



NUTRITION FOR ANATOMY & PHYSIOLOGY

EYE HEALTH

EYE HEALTH OVERVIEW



1

NUTRIENTS EYES NEED

2

NUTRIENTS IN / TOXINS OUT

3

MITIGATING THE EFFECTS OF
SCREEN TIME

4

ANTINUTRIENTS

“ NUTRIENTS FOR HEALTHY EYES 1

—



EYE / NERVE NUTRIENTS

VITAMIN A – also important for mucous membranes and immune strength; OMEGA 3s – Esp. DHA; B12



ANTI-INFLAMMATORIES / ANTIOXIDANTS

LUTEIN, ZEAXANTHIN,



MINERALS

ZINC, COPPER

“ VITAMIN A FOR HEALTHY EYES

Featuring Hannah, the iddy, biddy, piddy healthy runt pig fav of my sister!

S O C A L G A R D E N H E A L T H . C O M



EYE / NERVE NUTRIENTS

VITAMIN A

important for mucous
membranes & immune strength

PIGS fed a diet with no vitamin A three months
before conception and two months after

-> blind born; stillbirths or incoordinations /
spasms; ear malformations

59 pigs born blind – *all* those born in six
litters from deficient mama pigs^{N&PDp337}

A Farmer reported 17 pigs born blind on his
farm in June 1935 after “no green feed was
available on his farm from March 1934-
May 1935

“ VITAMIN A FOR HEALTHY EYES



EYE / NERVE NUTRIENTS

VITAMIN A

– also important for mucous membranes and immune strength

HUMANS can tell they may be low in Vitamin A when they notice:

- *Trouble seeing in low light;*
 - *pain from bright light/sunshine*
-
- Sterility, or lack of ovulation
 - Low thyroid function may prevent the conversion of beta-carotene to vitamin A (both are important to eye health!)

“ DHA & B₁₂ FOR HEALTHY EYES —



EYE / NERVE NUTRIENTS

OMEGA 3s

Remember Omega3s have
EPA for circulation and DHA?

DHA

Is food for the nerves that go all the way
to feed the brain and eyes
& provides some of the eye's moisture

B₁₂

The Myelin sheath of the nerve is made
up of B₁₂ and DHA

“ NUTRIENTS FOR HEALTHY EYES 2

—



NUTRIENTS FOR EYE MOISTURE

Water, DHA, Hyaluronic Acid

(From Omega-3s, BioCell Collagen / Bone Broth)



NUTRIENTS FOR STRUCTURE

BioCell Collagen / Bone Broth



NUTRIENTS IN / TOXINS OUT

Exercise

“

WATER FOR HEALTHY EYES

—



NUTRIENTS FOR EYE MOISTURE

Water, DHA, Hyaluronic Acid

(From Omega-3s, BioCell Collagen / Bone Broth)

Next time your eyes are dry...

Try drinking a glass of clean water!

“ BIOCELL COLLAGEN / HYALURONIC ACID

NUTRIENTS FOR EYE MOISTURE

&

NUTRIENTS FOR STRUCTURE



Dr Price's Research shows ancient civilizations relied on *bone broth* to *support body structures*

Today we have organic chicken bones in caps!

Supplying collagen and hyaluronic acid.

“ BIOCELL COLLAGEN / HYALURONIC ACID

NUTRIENTS FOR EYE MOISTURE

&

NUTRIENTS FOR STRUCTURE



Is collagen needed for the eyes?

I was told I had holes in my retina years ago. Two years later, after taking BioCell collagen regularly, no more holes – Doc says my eyes are perfect!

Many get relief from dry eyes also!

LUTEIN FOR HEALTHY EYES

The Effect of Lutein on Eye
and Extra-Eye Health

Nutrients. 2018 Sep; 10(9):
1321.

Published online 2018 Sep
18. doi: [10.3390/nu10091321](https://doi.org/10.3390/nu10091321)

“ 
LUTEIN

 
QUALITY OF LIFE IMPROVES

Lutein is a carotenoid and anti-inflammatory.

“A large body of evidence shows that lutein has several beneficial effects, especially on eye health. In particular, lutein is known to improve or even *prevent age-related macular disease* which is the leading cause of blindness and vision impairment.”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6164534/>

LUTEIN, ZINC, ZEAXANTHIN FOR HEALTHY EYES

Antioxidants (Basel).

Nutrients for Prevention of
Macular Degeneration
and Eye-Related Diseases

Hock Eng Khoo Hui
Suan Ng Wai-Sum
Yap Henri Ji Hang
Goh Hip Seng Yim



Lutein, Zeaxanthin, polyphenols, A, Zinc etc. (See article for full list!)

