MPS II
Detect and Protect
The MPS II

from Elektron Technology.
Fast. Flexible.
Reliable. Intuitive.

The MPS II is a portable screening device that enables early detection of patients at risk of Age-related Macular Degeneration (AMD) - the leading cause of vision loss in people over 50.

MPS II measures your Macular Pigment (MP) level. Low MP is a significant (modifiable) risk factor for AMD and, once detected, needs managing through diet, supplementation and lifestyle in order to minimise the risk of early onset of AMD.

Features

- **Screening**
  - Early detection of the risk of sight loss
  - Empowers proactive care management
  - Cuts healthcare costs
- **Accuracy**
  - Monocular detection is most accurate subjective method
- **Speed**
  - ~ 90 seconds per eye for MP result
- **Cost**
  - The most cost-effective screener on the market
- **Reliability**
  - Data quality algorithms provide instant interpretation of results
- **Footprint**
  - Far smaller than anything else on the market
- **Portability**
  - Ideal for clinics, hospitals and domiciliary visits
- **Technology**
  - Uses latest in LED technology and processing
  - Non-invasive – no need for pupil dilation
- **Innovation**
  - Novel application of Heterochromatic Flicker Technology
- **Flexibility**
  - Dual modes enable detailed drill-down of results
- **Connectivity**
  - Links to Windows PC for ease of use
- **Data**
  - Patient’s record and results stored for continued monitoring of MP
  - Generates repeat business

**CE/FDA**

Age-related Macular Degeneration.

And the importance of MPS II.

The global population is ageing. Coupled with the often poor western diet and lifestyle that many non-western populations are adopting, ophthalmologists predict an epidemiological explosion of AMD in the next few years.

In 2010, AMD was responsible for an estimated $343 billion of healthcare costs. These costs are set to spiral unless effective screening, prevention and treatment strategies are in place.

http://www.amdalliance.org/

The most effective way to reduce the problem and the cost is to either prevent AMD occurring in the first place or to halt progression from dry to wet AMD. Prevention is better and cheaper than intervention.

Although low MP is not the only determining risk factor for AMD and a holistic view of a patient needs to be taken – taking into account smoking, obesity, poor diet and lifestyle and excessive exposure to blue light hazards – there is overwhelming evidence that it is one of the main risk factors for early onset.

Over the last decade there have been many studies undertaken to assess the effects of oral supplementation on the progression of the disease to advanced AMD. The results of the AREDS2 study in 2013 – the largest study completed to date – is set to be a game changer for eye care professionals who are still sceptical about supplementation. AREDS 1 showed a 25% reduction in advanced AMD.

Taking all things into consideration it makes sense to screen to detect MP levels so that a healthcare professional can determine the best course of action for the patient concerned. Without this information, it is simply a case of waiting for symptoms of visual impairment to become apparent.

Screening for low MP by the MPS II is currently the best way of identifying those patients at greatest risk of developing AMD.
MPS II.
The business case.

Stage 1. No AMD
- Strategy: Screen the 40+ offspring of AMD patients plus the “worried well” to detect risk of developing AMD
- Tactics: ES MPS II screening and risk factor analysis ES
- Result: delay early onset of AMD through preventative management strategy

Stage 2. Dry AMD
- Strategy: Manage and monitor disease progression
- Tactics: educate around the importance of good diet, lifestyle and supplementation to increase the MP shield, ES monitor progress every 6 months through MPS II ES
- Result: halt disease progression and improve visual acuity

Stage 3. Wet AMD
- Strategy: Stabilise and/or improve vision
- Tactics: angiogenics
- Result: <35% improvement, 90% stabilise. $343 Billion spent in 2010 in this treatment, costs set to spiral unless we take preventative action

Detect – screen to detect low levels of macular pigment (MP)
Manage – supplementation, diet and lifestyle choices all increase MP levels
Monitor – regular check-ups to monitor MP levels

What commercial benefits has the MPS II screener brought to the practice as a whole?

‘The MPS II is extremely good value and we have already made our money back on the device several times over through initial consultation and follow up fees. It’s a cost-effective piece of equipment, adding value to the patient and practice – we screen a notable percentage of patients with risk factors. We sell the supplements at RRP and thus make money each month the patient is using them but I feel this is ethical if you are giving them to the correct patient groups. We’ve been very active in the local area publicising what we do.’

Dr Scott W Mackie
BSc (Hons) MCOptom PhD MFDO ABDO LVA (Hons) Dip Ty (P), Pg Dip (Cataract and Refractive Surgery), Mod (Diabetic Retinopathy Screening), Mod (Leadership Skills)
Customer testimonial

As a patient with only one functional eye with central vision, I was advised by Dr Mackie to get my macular pigment checked with the MPOD*. Which, in addition to another risk factor, revealed that I needed to start taking nutritional supplements. I am delighted that further testing of my macular pigment with the MPS II has revealed that my macular pigment has increased and my risk of developing AMD is reduced. I hope other patients like me are offered this enhanced technology.

* First generation screener

Finally...

We may ALL get some level of AMD as we get to be, say, ninety. It is by ensuring the level of sight loss is minimised – through screening and building up MP in our forties – that will enable our quality of life to be better as we get older.

Technical Specification

Type
- Computerised device capable of measuring Macular Pigment Optical Density (MPOD)
- Target viewing distance set to infinity
- Background and target luminance set at approximately 250 cd/m²

Stimuli
- Integrated output from blue, green and white LEDs
- Stimulus target angular subtense 1°

Peripheral Fixation
- Integrated output from red LEDs
- Angular subtense 3°
- Target offsets minimum +/- 6°

Patient Unit Inputs/Outputs
- USB 1.1 type B connector for PC connection
- Mains input connector (IEC320)
- Patient response button

Patient Unit Dimensions
- 300 x 230 x 300-350 variable mm (L x D x H)

Patient Unit Weight
- 4.4 kg

Electrical Specification
- Mains input 100-240v 50/60Hz universal input
- Classification
  - Mains operated
  - Class 1
  - Type B applied part
  - Continuous operation
  - Equipment not suitable for use in presence of flammable anaesthetic mixtures with air or nitrous oxide
  - Ordinary equipment without protection against ingress of water

Software Specification
- Supported on Microsoft® Windows 7 Professional and Windows 8 Professional
- Device
  - Make: MPS 9000, Model: MPS II

Supporting Clinical Evidence