

Photobiomodulation Therapy

We are delighted to announce the arrival at John Rose Eye Care of the World's first whole body light pod - the "NovoThor" - this is the first of its kind in the UK and currently one of only 4 in Europe.

The installation of the NovoTHor will allow our clients to benefit from Red and Near Infra Red light therapy that currently is only being enjoyed by a select few elite athletes or being used for medical treatment.



What is Photobiomodulation ?

The history of using light and colour for health and healing has gone back thousands of years - virtually all ancient civilisations used sunlight or coloured light in healing.

In 1903, Dr Niels Finsen of Denmark received the Nobel prize for Medicine for his work using concentrated "light radiation" - though his pioneering work was eclipsed by the advent of the pharmaceutical industry in the early part of the century.

This is the effect that various wavelengths of light have on our tissues - it has been known for over 50 yrs since the pioneering work of Dr Endre Meyer at the Semmelweis Medical University in Hungary - however it is only relatively recently that we have begun to understand the mechanisms of action and the potential benefits - the most intriguing of which and potentially the most exciting is the effect of red and near infra red

light on Mitochondria and the production of energy at the cellular level, that may have a beneficial effect of slowing down and maybe to some extent even reversing the ageing process!

Photobiomodulation is currently being used in many areas of medicine -there are many photo-therapy devices that have been FDA approved for various applications involving wound healing, pain reduction and aesthetic procedures in medicine , dentistry, physiotherapy and veterinary and oncology - however this is mainly with the use of hand held devices that only treat a small area at a time and is time consuming and difficult to treat larger areas - the NovoTHor is able to treat the whole body at the same time.

With the recent developments in technology and the appearance of LED technology it is now possible to offer photobiomodulation treatment using "cold" light sources tuned to the beneficial wavelengths but with no adverse effects.

Mitochondria are present in practically all cells of the body - they are the "battery packs " that produce energy within our cells and as we age they get less efficient and so the body slows down and consequently is under stress.

It is now understood that Mitochondria's metabolic cycle is particularly sensitive to light - it is slowed down and damaged by the "bluer" wavelengths of light - but conversely it is recharged and rebooted by the RED wavelengths - particularly around 630nm and 830nm.

There is an enormous amount of published data about this - currently in excess of 4000 papers - and there are many peer reviewed randomised controlled studies showing the benefits of photobiomodulation in both animal and human studies - the formal research papers go back nearly 50 years.

My interest is of course in particular how photobiomodulation affects the eye and brain - the eye is of course a unique structure as it is transparent to light - there have been various trials in diseases of the eye that demonstrate a protective effect in particular of the Retinal Ganglion Cells - these are damaged in diseases like Diabetes, Glaucoma and Macula Degeneration - and there are currently also trials taking place with Alzheimer's and Parkinson's as it appears that the nervous tissue particularly neurons and the mitochondrial involved with their correct functioning are particularly susceptible to treatment with red light.

Having read Dr Nick Lanes book " Power,Sex and Suicide : Mitochondria and the meaning of life some years ago; I have been following with great interest the TORPA and TORPAIL trial - www.clinicaltrials.gov - for many years - this started in 2009 and the first results were published in 2014 - with extremely encouraging results - the next phase of the clinical trials are just under way - the LIGHTSITE trial is just recruiting - however, this will take several years before concluding and the cost of doing this type of research is of the order of several millions of US\$.

Having been following the various research carefully for the past few years and been extremely encouraged by the results I have decided that the potential benefits of photobiomodulation are so large that I really have to offer this to my client base so that they are able to benefit as well even before the clinical trials are completed.

So convinced are the original investigators of PBM in its efficacy (Drs Merry and Dotson) that they are offering "off label" treatment from their research centre in Canada.

At the moment the clinical trials involving Macula Degeneration, Glaucoma etc are not complete and it may be several years before there are commercially available devices specifically to treat these conditions.

Many of us are busy - myself included - and despite my best efforts it is not always practical to spend 20-30 minutes per day in the Sun - also whilst outside in the Sun you are exposed to the "bad" light that causes damage as well as the good light - the NovoThor is unique in that it only bathes you in the "good" light and the dosage has been carefully calculated to give the optimum benefits - it is known that there is a biphasic dose response following the "Arndt-Schulz law."

The treatment takes between 8-20 minutes - we currently allow 30 minutes per booking to allow for changing.

A session costs £95 - however we are pleased to be able to offer a reduced fee of £55 for our clients who are currently paying for their Eye Care by direct debit.

Mitochondrial dysfunction is implicated in Macula Degeneration, Glaucoma, Diabetes, side effects from Statin use, Cataract formation, Stroke, Alzheimer's and other Neurodegenerative -diseases, wound healing etc

Please note the NovoTHor bed is located upstairs on the first floor - you must be able to climb stairs.

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