

# FORSTER EYE SURGERY

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## AGE RELATED MACULAR DEGENERATION (AMD)

### ROLE OF LIFESTYLE, DIET & SUPPLEMENTS

#### 1. LIFESTYLE

- Avoid smoking –smoking is a major factor in disease progression because it increases the oxidative stress on the eye and reduces protective macular pigments.

#### 2. DIET

- Dietary oils - A reduction in vegetable oil and an increase in fish oil in your regular diet may be helpful. Omega 3 fish oil supplements have not been shown to be beneficial.
- Avoid a high fat diet.
- Epidemiological studies have suggested that those with high dietary intake of antioxidants, in the form of dark green vegetables, have a lower rate of AMD. It is unclear whether this is causal or incidental; nonetheless it might be reasonable to recommend such a diet.

#### 3. SUPPLEMENTS

Supplements on the market for AMD include :

- Macuvision : Vitamin C, Vitamin E, Zinc, Copper.
- Lutein Advanced : Lutein, Zeaxanthin, Selenium, Omega 3 (fish)oil
- Macutec : Vitamin C, Vitamin E, Zinc, Copper, Lutein, Zeaxanthin  
/ Macuvision Plus

#### Macuvision – the first of the supplements

In 2001 a large multicentre American trial on macular degeneration was published. (Age Related Eye Disease Study – AREDS).

The study showed that antioxidants had a beneficial effect in stabilising the disease in patients with moderate to severe age-related macular degeneration. The antioxidants used were Vitamins A, C and E. Zinc and magnesium were also incorporated. This preparation is available in Australia, marketed under the name **“Macuvision”** (dosage two tablets daily).

Beta-carotene (Vitamin A) was not included in the preparations as artificial beta-carotene was associated with an increased incidence of lung cancer in patients who have smoked.



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## **Macutec / Macuvision Plus (AREDS 2 trial)**

In 2013 the second round of results of the AREDS trial became available. This looked at changing the doses of the vitamins, removing vitamin A, adding Lutein/ Zeaxanthin and the role of fish oil supplements. This study led to a modification of the supplements recommended.

The revised recommended formulation is contained in **Macutec or Macuvision Plus** (2 tablets a day). Macutec one daily and Macuvision Plus are one tablet a day. These contain less zinc.

Alternatively you may take a combination of regular **Macuvision** (2 tablets a day) and **Lutein Advanced** (1 tablet a day) although this contains selenium and Omega 3 oil which had no additional benefit.

Other brands are also available – the ones described above are Australian made and the most commonly used in Australia.

## **4. RISKS OF MACUVISION & MACUTEC**

### **Vitamin E and Warfarin**

- The Vitamin E in supplements may increase the pharmacological effect of Warfarin – if used in conjunction with Warfarin it may slightly increase the risk of haemorrhagic stroke. Please discuss this with your GP.

### **Zinc**

- Exacerbation of diabetes mellitus
- Poorer prognosis in acute strokes
- Associated with Alzheimer's disease if overdose
- Urinary tract issues in Men
  - Increased risk of prostate hypertrophy / cancer
  - Gastrointestinal

## **5. FES RECOMMENDATION**

Supplements have not been shown to be beneficial as either a preventative in the very early stages of macular degeneration

Macutec essential (2 tablets a day) or an equivalent combined with eating leafy green vegetables is advisable with moderate to severe macular degeneration.

