Eye health

Description

To: Jesus

Use this as an aide to your own research and share with your doctor as appropr

You can use drugs.com or other trusted health websites to look up the latest i

Eye Health

Night vision

Black currant & bilberry
Black currant & bilberry have anthocyanosides like cyanidin-3-glucoside (C3G)
Superfruit black currant supplies active C3G to support dark adaptation and ni

Yellow sunglasses

Wearing yellow undarkened sunglasses (blueblockers) block blue light & appear

Floaters

Floaters are dark outlines superimposed on what we see in our vision. They ma

What may help:

125 milligrams L-lysine
40 milligrams vitamin C
26.3 milligrams Vitis vinifera extract
5 milligrams zinc
100 milligrams Citrus aurantium
190 milligrams bromelain
95 milligrams papain
95 milligrams ficin
chrysanthemum tea
goji berries
mulberry leaves
acupressure- beginning of eyebrow (by nose), right & left side of eye, just ab

theepochtimes.com/health/floaters-symptoms-causes-treatments-and-natural-appro

Steroid injections directly into the eye may be 2x as effective against uveiti

What may cause macular degeneration-

Chris Knoppe
Refined oils
Cooking polyunsaturated fat
Refined grains
Transfat
Refined sugars
NRG, heart disease, diabetes, obesity, lung cancer, copd, lung infections, ast
degeneration

youtube.com/watch?v=Y_09DnSGetE[/embedyt]

What May Help

kale, spinach, avocados & egg yolks may have lutein & zeaxanthin for eyes
beta carotene
vitamin D3
coQ10
acetyl-L-carnitine
acetyl-L-carnosine
vitC
noni
acai
dry eyes-
spirulina
curcumin
vitA
vitD
GAMMA LINOLENIC ACID GLA
mucus specific anti-inflammatory
80% effective
statins appear to increase cataracts
pinkeye- boric acid in warm water, belladonna (homeopathic) worked better

contact lenses- peroxide kills blinding acanthamoeba parasite- never use tap w
macular degeneration AMD

Contact lenses appear to contain 5,000 higher than safe levels PFAS (flouride)
nationalworld.com/health/soft-contact-lenses-found-to-contain-toxic-forever-ch

800mg+/day calcium 2x/\ age related macular degeneration AMD
http://www.lef.org/protocols/eye_ear/macular_degeneration_07.htm
wet macular degeneration needs avastin

Age-related macular degeneration (AMD) impairs central vision, dry & wet type.

What may ghelp?
Vitamin C
L-carnosine drops
vitamin E

Hypertension

Wet AMD appears higher with high diastolic blood pressure

AMD appears higher when using thiazide diuretics

lutein, zeaxanthin, and meso-zeaxanthin carotenoid intake appears to reduce AM

Vitamin B complex (sustain release best) appears to reduce AMD

Nuts may help

Chicken may help

Anti-Vascular Endothelial Growth Factor (anti-VEGF) agents injected into the e

VEGF Trap-Eye may be as effective as Lucentis with half the injections

DMSO solution may bring the anti-VEGF agents into the eye without the possibil

Photodynamic therapy, also used in cancer therapy, treats wet AMD

Photodynamic Therapy (PDT) is a systemic treatment used in oncology by a varie
specialists to eradicate premalignant and early-stage cancer and reduce the tu
end-stage cancers. PDT involves three key components: a photosensitizer, light
oxygen.
Photosensitizing agents are drugs that become active when light of a certain w
directed onto the anatomical area where they are concentrated. It is an approv
wet macular degeneration, and is a more widely preferred treatment that takes
certain unique properties of subretinal neovascular vessels.
Compared with normal blood vessels, neovascular tissue appears to retain the l
medicine used in photodynamic therapy. After the medicine, verteporfin (Visudy
example, has been injected into a peripheral vein, it can detect abnormal bloo
macula and attach itself to the proteins in the abnormal blood vessels. Laser
wavelengths, which activates photosensitive drugs like verteporfin, is focused
for about one minute.
When verteporfin is activated by the laser, the abnormal blood vessels in
the macula are destroyed. This happens without any damage to surrounding eye t
Because normal retinal vessels retain very little verteprofin, the abnormal su
selectively destroyed. Blood or fluid cannot leak out and damage the macula an
(Wormald 2007).
While verteporfin PDT slowed wet AMD progression, newer anti-VEGF therapies ha
vision improvement in many patients. Combination therapies (PDT + corticostero
have shown some promise, particularly in certain classes of disease (Miller 20
Laser Photocoagulation
Laser photocoagulation (LP) is an effective treatment for wet type
AMD. However, LP is limited to the treatment of well-defined, or "classic" sub
neovascularization, present in only 25% of those with wet type AMD (Anon 2011a

