

FLOATERS FOCUS

The Evidence-Based Eye Health Handbook

Floaters · PVD · Macular Health · Dry Eye

No miracle cures. No fear-mongering. Just science you can actually use.

NP Bate, Ed.S.

floatersfocus.org — free edition

How to Use This Book

This book collects everything on Floaters Focus into one document: the emergency triage you need the day a floater appears, the science of what is happening inside your eye, the treatments the evidence actually supports, and the ones we are still watching. Every claim that rests on a study links to that study, so you can verify it yourself.

The chapters are organized by situation, not by topic. Start wherever you are: if a sudden shower of floaters just happened, start at Chapter 2 — the red-flag checklist comes before anything else. If you are past the panic and want the roadmap, read Part II in order. If you are researching supplements, skip straight to Part V.

Two house rules shape everything in this book:

- **Evidence over anecdote.** Claims are graded: RCT + guideline (Grade A), limited RCTs (Grade B), observational/animal/mechanistic only (Grades C–F). We say which is which, on every page.
- **No miracle cures.** If a treatment is promising but unproven, it goes on our watchlist — labeled exactly that — not into a sales pitch.

A note from the author

I wrote this because it did not exist when I needed it. I went through a posterior vitreous detachment and a retinal tear, and six years later a second PVD — and then a macular pucker. All before age 55. I sat in the waiting room wondering whether what I was reading online was true or just another TikTok cure. This book is the bridge I wish I had: plain-English explanations backed by actual studies, not hype.

This is informational and educational content, not medical advice. Nothing here replaces a dilated eye exam or a conversation with your ophthalmologist. When in doubt, see a doctor — the red-flag chapter tells you exactly when.

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PART I

Know Your Eye

The parts that actually matter — and why floaters live where they do

Eye Anatomy 101

Your eye is about the size of a ping-pong ball, but it is packed with specialized structures. This is the friendly tour of the parts you will hear about when dealing with floaters, macular issues, and dry eye.

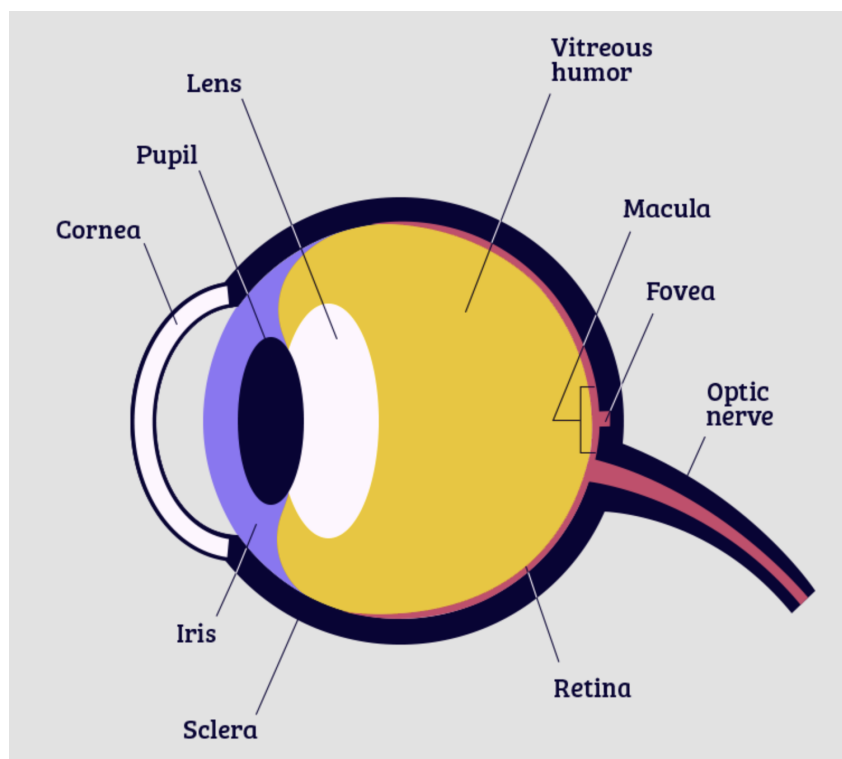


Diagram: National Eye Institute, NIH (public domain). Vitreous, retina, macula, and lens — the parts this book talks about most.