“The risk of macular degeneration can be reduced through the consumption of antioxidant-rich foods, supplements, and nutraceutical formulas. This review focuses on the antioxidants, vitamins, and minerals that have been reported for reducing the risk of macular degeneration and other eye-related diseases. Antioxidants including anthocyanins, carotenoids, flavonoids, and vitamins have been shown to reduce the risk of eye-related diseases...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6523787/>

ANTHOCYANINS, CAROTENOIDS & MINERALS TO PREVENT MACULAR DEGENERATION

Antioxidants (Basel).

Nutrients for Prevention of
Macular Degeneration
and Eye-Related Diseases

Hock Eng Khoo Hui
Suan Ng Wai-Sum
Yap Henri Ji Hang
Goh Hip Seng Yim

“Anthocyanins extracted from berries are powerful antioxidants. Cyanidin, delphinidin, malvidin, pelargonidin, peonidin, and petunidin are anthocyanin aglycones detected in berries, currants, and other colored fruits and vegetables. β -Carotene, as well as xanthophyll lutein and zeaxanthin, have been reported to reduce the risk of macular degeneration. Flavonoids from plants help in the prevention of eye-related diseases through anti-inflammatory mechanisms. A combination of these antioxidants, vitamins, and minerals possess a synergistic effect on the prevention or risk reduction of macular degeneration.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6523787/>

HEALTHY EYES

Antioxidants (Basel).

Nutrients for Prevention of
Macular Degeneration
and Eye-Related Diseases

Hock Eng Khoo Hui
Suan Ng Wai-Sum
Yap Henri Ji Hang
Goh Hip Seng Yim

“Formulas have been developed as dietary supplements to cater to the high demand from consumers and patients with eye problems. Many of the formulated dietary supplements that are sold in the market have been clinically proven for their efficacy to treat eye diseases.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6523787/>

NUTRIENTS TO PROTECT EYES AND SKIN

ASTAXANTHIN

POLYPHENOLS (*colorful foods*)

Collagen

Lutein

Lycopene

Beta carotene

Vitamin e

The photobiology of vitamins

<https://pubmed.ncbi.nlm.nih.gov/29718444/>

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ANTINUTRIENTS

WHAT DOES EXERCISE DO?

MOVES



NUTRIENTS IN



17

TOXINS OUT

NEW
RESEARCH
SHOWS
EXERCISE:

*Protects the
Retinal
Nerves*

NUTRIENTS IN

18



S O C A L G A R D E N H E A L T H . C O M

TOXINS OUT

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5114604/>

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MITIGATING THE EFFECTS OF SCREEN TIME

CUTTING BACK ON SCREEN TIME

IS THE LOGICAL
BEST/FIRST STEP!

BUT THE REALITY IS,
WITH SO MUCH OF
SCHOOL ONLINE

SCREEN TIME IS NOT ALWAYS OPTIONAL!

SOCALGARDENHEALTH.COM



“

*WHAT
NOW?*

BLUE LIGHT

CELL BIOLOGY INTERNATIONAL

2019 Nov;43(11):1296-1306.

doi: 10.1002/cbin.11131. Epub
2019 Jul 16.

Effect of blue light-emitting diode light and antioxidant potential in a somatic cell

Mohammad A J Bapary^{1,2}, Jun-Ichiro Takano¹, Shogo Soma¹, Tadashi Sankai¹



BLUE LIGHT



DEPLETES NUTRIENTS

“Is a major component of visible light wavelength...
DNA damage...

Reactive Oxygen Species (ROS) generation was also
elevated”

<https://pubmed.ncbi.nlm.nih.gov/30958611/>

BLUE LIGHT

CELL BIOLOGY INTERNATIONAL

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BLUE LIGHT



DEPLETES NUTRIENTS

“Upregulation of ROS by blue LED light plays a significant role in causing cellular dysfunction in DNA in a time-dependent manner

<https://pubmed.ncbi.nlm.nih.gov/30958611/>

BLUE LIGHT

CELL BIOLOGY INTERNATIONAL

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BLUE LIGHT



DEPLETES NUTRIENTS

“ In turn, antioxidant treatment has been shown to *improve cell growth and viability* under blue LED light conditions.

This indicates that *antioxidants* have potential against blue LED light –induced somatic cell damage..”

<https://pubmed.ncbi.nlm.nih.gov/30958611/>

HEALTHY EYES

The Effect of Lutein on Eye
and Extra-Eye Health

Nutrients. 2018 Sep; 10(9):
1321.

Published online 2018 Sep
18. doi: [10.3390/nu10091321](https://doi.org/10.3390/nu10091321)



LUTEIN



QUALITY OF LIFE IMPROVES

“sustained *lutein* consumption, either through
diet or supplementation,
may contribute to reducing the burden of several
chronic diseases..”