patients, LP is effective at preventing future vision loss, but it cannot rest
In addition, choroidal neovascularization can recur after treatment and cause
(Yanoff 2004). LP has not worked well on atrophic (dry) AMD.
Surgery. Subretinal surgery has been attempted for AMD. Some surgeries were ge
the removal of blood and the subretinal neovascular membrane. Another type of
attempted to physically displace the macula and move it onto a bed of healthie
research studies show that the results of surgery are disappointing (Bressler
generally not improved after surgery (Hawkins 2004). Additionally, the frequen
surgical complications were generally thought to be unacceptably high.
In late 2010, the FDA approved a device called the Implantable Miniature Teles
improve vision in some patients with end-stage AMD. The IMT replaces the natur
surgery in only one eye and provides 2X magnification. The other eye is used f
vision. In the clinical trials upon which FDA approval was based, at 1 and 2 y
75 percent of patients had an improvement in their visual acuity of two lines
improved their vision by three lines, and 40 percent had a four-line improveme
chart (Hudson 2008 and www.accessdata.fda.gov).
Each person may respond differently to the various conventional treatments ava
macular degeneration. From a patient’s perspective, it is very important to th
understand wet macular degeneration and its treatment in order to be able to d
therapeutic plan with his or her doctor. A specific treatment plan should be t
patient’s needs and disease activity.
The advent of anti-VEGF therapies, for example, has been seen as a significant
for patients with wet macular degeneration. It is important to speak with a sp
the benefits and side effects of anti-VEGF drugs to determine if they are appr
specific case. It should be noted that there is some speculation, which is not
strong human data, that anti-VEGF macular degeneration treatments may exert sy
and negatively impact vascular health by “leaking” from the eye.
It is, therefore, important to evaluate your cardiovascular health if you are
degeneration. For instance, a person who recently had a heart attack or has ex
atherosclerosis may opt to avoid anti-VEGF treatments in favor of photodynamic
laser photocoagulation. Individuals receiving anti-VEGF treatments should targ
mg/dL, fasting glucose between 70-85 mg/dL, etc. For more tips on supporting y
cardiovascular health, read our Atherosclerosis and Cardiovascular Disease Pro
Emerging Options: Hormone Therapy DHEA
Research has shown that the hormone dehydroepiandrosterone (DHEA) is abnormall
patients with AMD (Bucolo 2005). DHEA has been shown to protect the eyes again
damage (Tamer 2007). Because the macula requires hormones to function, an emer
hypothesizes that low blood sex hormone levels cause the retinal macula to acc
cholesterol in an attempt to produce its own hormones (Dzugan 2002).
The accumulation of cholesterol in macula may lead to the production of pathol
degeneration. An inverse association of female hormone with neovascular AMD wa
with current and former use of hormone replacement therapy among Caucasian and
women (Edwards 2010). Restoring optimal hormone balance with bioidentical horm
an effective new treatment for both men and women. Clinical studies are underw
hypothesis and possible hormonal treatment options.
Melatonin
Melatonin is a hormone and strong antioxidant that scavenges free radicals. Se
studies have shown that many areas of the eye have melatonin receptors (Rastma
melatonin at bedtime. The treatment prevented further vision loss. After six m
had not diminished and the majority of patients had reduced pathologic macular
examination (Yi 2005).
Dietary Considerations
Soy. Soy contains the phytonutrient genistein, which has documented antiangiog
properties postulated to be the result of inhibiting VEGF (Yu 2010). This prop
blood vessel growth is important in limiting abnormal ingrowth of choroidal bl
mice, genistein inhibited retinal neovascularization and expression of VEGF (W

Food rich in Omega-3 fatty acids. Oily fish (e.g., salmon, tuna, and mackerel)
seeds are important sources of omega-3 fatty acids, essential for protection a
degeneration and other diseases (Landrum 2001). A meta-analysis found that pat
high dietary intake of omega-3 fatty acids had a 38% lower risk of late (more
Additionally, an association was observed between eating fish two times a week
reduced risk of both early and late AMD (Chong 2008).

Macular Pigments: Lutein, Zeaxanthin, and Meso-Zeaxanthin

The relationship between the density of macular pigment (MP) and the onset of
established. The MP is composed principally of three carotenoids: lutein, zeax
meso-zeaxanthin. They represent roughly 36, 18, and 18 percent, respectively,
carotenoid content of the retina. They are found within the macula and surroun
including blood vessels and capillaries which nourish the retina (Rapp 2000).
Lutein, zeaxanthin and meso-zeaxanthin ensure proper functioning of the macula
harmful ultraviolet light and acting as antioxidants (Beatty 2000; Kaya 2010).
process, there is a decrease in levels of lutein and zeaxanthin; low levels of
AMD (Johnson 2010). An autopsy study on donated eyes found that levels of all
carotenoids were reduced in those with macular degeneration compared to contro
The most significant finding, however, was the sharp decrease in meso-zeaxanth
macula of macular degeneration subjects (Bone 2000).

This postmortem study helped confirm other studies indicating the importance o
integrity of the macula (Krinsky 2003). These carotenoids protect the macula a
photoreceptor cells beneath via their antioxidant properties and light-filteri
(Landrum 2001).

Intake of lutein and zeaxanthin is an important preventative measure, but may
degeneration process when it is ongoing (Richer 2004). Because lutein and zeax
tissue-specific characteristic of all carotenoids, their natural tendency is t
macula and retina. Consumption of foods rich in these substances is especially
they have a direct effect on macular pigment density -- the denser the pigment
retinal tear or degeneration will occur (Stahl 2005). Fruits with a yellow or
mangoes, kiwis, oranges, and vegetables of the dark green leafy, orange and ye
are sources of lutein and zeaxanthin (Bone 2000).

Unlike lutein and zeaxanthin, meso-zeaxanthin is not found in the diet, but is
youthful macular density (Bone 2007). Patients with macular degeneration have
have 30% less meso-zeaxanthin in their macula compared to individuals with hea
(Quantum Nutritionals, data on file). When taken as a supplement, meso-zeaxant
absorbed into the blood stream and effectively increases macular pigment level

Targeted Nutritional Interventions

Anthocyanidins and Cyanidin-3-Glucoside (C3G). C3Gs are critical components of
well as being powerful antioxidants (Amorini 2001; Zafra-Stone 2007). Positive
been noted in many animal studies and some human studies using bilberry for ma
degeneration as well as other eye disorders including diabetic retinopathy, re
glaucoma, and cataracts (Fursova 2005; Milbury 2007). C3G has been shown to im
vision in humans by enabling the rods in the eye responsible for night vision
functioning faster (Nakaishi 2000).

In animal cells, C3G regenerated rhodopsin (the retinal
complex that absorbs light) (Amorini 2001). The anthocyanidins in bilberry dec
permeability by interacting with blood vessel collagen so as to slow down enzy
the blood vessel wall. This may prevent the leakage from capillaries that is p
neovascular AMD. Studies also show that bilberry increases oxidative stress de
mechanisms in the eyes (Milbury 2007). There may be additional benefits by add
(Roberts 2007).