The big picture

Think of your eye like a camera, but one that is alive and constantly repairing itself. Light comes in through the cornea (the clear front window), gets focused by the lens, passes through the vitreous (the clear gel), and lands on the retina (the sensor). The macula is the sweet spot in the center for sharp detail vision.

The vitreous humor — the gel

The vitreous fills roughly 80% of your eye's volume. It is 99% water plus a 1% collagen and hyaluronic acid mesh — like a very soft Jell-O. It is crystal clear when young and firmly attached to the retina. With age, the collagen mesh shrinks (syneresis), water pockets form (liquefaction), and the gel pulls away from the retina — a posterior vitreous detachment, or PVD. This is normal: 75% of people over 65 have one. Floaters are clumps of collagen casting shadows on your retina. They

live in the vitreous, which has no blood supply — which is why no eye drop can reach them.

The macula — your high-definition zone

The macula is a tiny (~5.5 mm) yellowish spot in the center of your retina, packed with cones (color and detail photoreceptors) and zero rods (night vision). That is why you can read this text but your peripheral vision is blurry. The yellow color comes from lutein and zeaxanthin — the same pigments in the AREDS2 formula. When the macula degrades, you get age-related macular degeneration (AMD): straight lines go wavy, and a central blind spot can form.

The meibomian glands — the oil layer

Along the eyelid margins sit dozens of tiny oil glands. They secrete the oily top layer of your tear film that keeps tears from evaporating. When they clog, you get evaporative dry eye — the most common type, responsible for about 86% of dry eye cases. The fix is mechanical (warm compresses to melt the oil) plus rebalancing the tear film, which Part III covers.

KEY FACT: No blood vessels in the vitreous means no immune cells and no way for drops or oral agents to penetrate it directly. Any product promising to 'dissolve floaters on contact' is describing something that anatomically cannot happen.

PART II

Floaters & PVD

The emergency checklist first — then the honest roadmap

Chapter 2 — Sudden Floaters: Start Here

STOP — READ FIRST: Sudden 'shower' of hundreds of tiny new floaters (like black pepper or coffee grounds); flashes of light in your peripheral vision (camera flashes, lightning bolts), especially in the dark; a dark curtain, shadow, or veil creeping across your vision from any side. If any of these are happening now: call your ophthalmologist's emergency line immediately, or go to the ER. These are retinal tear and detachment signs. Hours matter. Do not wait for an appointment.

If you are not seeing those red flags

You probably have a posterior vitreous detachment (PVD). It is extremely common, not a disease, and while the floater is annoying as hell, your retina is likely fine. Here is what is happening: your eye is filled with a gel (the vitreous) that liquefies and shrinks with age. When it pulls away from the retina, protein clumps and cellular debris cast shadows — those shadows are your floaters. Often the first thing people notice is a large, distracting ring called a Weiss ring, from where the gel detached from the optic nerve.

The 'bug' that was not there

You tried to swat a fly off your face, but there was no fly. The 'bug' moved with your eye, then drifted when you stopped. Maybe it is a cobweb, a squiggly line, or a dark ring. It was not there yesterday. If you are frantically googling right now: you are not alone, and this does not automatically mean you are going blind. The first few weeks are a mental rollercoaster — some days you will not notice them, other days they will drive you crazy. That is normal too.

Chapter 3 — The PVD Survival Guide

You have been diagnosed with a posterior vitreous detachment. Now what? Here is the honest, data-backed roadmap for the weeks and months ahead.

You are not going blind

While a PVD itself is harmless, the process of the gel peeling away can sometimes pull too hard and tear the retina — which is why the red-flag checklist exists. If the eye is examined and the retina is intact, the floaters themselves are a normal aging change. The fear of permanent vision loss is the worst part for most people, and it is the part that is not true.

The timeline: will they ever go away?