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6164534/>

HEALTHY EYES

Zeaxanthin and ocular health, from bench to bedside

Ramar Manikandan¹ Raman Thiagarajan² Ganesh Goutham¹ Munusamy Arumugam¹ Manikandan Beulaja³ Luca Rastrelli⁴ Krystyna Skalicka-Woźniak⁵ Solomon Habtemariam⁶ Ilkay Erdogan Orhan⁷ Seyed Fazel Nabavi⁸ Seyed Mohammad Nabavi²



ZEAXANTHIN



ANTIOXIDANT CAROTENOID

“Cataracts, glaucoma, and age-related macular degeneration are known as major ocular problems which cause blindness among the elderly population worldwide. Oxidative stress plays an important role in both the initiation and progression of ocular problems and with respect to this; dietary antioxidants can serve as a therapeutic strategy for the improvement of ocular health

<https://pubmed.ncbi.nlm.nih.gov/26705841/>

HEALTHY EYES

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ZEAXANTHIN



ANTIOXIDANT CAROTENOID

“Zeaxanthin is known as one of the most important and common xanthophyll carotenoids, possessing multiple therapeutic effects such as strong **antioxidant and pro-oxidant** behaviour as well as **anti-inflammatory** effects.

<https://pubmed.ncbi.nlm.nih.gov/26705841/>

HEALTHY EYES

Zeaxanthin and ocular health, from bench to bedside

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“
ZEAXANTHIN

 
ANTIOXIDANT CAROTENOID

“A growing body of literature shows that zeaxanthin *mitigates ocular problems* and suppresses oxidative stress in the retinal tissues. .”

<https://pubmed.ncbi.nlm.nih.gov/26705841/>

HEALTHY EYES

FOOD SOURCES

Nutrients. 2017

Lutein and Zeaxanthin—Food Sources,
Bioavailability and Dietary
Variety in Age-Related Macular
Degeneration Protection

[10.3390/nu9020120](#) [28208784](#)

[Bronwyn Eisenhauer](#) [Sharon](#)
[Natoli](#) [Gerald Liew](#) [Victoria M.](#)
[Flood](#)



LUTEIN / ZEAXANTHIN



FOOD SOURCES

*“dark green leafy vegetables, but also include
pistachio nuts and other
highly bioavailable sources of L/Z such as
eggs.”*

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5331551/>

HEALTHY EYES

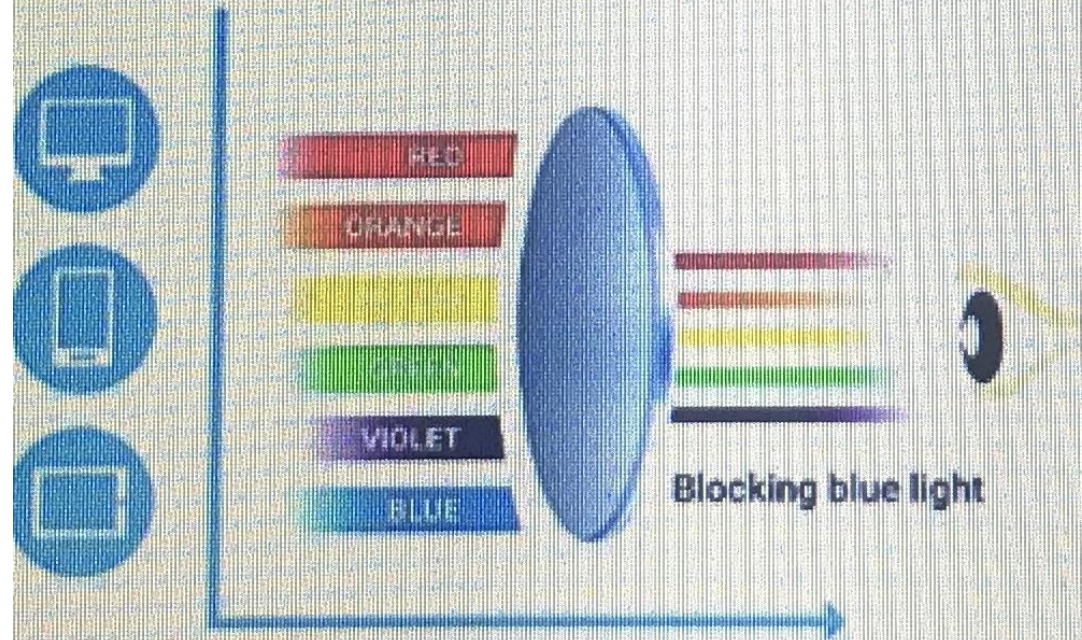
PROTECTIVE GLASSES

Always wearing sunglasses can block ***the full spectrum of light that eyes need*** from the sun for health.