C3G, which is highly bioavailable, enhances other functions in the body (Miyaz
1999; Matsumoto 2001). Its potent antioxidant properties protect tissues again
often the first step in cancer formation and aging of tissues (Acquaviva 2003;
C3G protects endothelial cells against peroxynitrite-induced endothelial dysfu
vascular failure (Serraino 2003).

In addition, C3G fights vascular inflammation by inhibiting
inducible nitric oxide synthase (iNOS) (Pergola 2006). At the same time, C3G u
activity of endothelial nitric oxide synthase (eNOS), which helps maintain nor
function (Xu 2004). These effects on blood vessels are especially important in
delicate nerve cells depend on the single ophthalmic artery for their sustenan
In animal models, C3G prevents obesity and ameliorates blood sugar elevations
One way it does this is by increasing gene expression of the beneficial fat-re
adiponectin (Tsuda 2004). Diabetics, of course, are predisposed to severe eye
including blindness from elevated blood sugar levels.
C3G helps induce apoptosis (programmed cell death) in a number of human cancer
important step in cancer prevention (Fimognari 2004; Chen 2005). In a similar
different mechanism), C3G stimulates rapidly proliferating human cancer cells
they more closely resemble normal tissue (Serafino 2004).
Finally, it was discovered that C3G is neuroprotective in experimental cellula
function, helping to prevent the negative effects of the Alzheimer's-related p
on brain cells (Tarozzi 2010).

Grape Seed Extract

Grape seed extract, a bioflavonoid, is a potent antioxidant. Plant-derived
bioflavonoids are readily assimilated into our body when consumed. Bioflavonoi
protect retinal ganglion cells (Majumdar 2010). Studies conducted in fruit fli
that grape seed extract attenuates the aggregation of pathologic proteins, whi
protective effect against macular degeneration and neurodegenerative disorders
fruit flies administered grape seed extract exhibited improved eye health (Pfl
experiments in diabetic animals indicate that grape seed extract limits the oc
damage seen in diabetic retinopathy (degradation of the retina), which shares
pathological characteristics with AMD (Li 2008).
Compelling laboratory evidence demonstrates that grape extracts can inhibit an
human cells (Liu 2010). This suggests that grape seed extract may suppress the
vessel growth observed in wet AMD.

Resveratrol

Resveratrol is a potent polyphenolic antioxidant compound produced by grapes
and other plants for protection against pathogens. In humans, it exerts a broa
physiologic effects when ingested orally. Several studies have demonstrated ca
properties of resveratrol, including endothelial protection and attenuation of
indicates that resveratrol may combat macular degeneration and promote eye hea
mechanisms. In an animal model, resveratrol was able to stave off diabetes-ind
lesions (Kim 2011).
Moreover, this same study showed that resveratrol was able to dampen
VEGF signaling in mouse retinas, a key pathologic feature of AMD. Another stud
these results by showing that resveratrol inhibited angiogenesis and suppresse
neovascularization in mice prone to develop macular degeneration due to a gene
(Hua 2011). Also, several laboratory experiments have suggested additional pro
mechanisms of resveratrol in macular degeneration, including protecting retina
epithelial cells from hydrogen peroxide-induced oxidative stress and light dam
2010; Pintea 2011).
Given these exciting initial findings regarding resveratrol and macular degene
its stellar track record in a variety of other conditions, Life Extension beli
with AMD (especially the "wet" variety) may benefit from supplementation with
Ginkgo Biloba. Ginko biloba improves microcapillary circulation in the eye and
deterioration of the macula (Thiagarajan 2002). By inhibiting platelet aggrega
blood vessel elasticity, ginko biloba improves blood flow through major blood
capillaries. Ginkgo is also a powerful antioxidant (Mahadevan 2008).
Glutathione and Vitamin C. Glutathione and Vitamin C are antioxidants found in
concentrations in healthy eyes and in diminished quantities in the eyes of AMD
C aids glutathione synthesis in the eye. When combined with cysteine, an amino
antioxidant, cysteine remains stable in aqueous solutions and is a precursor t

synthesis. Vitamin C is important because it absorbs ultraviolet radiation, wh
cataracts (Tan 2008). Topical Vitamin C inhibited angiogenesis in an animal mo
inflammatory neovascularization (Peyman 2007).

L-Carnosine

L-Carnosine is a naturally occurring antioxidant and anti-glycation agent. Stu
have shown that carnosine inhibits lipid peroxidation and free radical-induced
(Guiotto 2005). Topically applied N-acetyl-carnosine prevented light-induced D
and repaired damaged DNA strands (Specht 2000), as well as improved visual acu
lens opacification in animals and humans with advanced cataracts (Williams 200
2009).

Selenium

Selenium, an essential trace mineral, is a component of the antioxidant enzyme
glutathione peroxidase, important in slowing the progression of AMD and other
including cataracts and glaucoma (Head 2001; King 2008). In mice, increased ex
glutathione peroxidase protected against oxidative-induced retinal degeneratio
Coenzyme Q10 (CoQ10). CoQ10 is an important antioxidant that may protect again
radical damage within the eye (Blasi 2001). Mitochondrial DNA (mtDNA) instabil
important factor in mitochondrial impairment culminating in age-related change
In all regions of the eye, mtDNA damage is increased as a consequence of aging
age-related disease (Jarratt 2010). In one study, a combination of antioxidant
acetyl-L-carnitine, and omega-3 fatty acids improved the function of mitochond
pigment epithelium and subsequently stabilized visual functions in patients af
AMD (Feher 2005).

Riboflavin, Taurine, and Lipoic Acid

Riboflavin (B2), taurine, and R- lipoic acid are other
antioxidants utilized to prevent AMD. Riboflavin is a B complex vitamin that r
glutathione and helps prevent light sensitivity, loss of visual acuity, as wel
in the eyes (Lopez 1993). Taurine is an amino acid found in high concentration
taurine deficiency alters the structure and function of the retina (Hussain 20
considered a “universal antioxidant” because it is fat and water soluble. It a
neovascularization in mice (Dong 2009).