Here is where honesty matters: those floaters are likely physical, permanent changes inside your eye. But your *perception* of them will change drastically. The most important word in your recovery is **neuroadaptation**. Over the next few months, your brain will realize these floating shadows are not a threat. Just as your brain ignores your nose in your field of vision, it will slowly learn to tune out the floaters.

What the data says about neuroadaptation

- 60–90% of patients report significant subjective improvement by 6 months without intervention (Johnson et al., *Ophthalmology* 2010).
- fMRI studies show reduced visual cortex response to floater shadows over time — your brain literally 'turns down the volume.'
- Most annoying in the first 4–12 weeks, with a significant drop-off after 3 months.

Practical daily habits

You do not have to just sit and wait for your brain to adapt. Three practical changes make the waiting period dramatically easier: dark mode on every screen (floaters are shadows — they are most visible against bright, uniform backgrounds), high-contrast sunglasses outdoors (brown/amber/rose tints beat pure grey), and giving your eyes high-contrast real detail to focus on instead of the floater. Part V covers all three in depth.

PART III

When to See a Doctor

Urgency levels, so you don't under-react or over-panic

Chapter 4 — Urgency Levels

Your eyes don't have pain receptors in the back — so serious problems can be silent until it is late. This chapter breaks down urgency so you know exactly what warrants an ER trip, what can wait a week, and what belongs in your annual routine.

Go now (ER or retina specialist today)

- **Sudden shower of new floaters + flashes** — like someone shook a snow globe in your eye. Often means the vitreous tore the retina. Laser today = no detachment. Waiting = possible surgery.
- **Curtain, shadow, or veil in peripheral vision** — classic retinal detachment. Vision loss spreads toward center; emergency surgery needed.
- **Sudden painless vision loss in one eye** — central retinal artery occlusion (eye stroke). 90-minute window for any chance of recovery.
- **Severe eye pain + nausea + vomiting + halos** — acute angle-closure glaucoma. Optic nerve damage in hours; ER for pressure-lowering treatment.
- **Chemical splash or foreign body** — irrigate immediately with clean water or saline for 15+ minutes *while* someone drives you to the ER.
- **Sudden double vision + droopy eyelid** — could be a cranial nerve palsy, aneurysm, or tumor. ER for imaging; don't drive yourself.

See soon (within 1–7 days)

- **New floaters (stable, no flashes)** — likely PVD, but needs a dilated exam to confirm no tear. Schedule within 1–2 weeks; if flashes start, go to the ER.
- **Persistent blurred or distorted vision** — wavy lines, central blur, trouble reading. Could be wet AMD, macular edema, or cataract progression.
- **Eye pain + light sensitivity + redness** — could be uveitis, keratitis, or scleritis; inflammation damages tissue, don't wait.
- **Sudden increase in prescription** — could be cataracts, diabetes (lens swelling), or keratoconus.
- **Chronic red eye not improving with OTC drops** — rebound from vasoconstrictors, or dry eye disease.
- **Diabetic? Any vision change = now.** Diabetic retinopathy and macular edema progress fast.

Routine (annual or as recommended)

- Age 40–54: every 2–4 years (baseline for glaucoma, cataract, presbyopia).
- Age 55–64: every 1–3 years (glaucoma, AMD, cataract risk rises).
- Age 65+: every 1–2 years (high AMD, glaucoma, cataract, PVD prevalence).
- Diabetes (any age): annual minimum — diabetic retinopathy is often silent until advanced.
- Family history of glaucoma or AMD: every 1–2 years.
- High myopia (>-6.00 D): annual — retinal tear, detachment, and myopic maculopathy risk.
- On high-risk meds (steroids, plaquenil, tamoxifen): per doctor, often every 6–12 months.

Which doctor do you need?

- **Ophthalmologist (MD/DO)** — medical doctor with surgical training. Diagnoses and treats all eye diseases; does surgery. For retinal tears/detachment, wet AMD injections, glaucoma and cataract surgery.
- **Optometrist (OD)** — primary eye care: exams, prescriptions, dry eye management, glaucoma and AMD monitoring; refers for surgery.
- **Retina specialist (MD)** — ophthalmologist plus 1–2 years of retina fellowship. The 'cardiologist of the eye': detachments, wet AMD injections, diabetic retinopathy, macular holes.

