 IU per day is recommended. If blood tests reveal vitamin D deficiency, supplementation with 500015000 IU per day for at least 1-3 months is required to replenish body stores.