B Vitamins

Recent advances surrounding the causes of AMD have unearthed shared risk
factors with cardiovascular disease (CVD) as well as similar underlying mechan
elevated biomarkers of inflammation and CVD including C-reactive protein (CRP)
homocysteine (Vine 2005). Researchers have identified that elevated levels of
and low levels of certain B vitamins (critical to the metabolism of homocystei
with an increased risk of AMD and vision loss in older adults (Rochtchina 2007
found that supplementing with folic acid, B6, and B12 can significantly reduce
adults with cardiovascular risk factors (Christen 2009). The data, along with
confirmatory studies, have convinced physicians to recommend B vitamin supplem
patients with AMD. A study in more than 5000 women indicates that including fo
mg/day), B6 (50 mg/day) and B12 (1 mg/day) in the diet may prevent and reduce
AMD (Christen 2009).

Supplement Recommendations from the Age-Related Eye Disease Study (AREDS)

The largest and most important study of nutritional supplements in AMD is the
Disease Study (AREDS). The AREDS demonstrated a reduction in the risk of progr
end-stage AMD when vitamins and zinc supplementation were given to patients wi
forms of the disease. Thousands of patients were followed for over six years.
revealed significant improvements for patients with AMD and recommended antiox
zinc for most patients with AMD, except those with advanced cases in both eyes
formula consists of the following, which is to be taken daily: Vitamin A (Beta
C, Vitamin E, Zinc and Copper (Fahed 2010).

DHA and EPA

An 8-year trial of 2924 eligible AREDS AMD participants found that independent
of AREDS supplementation, higher intakes of DHA and EPA were associated with a

for progression to advanced AMD (Chiu 2009).
Zinc. Following the revealing data found from the AREDS, additional research o
shown significant activity in treating AMD, specifically the dry form of the d
study, a zinc-monocysteine supplement significantly improved visual acuity and
sensitivity compared to placebo (Newsome 2008).
Summary
There has been limited success within conventional medical treatment protocols
eyesight from either form of AMD. Leading researchers are documenting the bene
holistic approaches to AMD. Patients are encouraged to increase physical fitne
nutrition (including a reduction in saturated fats), abstain from smoking, and
from excessive light. Dietary supplementation with trace elements, carotenoids
and vitamins is recommended for improving overall metabolic and vascular funct
screening and patient education offer the most hope for reducing the debilitat
disease.
Life Extension Suggestions
Lutein: 10 – 20 mg daily
Zeaxanthin: 3 – 8 mg daily
Astaxanthin: 6 – 12 mg daily
Cyanidin-3-glucoside (C3G): 2 – 5 mg daily
Methyltetrahydrolfolate (MTHF): 1000 – 2000 mcg daily
Vitamin B6 (as pyridoxal 5'-phosphate): 100 – 200 mg daily
Vitamin B12 (as methylcobalamin): 1 – 5 mg daily
Beta carotene: 25?000 IU daily
Vitamin C: 1000 – 2000 mg daily
Natural Vitamin E: 100 – 400 IU alpha-tocopherol and 200 mg gamma-tocopherol d
Zinc: 45 – 60 mg daily
Copper: 2 mg daily
R-Lipoic acid: 300 – 900 mg daily
Selenium: 200 – 400 mcg daily
Taurine: 1000 mg daily
CoQ10 (as ubiquinol): 100 – 300 mg daily
N-acetyl-carnosine eye drops: 1 – 2 drops, 1-4 times daily
Omega-3 fatty acids (from fish): 2000 – 6000 mg daily
Ginkgo biloba (standardized extract): 120 – 240 mg daily
Grape extract: 150 – 300 mg daily
Bilberry (standardized extract): 100 – 200 mg daily
Soy isoflavones: 135 – 270 mg daily
The following blood testing resources may be helpful:
Male and Female Panel
Omega Score®
Coenzyme Q10 (CoQ10)
In addition, the following pharmaceutical options should be discussed with you
Lucentis®
Macugen®
Avastin®
These statements have not been evaluated by the Food and Drug Administration.
products are not intended to diagnose, treat, cure or prevent any disease.
The information provided on this site is for informational purposes only and i
substitute for advice from your physician or other health care professional or
contained on or in any product label or packaging. You should not use the info
site for diagnosis or treatment of any health problem or for prescription of a
other treatment. You should consult with a healthcare professional before star
exercise or supplementation program, before taking any medication, or if you h
you might have a health problem. You should not stop taking any medication wit
consulting your physician.