PART IV

Macular Health, Dry Eye & Glaucoma

The three conditions most people confuse with floaters

Chapter 5 — Macular Health (AMD)

Age-related macular degeneration affects central vision — the part you use to read, drive, and recognize faces. Early action with the right formula matters, but so does knowing exactly who that formula is for.

The essential facts

- **AREDS2 helps ONLY intermediate AMD** — large drusen (≥ 125 μm) or pigment changes. It does *not* prevent AMD in healthy eyes and does *not* treat wet AMD.
- The AREDS2 formula: vitamin C 500 mg, vitamin E 400 IU, lutein 10 mg, zeaxanthin 2 mg, zinc 25–80 mg, copper 2 mg.
- Smoking is a 2–4× risk multiplier. Quitting is the single best 'supplement' there is.
- Wet AMD needs anti-VEGF injections (Eylea, Lucentis, Avastin, Vabysmo) — no supplement replaces this.
- Lifestyle matters: Mediterranean diet, leafy greens daily, exercise, blood pressure control, UV protection.

Shop our picks: Our pre-vetted picks (affiliate links — support the site at no extra cost): [Preservision Areds2](#)

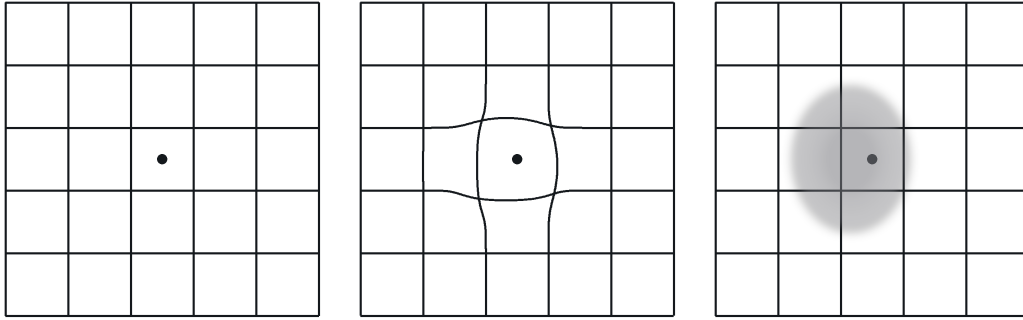
What does not work

- AREDS2 for early AMD or prevention.
- Beta-carotene — increases lung cancer risk in smokers and recent quitters.
- Bilberry, saffron, and astaxanthin for AMD — insufficient evidence (we track these on our watchlist; see Chapter 9).
- Stem-cell clinics and unproven 'vision restoration' therapies.

RED FLAG: If you are over 50: dilated exam every 1–2 years. With intermediate AMD: take AREDS2, use the Amsler grid weekly, and see a retina specialist the day lines go wavy. Wet AMD treatment windows are measured in days.

The Amsler grid: your weekly home test

The Amsler grid is an at-home test that helps catch progression from dry to wet AMD at an early, treatable stage. Hold the grid 12–14 inches away with reading glasses on, cover one eye, and stare at the black dot in the center. Repeat with the other eye — testing each eye separately, because with both eyes open the good eye can mask changes in the bad one. Do it once a week. If lines look wavy, dim, irregular, fuzzy, or a section seems blocked out, schedule an eye exam immediately.



Left: normal grid. Center: wavy lines (fluid blister bends straight lines). Right: gray blind spot (scotoma).
Original illustrations for Floaters Focus.

What the changes mean: an eye without wet AMD sees all lines straight. With wet AMD, fluid accumulates within or under the retina, forming a blister that makes straight lines curve — or a gray, white, black, or red blind spot in or near the center. The fluid comes from new leaky vessels and can often be dried up by anti-VEGF injections (Beovu, Eylea, Lucentis, Avastin) — but only if caught early. Left untreated for months, wet AMD scars the retina and the vision loss becomes irreversible. Establish a baseline shortly after your exam; small waviness can exist from large drusen. The warning sign is a new or enlarged area, or a new blind spot — that is when you call the retina specialist.