RobertAnthony does wear a special kind to cut the glare of the blue sky and sun when catching outfield balls.

BLUE blocking glasses can prevent the ROS from blue light.

Blue light filter technology

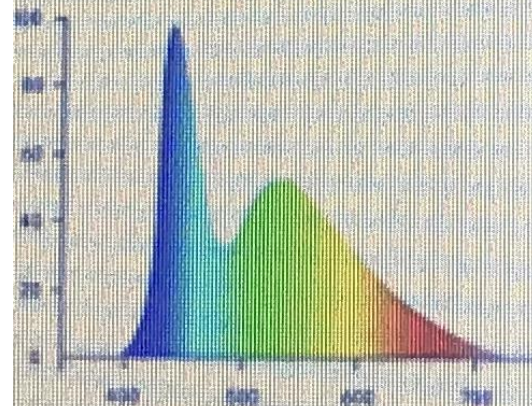


OURS LENS

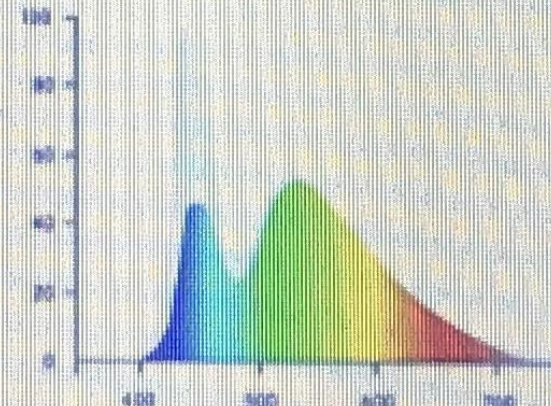
high transmittance 😊

see more clearly 😊

better effect 😊



Excess blue light,
most harmful



Blue light



Anti Digital
Eye Fatigue



Minimize
Digital Headache



Better
Sleeping



UV
Protection

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ANTINUTRIENTS



BLOOD SUGAR ISSUES AND EYE HEALTH

DIABETES

*DIABETIC RETINOPATHY is a
significant risk factor for
BLINDNESS*

[HTTPS://WWW.NCBI.NLM.NI
H.GOV/PMC/ARTICLES/PMC7
896265/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7896265/)



DIABETIC RETINOPATHY

Study on 54,535 eyes over 662 Days

“CONCLUSIONS

IN THIS LONGITUDINAL OPHTHALMOLOGIC
REGISTRY POPULATION INVOLVING EYES WITH
GOOD VISION, MORE ADVANCED DIABETIC
RETINOPATHY AT FIRST DIAGNOSIS WAS A
SIGNIFICANT RISK FACTOR FOR DEVELOPING
SEVERE BLINDNESS.

”



HEALTHIER CHOICES FOR EYE HEALTH

—
WHAT ELSE
CAN WE DO
TO PREVENT
DIABETES?

FASTING

DNA REPAIR From AMSTERDAM

DNA REPAIR (AMST). 2018
JAN;61:56-62. DO
GLUCONEOGENESIS.

SCHEFFLER K1, RACHEK L2,
YOU P3, ROWE AD4, WANG
W1, KUŚNIERCZYK A5,
KITTELSEN L3, BJØRÅS M1,
EIDE L6



DIABETES

Mice allowed to eat all they want developed high blood sugar.

“...elevated insulin levels and higher liver glycogen content as well as increased accumulation of 8oxoG in mtDNA.”



FASTING MICE DIDN'T EXPERIENCE THIS

“Our data demonstrate a physiological role of base excision repair that goes beyond DNA maintenance, and implies that DNA repair is involved in regulating metabolism.”



FASTING

*The Journal of The Academy
of Nutrition and Diet*

J ACAD NUTR DIET. 2015
AUG; 115(8): 1203–1212.

PUBLISHED ONLINE 2015 APR
6.

DOI: 10.1016/J.JAND.2015.02
.018

REVIEW OF HUMAN STUDIES

NORMALIZE BODY CLOCK

“Intermittent fasting regimens that limit food consumption to daytime may leverage circadian biology to improve metabolic health...

HORMONE REGULATION

“Time of day plays a major role in the integration of metabolism and energetics as well as physiologic indices such as hormonal secretion patterns, physical coordination, and sleep.”

“

EYE HEALTH CONCLUSION

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CONSIDER NUTRIENTS

The eyes require for health



CONSIDER HOW NUTRIENTS FLOW IN AND TOXINS OUT

Are you getting regular
exercise?



MITIGATE DAMAGE

Through nutrient intake
and blue light filtering
glasses

NUTRITION FOR ANATOMY & PHYSIOLOGY

EYE HEALTH (END)