Life Extension
faim.org
Stop Degenerative Eye Disease with Coconut Oil
Dr. Bruce Fife
Can you avoid age-related degenerative eye disease? Our eyesight naturally dim
some extent as we age, but regardless of our age, our eyes should provide us w
for a lifetime. New research reveals that good eyesight can be maintained for
age-related eye disorders can be stopped dead cold and possibly even reversed.
maintaining good vision depends on your diet.
The body has an amazing ability for self-repair. We get a cut, a bruise, break
some other injury, the body knows exactly what to do to repair the damage. In
completely healed, damaged blood vessels in a bruise are repaired, and broken
fused back together, in many cases the repair is so complete that there is lit
an injury ever occurred.
Like other tissues, peripheral nerves throughout our bodies have a high capaci
regeneration after injury, however injury to nerve cells within the central ne
In fact, for many years it was believed that brain tissue, could not be repair
Once an injury occurred, the neurons, or brain cells, were gone forever. It wa
brain cells we were born with were all that we would ever have. We now know th
right conditions brain cells can be regenerated and new brain cells do grow an
other cells throughout the body.
The brain contains two types of nerve cells: glia and neurons. Glia are the mo
provide the structural support that holds all the brain cells together. They a
important functions, but they don't relay signals; that is the function of the
transmit signals by means of electrochemical impulses which allow us to think,
function in our environment.
Neurons consist of three basic parts: (1) the cell body (2) the axon, a long c
of the cell that carries electrochemical impulses along the length of the cell
nerve endings that branch out like the branches on a tree. Messages are passed
nerve impulses from the axon of one neuron to the dendrite of other. If you st
message is relayed in this manner almost instantaneously up to the brain where
as pain and the appropriate reaction can be quickly initiated.
The eyes are extensions of the brain and are also composed of glia and neurons
sensitive portion of the eye is the retina, which lines the inside of the eyeb
retina it sends nerve impulses through the retinal ganglion cells (RGCs) to th
have long axons that join together like threads in a piece of rope to form the
Any damage that occurs to the RGCs or optic nerve can cause visual impairment
enough, complete blindness. When injured, retinal ganglion cells generally do
ability for self repair and eventually die, eliminating any chance for regener
RGCs or the optic nerve leads to lifelong visual impairment.
The most common degenerative eye diseases that involve damage to the retina an
are glaucoma, macular degeneration, and diabetic retinopathy. These three cond
the vast majority of irreversible vision loss in people living in affluent cou
Glaucoma is believed to be caused, in part, by abnormal pressure within the ey
filled with a viscous fluid that helps maintain the shape of the eye and circu
fluid is constantly entering and leaving the eyeball. If it enters faster than
within the eye builds up damaging the retina and optic nerve. Treatment is foc
fluid pressure with the use of medicated eye drops, drugs, laser therapy, surg
combination of these. Unfortunately, all these procedures have the potential f
unwanted side effects or injury.
Diabetic retinopathy is caused by inadequately controlled diabetes. High blood
blood vessels feeding the retina to degenerate and become leaky. This distorts
leading to permanent damage. Besides trying to get blood sugar under control,
involve laser surgery to burn or cauterize damaged blood vessels to keep them
This permanently scars the retina, but may prevent or slow further vision loss
Macular degeneration is the slow destruction of the macula – the portion of th

needed for sharp, central vision. In macular degeneration central vision is lo
progresses out affecting side or peripheral vision. Vision loss is permanent.
macular degeneration is unknown and there is no effective treatment. When macu
degeneration occurs later in life it is usually referred to as age-related mac
distinguish it from other forms that may be inherited and appear early in life
For many years the inability of damaged retinal neurons and optic nerve to reg
accepted almost as a “law of nature,” and on the clinical level, retinal injur
irreversible and corresponding vision loss was permanent. Today medical resear
starting to unlock the secrets of neuronal regeneration. Under the right condi
retina and optic nerve can be healed. A growing number of studies over the pas
have demonstrated that mature RBCs can be transformed into an active regenerat
allowing these neurons to survive injury and to regenerate axons in the injure
Almost all clinical studies using drugs as a means to protect the retina, opti
components of the eye have failed. However, a special group of naturally occur
called brain-derived neurotrophic factors (BDNFs) show great promise. BDNFs pl
regulating survival, growth, and maintenance of neurons. They help support the
existing neurons and encourage the growth and differentiation of new neurons.
Normally, injury to the optic nerve induces a rapid die-back of the axons lead
ganglion cell death. However, when an adequate amount of BDNFs are present, th
injury are diminished and RGCs can be repaired or regenerated.
Animal studies have shown that after severing the optic nerve in adult rats, r
progressively degenerate until, after two months, a residual population of onl
of these cells survive. When BDNFs are present, however, survival rate signifi
For example, in one study researchers severed the optic nerves in a group of r
The injury to the optic nerve caused a rapid, progressive degeneration of the
of the RGCs. After 3 weeks, only 10 percent of the RGCs survived. After 5 week
dropped to 8 percent, and by the 7th week only 5 percent remained. In a second
BDNFs was injected into their eyes before the optic nerve was severed. In this
three times as many RGCs survived compared to untreated controls.1
Studies show that after severing the optic nerve, BDNFs not only protect RGCs
promote regrowth of the axons. RGCs sprout new axons, elongate, and form funct
connections with other neurons. In lab animals that have had their optic nerve
allowed them to recover the ability of light-dark discrimination.2 In essence,
been able to restore partial sight to blind mice.
We always have some BDNFs circulating in our central nervous system that helps
brains and eye from degeneration. However, people with diabetic retinopathy, g
macular degeneration have a deficiency of BDNFs, which makes them more suscept
neurodegeneration and visual problems.3-4
BDNFs provide the potential for preventing degenerative vision loss and possib
lost vision. In animal studies, BDNFs can be injected directly into the eyebal
these protective proteins. Clinically, this process is not feasible because in
therapeutic levels of BDNFs, multiple injections are needed over a period of t
the benefit.5
Fortunately, BDNFs are produced naturally in our bodies. Using this fact, anot
raise BDNFs to therapeutic levels is to boost the body’s own production of the
proteins. This can be done quite simply through diet.
The production of BDNFs is stimulated by the presence of ketones. Ketones are
fatty acids stored in the body and provide an alternative to glucose as a sour
brain. Normally, our cells, including our brain cells, use glucose as their pr
Most the glucose in our bodies comes from carbohydrates in our foods. When we
carbohydrates are converted into glucose and released into our bloodstream. Be
when we don’t eat carbohydrates, blood glucose levels fall. Our cells need a c
energy to function, so when this happens, fat stores in the body are mobilized
are released into the bloodstream. Our cells can use fatty acids for fuel just
The brain, however, cannot use these fatty acids and must have an alternative
Some of these fatty acids are converted into ketones, which are readily used a