Free printable grid: [BrightFocus Amsler Grid \(PDF\)](#). Instructions source: [BrightFocus Foundation](#). This test does not replace regular eye exams.

Macular pucker (epiretinal membrane)

A thin, scar-like membrane can grow on the macula's surface and slowly contract, wrinkling the retina beneath it — like shrink-wrap on a picture. That wrinkling is the 'pucker,' and it distorts central vision: straight lines look wavy, edges bend, and vision can blur. It usually follows a posterior vitreous detachment — when the gel peels away, it can leave cells behind that multiply into the membrane. About 70% of people with an epiretinal membrane have had a PVD.

It is much more common than most people realize: roughly 1 in 11 adults has one, and prevalence rises steeply with age. The good news is that most are mild or asymptomatic — many people never notice them at all, and observation with periodic OCT scans is a completely legitimate plan.

When distortion or blur does interfere with reading, driving, or daily life, the treatment is surgery: vitrectomy with epiretinal membrane peel. It is elective, not urgent, and most eyes gain vision — though the macula rarely returns to a perfect contour, and surgery accelerates cataract formation (which is why cataract timing gets coordinated). No drops, supplements, or eye exercises can remove the membrane. The Amsler grid is a useful way to track whether distortion is stable or worsening between visits — see the grid section above.

Mitchell P, et al. *Ophthalmology* 1997;104(7):1033-1040. doi: [10.1016/s0161-6420\(97\)30190-0](https://doi.org/10.1016/s0161-6420(97)30190-0) — Blue Mountains Eye Study. Fung AT, et al. *Clin Exp Ophthalmol* 2021. doi: [10.1111/ceo.13914](https://doi.org/10.1111/ceo.13914). *Diagnostics* 2025;15(20):2596. doi: [10.3390/diagnostics15202596](https://doi.org/10.3390/diagnostics15202596) — newer SR, OCTA biomarkers in iERM. Christodoulou E, et al. *Ther Adv Ophthalmol* 2020. doi: [10.1177/2515841420927133](https://doi.org/10.1177/2515841420927133). Song SJ, et al. *Retina* 2015;35(5):866-872. doi: [10.1097/IAE.0000000000000406](https://doi.org/10.1097/IAE.0000000000000406) — vitrectomy prognostic factors.

Chapter 6 — High Eye Pressure (IOP) & Glaucoma Suspect

If your eye doctor has said the words "glaucoma suspect," or "ocular hypertension," you are on a watchlist — not a diagnosis. Most people with elevated intraocular pressure (IOP) never develop glaucoma. But IOP is the one risk factor for glaucoma you can actually influence, which makes this chapter the closest thing to actionable in the whole book.

The essential facts

- **High IOP is a risk factor, not a diagnosis.** Most ocular-hypertension patients never develop glaucoma.
- **IOP is the ONLY modifiable risk factor.** Proven treatments (drops, laser) are what actually protect the optic nerve.
- **Caffeine raises IOP acutely** — and in the UK Biobank study (n=121,374), heavy habitual caffeine raised IOP mainly in people with high genetic risk of elevated IOP, and was linked to more glaucoma in that group.
- **Supplements are adjuncts at best.** None is proven to replace or match prescription IOP treatment.

What actually works

- **Monitoring / regular eye exams** (visual field + OCT) — the core of glaucoma-suspect care. Keep every scheduled appointment; IOP fluctuates through the day, so a single normal reading clears nothing.
- **Prostaglandin analogue eye drops** (e.g. latanoprost) — first-line, roughly 25–33% IOP reduction.
- **Selective laser trabeculoplasty (SLT)** — a proven alternative to drops for many patients.
- **Filtering surgery** (trabeculectomy / drainage devices) for advanced or refractory cases.