Ketones not only supply the brain with energy, but also trigger the synthesis
One way to increase the body’s levels of BDNFs is to eat a low-carb diet. A lo
blood glucose levels low, which causes the release of fatty acids and the prod
A very low-carb or ketogenic diet stimulates greater ketone production and hig
Theraputic levels of BDNFs can be attained and maintained for an indefinite pe
very low-carb diet.
Another way to raise ketones, and consequently BDNFs, is by eating coconut oil
composed predominately of the unique group of fatty acids known as medium chai
(MCFAs). When consumed, a significant proportion of these MCFAs are automatica
into ketones, regardless of blood glucose levels. You can raise blood ketone a
simply by adding coconut oil into your daily diet.
If you eat enough coconut oil, you can raise blood levels of BDNFs to therapeu
would require the daily consumption of 3 to 6 tablespoons of coconut oil daily
would be needed if you combine coconut oil with a very low-carb diet.
If you want to preserve your vision and protect yourself from encountering age
degenerative eye disorders that affect the retina and optic nerve, your safest
approach would be to incorporate coconut oil into your daily diet. If you have
experienced some vision loss due to glaucoma, macular degeneration, or diabeti
combining coconut oil with a low-carb diet can help you prevent any further vi
possibly even regain some of your lost vision.
http://www.faim.org/stop-degenerative-eye-disease-with-coconut-oil
Intravitreal injections of neurotrophic factors
survival of axotimized retinal ganglion cells
reduced levels of brain derived neurotrophic factor
bdnf impairment is associated with age-related
patterns of retinal ganglion cell survival
Vitamin B9 (folate)
High homocysteine levels (perhaps above 8 ?mol/L) appear to increase age-relat
degeneration. Many people (60% of the population, and 90% of people with depre
use regular folate well which may contribute to high homocysteine levels. Taki
(methyl version of vitamin B9) may increase folate blood levels 700% higher th
folate and may reduce homocysteine levels much lower. Lowering homocysteine ma
reduce depression, anxiety, dementia, bipolar disorder, schizophrenia, cardiov
congestive heart failure, stroke, migraines, and hearing loss.
What else lowers homocysteine-
vitamin B6, vitamin B12 (methylcobalamin may be best), betaine (TMG), vitamin
magnesium
n-acetyl L-cysteine (NAC)
S-adenosylmethionine (SAMe)
taurine
green vegetables, especially dark green leafy vegetables
oranges
beans
exercise
What to avoid
the prescription drugs cholestyramine, colestipol, fenofibrate, levodopa, metf
methotrexate, niacin, nitrous oxide, pemetrexed, phenytoin, sulfasalazine
red meat and dairy products
smoking
coffee
alcohol consumption
advancing age
obesity
Reduced B Vitamin Therapy in MTHFR C677T/A1298C Patients with Major Depressive
– Clinical Response Correlates with Homocysteine Reduction: A Double-Blind,
Placebo-Controlled Study

Arnie Mech and Andrew Farah
http://enlyterx.com/wp-content/uploads/2015/11/EnLyte-Clinical-Study-Reprint.p
https://globenewswire.com/news-release/2015/07/29/756168/10143796/en/Breakthro
ssion-Study-Shows-42-Remission-Rate-With-EnLyte.html
http://www.drweil.com/health-wellness/body-mind-spirit/heart/elevated-homocyst
glaucoma
test 3-5yrs if 40-60yrs old
1 to 2 if over 60
tonometry (eye pressure test) AND ophthalmoscopy
eye pressure may not be enough
generic PGAs work
glaucoma- 3yrs of birth control pill usage doubles
glaucoma risk factors, such as African heritage, diabetes, heart disease, high
hypothyroidism or retinal problems...a history of smoking, early menopause (pr
long-term use of corticosteroids...a family history of glaucoma...and those wh
older.

Cataracts
Microstents implanted during cataract surgery lower glaucoma deterioration by
MSM or DMSO may improve the absorption of medicinal eyedrops.
Cineraria eyedrops may heal cataracts early on, & one drop a day may prevent.
N-acetyl carnosine may also reverse cataracts.
Bilberry & pycnogenol may also help cataracts.
Lecithin liposomal vitamin C & vitC in foods may reduce cataracts.
Onions, garlic, cabbage, broccoli (especially sprouts), cauliflower, greens al

N-acetylcysteine (NAC) & Alpha lipoic acid (ALA)

NAC & ALA helps improve glutathione effectiveness for the eye.

only test needed is blood pressure, heart rate, no infection
multifocal replacements up to $4000 out of pocket & increased repeate surgery,
get toric lens if astigmatism or irregular cornea
on naturally.
3.) Almonds to Improve Your Vision Naturally
Almond is a well known remedy for eyesight. It contains vitamin E, antioxidant
3 fatty acids. Almond helps in enhancing concentration and memory. It is an ef
remedy to improve vision naturally. Soak 5-10 almonds in a glass of water. Lea
and then in the next morning, peel the skin of almonds and grind them. Make a
consume them with a glass of warm milk. Do this remedy on a regular basis for
best effects.
4.) Indian Gooseberry to Improve Your Vision Naturally
Gooseberry is the most effective home remedy for weaker eyesight. It works as
herb for low vision. It is packed with a rich source of vitamin C. Vitamin C h
functioning of retinal cells. It contains several nutrients and antioxidants.
gooseberry in any form such as capsule, jam, tablet, juice or powder. Mix 2-3
Indian gooseberry juice in a half cup of water. Drink this at least twice in a
5.) Eat Healthy to Improve Your Vision Naturally
Healthy diet is an important factor for improving natural vision. If you are n
nutritious diet, it will affect your eyesight. Start consuming a healthy and b
it plays an important role to improve your eyesight. You must have these usefu
in your daily diet routine such as eggs, milk, Eat spinach, carrot juice, blue
sweet potato, dry fruits, salad, green vegetables, fruits, fish oil and lemon
nutrition expert, to set a diet according to your problem.