Step one: cut the caffeine

Before anyone hands you a prescription pad, this is the first step worth trying — and it is the one you can actually control. Caffeine raises IOP within about an hour of a strong cup. A 2026 systematic review and meta-analysis of 16 randomized trials (662 participants) found that doses over roughly 100 mg — about one strong coffee — raised eye pressure in both healthy and glaucomatous eyes, while lower doses did not significantly move it. In the 2021 UK Biobank

gene-diet study (n=121,374), heavy habitual caffeine raised IOP mainly in people with a high genetic predisposition to elevated IOP, and was linked to more glaucoma in that group; for people without the genetic susceptibility the association was effectively null. Cutting back won't fix everyone's number, and it doesn't replace your doctor's care. But it's free, it's yours to control, and for some of us it's the difference between watching your pressure and a lifetime of daily drops. Would you give up the second cup to keep your sight? A reasonable person would.

Supplements: what the evidence actually says

Three supplements show real (if early) signals, and one does not. None is FDA-approved for high IOP or glaucoma, none replaces prescribed treatment, and all should be run past your ophthalmologist first.

- **Nicotinamide (vitamin B3) — Watching.** The strongest candidate, but it is *neuroprotection*, not *IOP-lowering*: a phase-2 RCT (n=42, 3 g/day) improved visual field, and a crossover RCT (n=57, 3 g/day) improved inner retinal function on ERG. The AGS/AAO 2025 position: encouraging but not yet recommended; a phase-3 trial (NAMinG) is running. 3 g/day is far above the ~16 mg RDA — discuss with your doctor, and watch liver status at that dose.
- **Mirtogenol (French maritime pine bark + bilberry) — Watching.** Small studies show a modest IOP drop (~3 mmHg over 3 months) in ocular hypertension, and it may potentiate latanoprost. Small trials, mostly one research group — hypothesis-generating.
- **Saffron — Watching.** One small RCT in POAG patients on drops showed a modest added IOP reduction. Single small trial.
- **Citicoline — Skeptical.** A 2023 systematic review/meta-analysis found no significant effect on IOP, visual field, or retinal nerve fiber preservation. Some individual trials show hopeful signals on visual function, but the pooled evidence says no.

What does not work

- Eye exercises / the Bates method — cannot change trabecular outflow or IOP.
- Mega-dose vitamin C — weak historical data, kidney-stone risk at high doses.
- Ginkgo for IOP — blood-flow studies in normal-tension glaucoma, not IOP lowering, plus bleeding risk.
- Omega-3 for IOP — dry-eye evidence does not transfer.

RED FLAG: Severe eye pain with nausea/vomiting, halos around lights, red eye, or sudden blurred vision can mean acute angle-closure — an emergency that can cause irreversible vision loss in hours. Do not wait for a scheduled appointment; go to the ER.

Kim J, et al. *Ophthalmology* 2021;128(6):866-876. doi: [10.1016/j.ophtha.2020.12.009](https://doi.org/10.1016/j.ophtha.2020.12.009). De Moraes CG, et al. *JAMA Ophthalmol* 2022;140(1):11-18. doi: [10.1001/jamaophthalmol.2021.4576](https://doi.org/10.1001/jamaophthalmol.2021.4576). Hui F, et al. *Clin Exp Ophthalmol* 2020;48(7):903-914. doi: [10.1111/ceo.13818](https://doi.org/10.1111/ceo.13818). Steigerwald RD, et al. *Clin Ophthalmol* 2010;4:471-476. doi: [10.2165/00007012-2010400404711](https://doi.org/10.2165/00007012-2010400404711).

10.2147/opth.s9899. Jabbarpoor Bonyadi MH, et al. *BMC Complement Altern Med* 2014;14:399. doi:
10.1186/1472-6882-14-399. Peritore G, et al. *PLoS One* 2023;18(10):e0291836. doi:
10.1371/journal.pone.0291836.

Chapter 7 — Dry Eye & Discomfort

Burning, gritty, blurry vision — especially after screens. The most common cause is evaporative dry eye: oil glands clog, the tear film's oily layer thins, and tears evaporate too fast. About 86% of dry eye is this type.

The trifecta that actually works

- **Lipid-containing artificial tears** — Refresh Mega-3, Systane Complete, Blink Triple Care.
- **Omega-3 in rTG form, ≥ 2 g EPA+DHA daily** — takes 6–12 weeks; ethyl-ester forms absorb poorly.
- **Warm compresses 10 minutes, twice a day, plus lid hygiene** (hypochlorous spray, not baby shampoo, which strips the lipid layer).

Shop our picks: Our pre-vetted picks (affiliate links — support the site at no extra cost): [Nordic Ultimate Omega 2X](#); [Systane Complete Pf](#); [Refresh Mega 3](#)

If the trifecta is not enough

Prescription options include cyclosporine (Restasis/Cequa), lifitegrast (Xiidra), and varenicline (Tyrvaya). In-office treatments — IPL, thermal pulsation (LipiFlow/TearCare), and meibomian gland probing — address the root cause when at-home care stalls. The rule: if OTC tears four times a day for three months don't help, ask about a meibomian gland workup (meibography). Dry eye is treatable — you do not have to live with it.

What does not work

- Straight castor oil in the eyes — toxic to the cornea, infection risk.
- Baby shampoo lid scrubs — destroys the lipid layer.
- Vasoconstrictor drops (Visine, Clear Eyes) — rebound redness.
- Ethyl-ester fish oil — poor absorption.
- Blue-light glasses for dry eye — weak evidence.

PART V

Treatments

What the evidence shows — and what we're still watching

Chapter 8 — Oral Interventions for Floaters

For decades the only advice for floaters was 'learn to live with it.' Two studies in the last five years challenged that assumption. Here is the full picture — no hype, no corporate filter.

Bottom line up front: neither product is FDA-approved for floaters. Both studies are early, small, and have limitations. But they are the best human data we have on oral floater interventions, and the results are stronger than anything previously published in this space.

VitroCap N — micronutrient formulation

A targeted oral supplement designed for vitreous degeneration: L-lysine 125 mg, vitamin C 40 mg, *Vitis vinifera* extract 26.3 mg, zinc 5 mg, and *Citrus aurantium* 100 mg.

The study (double-blind, placebo-controlled RCT, N=61, 6 months):

- Subjective visual discomfort: **P < 0.001** vs. placebo.
- Vitreous opacity area: **P < 0.001** decrease in the active group vs. insignificant increase in placebo.
- 76.9% of active-group completers showed objective opacity reduction vs. 28.6% on placebo.
- Photopic functional contrast sensitivity: P = 0.047.
- 66.6% of the active group achieved the desired therapeutic effect.

Ankamah E, et al. *TVST* 2021;10(12):19. doi: [10.1167/tvst.10.12.19](https://doi.org/10.1167/tvst.10.12.19)

This is the first double-blind RCT to show an oral supplement can reduce both the subjective burden of floaters and the objective opacity area measured by imaging. The proposed mechanism is antioxidative and antiglycation activity against vitreous collagen aggregation and hyaluronan depolymerization. Limitations: small sample, single center, a patient-reported measure developed for the trial itself, and authors with a disclosed patent/royalty agreement with the product's maker.

Bromelain + papain + ficin — proteolytic enzyme mix

A mixture of fruit-derived proteases (190 mg bromelain, 95 mg papain, 95 mg ficin per enteric-coated capsule) formulated to hydrolyze collagen fibrils and hyaluronic acid aggregates in the vitreous.

The study (prospective cohort with placebo arm, N=280, 3 months):

- Single SVO group: 70% treatment success at 3 months; multiple SVOs: 72.5%.
- Dose-dependent: 65.5% (1 capsule/day) → 70% (2) → 75.5% (3).
- Placebo group: no significant change. No serious adverse events.

Takeuchi M, et al. *Appl Sci* 2020;10(17):5901. doi: [10.3390/app10175901](https://doi.org/10.3390/app10175901)

A 2024 in vitro study from Heidelberg supported the mechanism: hyaluronic acid depletion increases vitreous forward light scattering, and bromelain partially reversed that increase in HA-depleted vitreous gels. Limitations: open-label, published in an applied-sciences journal, no independent masked reading, mechanism inferred. No single commercial product matches the exact study spec.