6.) Bilberry to Improve Your Vision Naturally
Bilberry is the best remedy for weak eyesight and night blindness. Bilberry co
antioxidants, which helps to stimulate blood flow of human body. It increases
and strengthens blood vessels. Which protects your eyes from harmful contents.
protect from glaucoma and cataracts. Eat about one half cup of ripe bilberry f
improve your vision.
7.) Sunning And Palming to Improve Your Vision Naturally
Sunning and palming is also a good home remedy for weaker eyesights. It is a b
method to use for reactivating your eye lens muscles. Sunning and palming your
provide benefit to your eyes. This method helps to relax your eyes. For sunnin
allow the sun to heat your eyes directly. Do this for few minutes regularly. F
to rub your hands together to generate heat. After that, you have to close you
your eyes slightly through your hands, it will give you relaxation on your eye
regularly.
8.) Carrot to Improve Your Vision Naturally
Carrot is one of the most effective remedy for low vision and weaker eyesight.
vitamins and nutrients especially phosphorous, iron, calcium and vitamin A. Yo
glass carrot juice regularly or you can also eat carrots as a salad. Eat or dr
will help to improve your eyesight.
9.) Barefoot Walking to Improve Your Vision Naturally
Walking is the most important part of life. It helps us to maintain our health
walking or barefoot walking into their daily routine. Barefoot walking on a gr
morning will help you to get improvement in your eyesight effectively. If you
vision power again, then start barefoot walking regularly.
10.) Fennel to Improve Your Vision Naturally
Fennel is also known as the best remedy for low vision or weaker eyes. Fennel
the herb of eyesight. It contains antioxidants and nutrients which helps to ge
assists to improve our weak eyesight. Take one cup of fennel, one cup of almon
sugar. Then blend these ingredients and make a powder of it. Eat one teaspoon
a glass of milk before sleep. Use this remedy at least 2-3 months on a regular
world around you without the need of glasses.
Goji berries help eyesight.
Astaxanthin
Astaxanthin is an algae extract that is an anti-inflammatory/painkiller, preve
internally), and helps eye health. Astaxanthin needs to be taken with a meal w
to be absorbed. Astaxanthin can help prevent:
Age-related macular degeneration (ARMD)
Cataracts
Inflammatory eye diseases (i.e., retinitis, iritis, keratitis, and scleritis)
Retinal arterial occlusion and venous occlusion
Cystoid macular edema
Diabetic retinopathy
Glaucoma
http://articles.mercola.com/sites/articles/archive/2017/02/20/astaxanthin-whol
px?utm_source=dnl&utm_medium=email&utm_content=art1&utm_campaign=20170220Z1&et
cid=DM134476&et_rid=1894192536#_edn23
http://www.lifeextension.com/magazine/2013/4/Astaxanthin-Provides-Broad-Spectr
n/Page-01
http://www.valensa.com/resources/Astaxanthin.php
Eur J Ophthalmol. 2012 Mar-Apr;22(2):216-25. doi: 10.5301/ejo.5000069.
Carotenoids in Age-related Maculopathy Italian Study (CARMIS): two-year result
randomized study.
Piermarocchi S, Saviano S, Parisi V, Tedeschi M, Panozzo G, Scarpa G, Boschi G
G; Carmis Study Group.
Invest Ophthalmol Vis Sci. 2008 Apr;49(4):1679-85. doi: 10.1167/iovs.07-1426.
Inhibition of choroidal neovascularization with an anti-inflammatory carotenoi

Izumi-Nagai K, Nagai N, Ohgami K, Satofuka S, Ozawa Y, Tsubota K, Ohno S, Oike
J Pharm Pharmacol. 2008 Oct;60(10):1365-74. doi: 10.1211/jpp/60.10.0013.
Astaxanthin, a dietary carotenoid, protects retinal cells against oxidative st
mice in-vivo.
Nakajima Y, Inokuchi Y, Shimazawa M, Otsubo K, Ishibashi T, Hara H.
Ophthalmology. 2008 Feb;115(2):324-333.e2. Epub 2007 Aug 22.
Carotenoids and antioxidants in age-related maculopathy italian study: multifo
electroretinogram modifications after 1 year.
Parisi V, Tedeschi M, Gallinaro G, Varano M, Saviano S, Piermarocchi S; CARMIS
Regul Toxicol Pharmacol. 2010 Oct;58(1):121-30. doi: 10.1016/j.yrtph.2010.05.0
May 8.
Suppressive effect of astaxanthin on retinal injury induced by elevated intrao
Cort A, Ozturk N, Akpinar D, Unal M, Yucel G, Ciftcioglu A, Yargicoglu P, Asla
Pure Appl. Chem., 1999, Vol. 71, No. 12, pp. 2253-2262
http://dx.doi.org/10.1351/pac199971122253
Journal of the Science of Food and Agriculture May 1, 2001: 81(6); 559-568
Infrared light and macular degeneration
Infrared light exposure (12 min 3x/day) may help reduce macular degeneration,
http://articles.mercola.com/sites/articles/archive/2017/02/26/photobiomodulati
ce=dnl&utm_medium=email&utm_content=mv1&utm_campaign=20170305Z1_UCM&et_cid=D
M135758&et_rid=1912368176
heart astax
Mediators Inflamm. 2013; 2013: 782137.
2013 Dec 31. doi: 10.1155/2013/782137
Dietary Intake of Carotenoids and Their Antioxidant and Anti-Inflammatory Effe
Cardiovascular Care
Marco Matteo Ciccone et al.
Multiple Mechanisms of Anti-Cancer Effects Exerted by Astaxanthin
Li Zhang and Handong Wang
Orazio Taglialatela-Scafati, Academic Editor
Mar Drugs. 2015 Jul; 13(7): 4310–4330.
2015 Jul 14. doi: 10.3390/md13074310
https://www.cyanotech.com/pdfs/bioastin/batl08.pdf

[Improving Eyesight with Red Light Therapy]

This review shows that infrared light therapy treats both dry & wet macular de
successfully. It also may help the eye recover from the shots.
It also explains just why refined & heated veg oils that have polyunsatured fa
(unheated & unrefined oils are healthy- especially organic extra virgin olive
country).
And it includes a review finding there may not be an eye disease that near inf
doesn't seem to help.
Here's one of the best bulbs:
https://www.therabulb.com/blogs/test/therabulb-introduces-industry-first-300-w
ncandescent-bulb
12 min 3x a day at 20 inches or 9 min at 15 ininches (unless too hot!)
https://endalldisease.com/healing-eyesight-vision-loss-with-red-light-t
herapy/
This review shows that infrared light therapy treats both dry & wet
macular degeneration successfully. It also may help the eye recover
from the shots.
It also explains just why refined & heated veg oils that have
polyunsatured fat cause AMD (unheated & unrefined oils are healthy-
especially organic extra virgin olive oil from one country).

And it includes a review finding there is not an eye disease that near infrared therapy doesn't help.
Here's one of the best bulbs:
https://www.therabulb.com/blogs/test/therabulb-introduces-industry-first-300-watt-near-infrared-incandescent-bulb
12 min 3x a day at 20 inches or 9 min at 15 ininches (unless too hot!)
At the 1:13 minute mark is the information on macular degeneration.
At the start is the information on the cause of all heart disease. His research lines up with my research and what I've found is the cause:
Youtube player

Image not found or type unknown

Here's doctor who's done months of research to find the origins of macular degeneration.
https://endalldisease.com/healing-eyesight-vision-loss-with-red-light-therapy/
This review shows that infrared light therapy treats both dry & wet macular degeneration successfully. It also may help the eye recover from the shots.
It also explains just why refined & heated veg oils that have polyunsatured fat cause AMD (unheated & unrefined oils are healthy- especially
h
t
t
p
s
:
/
/
e
n
d

a
l
l
d
i
s
e
a
s
e
.
c
o
m
/
h
e
a
l
i
https:
//end
alldis
ease.
com/
heali
ng-ey
esigh
t-visi
on-lo
ss-wi
th-re
d-ligh
t-ther
apy/
This
revie
w
show
s that
infrar
ed
light
thera
py
treats
both
dry &
wet
macu
He's found what appears to be the cause of almost all macular degeneration-:
Refined oils (my last email showed they have mercury & formaldehyde from heating) & any oil with polyunsaturated fat that is cooked (formaldehyde) which is all except unrefined coconut, unrfinede macademia nut, & unrefined MCT oil has a smoke point of

260 degrees so ok for heating but not frying (it also increases metabolism & energy & weight loss).
Peanut oil has the least polyunsaturated of all the oils used for potato chips.
Refined grains (bleached white wheat flour, white rice) have mercury added
Refined sugar (in contrast organic raw honey causes weight loss).
Transfatty/hydrogenated oils
Youtube player

-

organic extra virgin olive oil from one country).
And it includes a review finding there is not an eye disease that near infrared therapy doesn't help.
Here's one of the best bulbs: https://www.therabulb.com/blogs/test/therabulb-introduces-industry-first-300-watt-near-infrared-incandescent-bulb
12 min 3x a day at 20 inches or 9 min at 15 ininches (unless too hot!)
n
g
-
e
y
e
s
i
g
h
t
-
v
i
s

i
o
n
-
l
o
s
s
-
w
i
t
h
-
r
e
d
-
l
i
g
h
t
-
t
h
e
r
a
p
y
/
lar
dege
nerati
on
succ
essfu
lly. It
also
may
help
the
eye
recov
er
from
the
shots
.
It
also
expla
ins
just
why

refine
d &
heate
d veg
oils
that
have
polyu
nsatu
red
fat
caus
e
AMD
(unh
eated
&
unrefi
ned
oils
are
healt
T
h
i
s
r
e
v
i
e
w
s
h
o
w
s
t
h
a
t
i
n
f
r
a
r
e
d
l
i
g
h
t
t
h

e
r
a
p
y
t
r
e
a
t
s
b
hy-
espe
cially
orga
nic
extra
virgin
olive
oil
from
one
count
ry).
And
it
inclu
des a
revie
w
findin
g
there
is not
an
eye
disea
se
that
near
infrar
ed
thera
py
does
n't help. Here's one of the best bulbs

Both dry & wet macular degeneration successfully. Italsw.therabulb.com/blogs/
o may help the eye recover from the shots. It also explains just why refined &
And it includes a review finding there is not an
eye disease that near infrared therapy doesn't help.

Here's one of the best bulbs:
therabulb.com/blogs/test/therabulb-introduces-industry-fi
rst-300-watt-near-infrared-incandescent-bulb

12min 3x a day at 20 inches or 9 min at 15 in inches (unless too hot!)

endalldisease.com/healing-eyesight-vision-loss-with-red-light-therapy/

This review shows that infrared light therapy treats both dry & wet macular de
from one country).

And it includes a review finding there is not an eye disease that near infrare
Here's one of the best bulbs:
https://www.therabulb.com/blogs/test/therabulb-introduces-industry-first-300-w
12 min 3x a day at 20 inches or 9 min at 15 inches (unless too hot!)

Infrared therapy & the eyes

The only effective treatment for one form of macular degeneration that brings

articles.mercola.com/sites/articles/archive/2017/11/12/photobiomodulation-ligh

Infrared & red light together in the red heat lamp is far more effective than

The heat lamp may also warm the eye (closed) enough to help kill the bacteria/

Avoid blue light except first thing in morning to prevent eye damage

articles.mercola.com/sites/articles/archive/2020/07/13/light-therapy-can-save-

Prevention macular degeneration
articles.mercola.com/sites/articles/archive/2018/12/15/is-macular-degeneration

What is needed to not have to inject the drugs:
healthline.com/health/eye-health/wt-macular-degeneration-treatment-breakthroug

Pharmaceutical grade DMSO may take antibiotics throughout the eye to help kill

Rojas JC, Gonzalez-Lima F. Low-level light therapy of the eye and brain. Eye a
J Clin Laser Med Surg. 2001 Dec;19(6):305-14.

saunaspace.com/debunk-near-infrared-light-cataract-connection/

sciencealert.com/near-infrared-light-heals-eyes

Category

1. Uncategorized

Date Created
May 2021
Author
biggs