Hammer M, et al. *IOVS* 2024;65(3):36. doi: [10.1167/iov.65.3.36](https://doi.org/10.1167/iov.65.3.36)

Low-dose atropine 0.01% — symptomatic relief

A 2025 pilot tested whether low-dose atropine drops reduce the perceived burden of floaters. The hypothesized mechanism is pupillary dilation: a wider pupil reduces the shadow cast by vitreous opacities. It is a symptomatic, not curative, effect. N=44, 1 week; 59% of completers satisfied or very satisfied, but worsened near vision (18%), worsened distance vision (18%), and photophobia (18%) were common. Prescription/compounding only — off-label.

Du J, et al. *J Vitreoretin Dis* 2025;9(6):831-835. doi: [10.1177/24741264251364819](https://doi.org/10.1177/24741264251364819)

The honest assessment

These studies are not proof that floater supplements work for everyone. But they are the first real human data suggesting that oral interventions can meaningfully reduce the visual burden of vitreous floaters. That is a genuine advance over the previous standard of 'nothing you can do.' Both studies are small, unreplicated, and have design limitations — facts, not disqualifiers, but reasons to be hopeful rather than certain.

Shop our picks: Our pre-vetted picks (affiliate links — support the site at no extra cost): [Vitrocap N](#); [Bromelain Enzymes](#); [Curcumin Piperine](#)

Chapter 9 — Treatments We're Watching

This chapter is our watchlist: treatments with a plausible mechanism and some early signals — but not enough evidence to recommend them yet. Nothing here is FDA-approved for the condition listed. Our rule: **mechanism + early data = worth watching. Reproducible, large trials = worth recommending.**

Saffron — early AMD (verdict: watching; strongest candidate)

The world's most expensive spice, and the one supplement on this watchlist I'd actually spend money on. Its active compounds, crocin and crocetin, are potent antioxidant and anti-inflammatory carotenoids; preclinical work shows they protect retinal pigment epithelium cells from oxidative stress. Human data: an RCT (N=25, 20 mg/day, 3 months) improved retinal flicker sensitivity; an open-label extension (N=29, ~14 months) showed ~2 Snellen lines of acuity improvement that persisted; a 2024 RCT found modest mfERG improvement, including in patients already on AREDS. Caveats: every trial is small and short, endpoints are functional (not structural), some authors have ties to suppliers, and retail saffron varies wildly in crocin content.

Falsini B, et al. *IOVS* 2010;51(12):6118-6124. doi: [10.1167/iov.09-4995](https://doi.org/10.1167/iov.09-4995)

Piccardi M, et al. *ECAM* 2012;2012:429124. doi: [10.1155/2012/429124](https://doi.org/10.1155/2012/429124)

Broadhead GK, et al. *BMJ Open Ophthalmol* 2024;9(1):e001399. doi: [10.1136/bmjophth-2023-001399](https://doi.org/10.1136/bmjophth-2023-001399)

Ginkgo biloba — AMD (verdict: wait-and-see)

Ginkgo increases retinal and choroidal blood flow, antagonizes platelet-activating factor, and has antioxidant activity — a biologically coherent mechanism for AMD. The evidence: a Cochrane review found only two randomized trials (119 people, 6 months, EGb 761 at 60–240 mg/day); both reported some positive vision effects but results could not be pooled. Conclusion: insufficient evidence. Caveat: ginkgo inhibits platelet aggregation — a real bleeding risk with aspirin, warfarin, or before surgery.

Evans JR. *Cochrane Database Syst Rev* 2013. doi: [10.1002/14651858.CD001775.pub2](https://doi.org/10.1002/14651858.CD001775.pub2)

Astaxanthin — eye health (verdict: watching)

A carotenoid found in salmon, krill, and microalgae — and, unlike lutein and zeaxanthin, it crosses the blood-retinal barrier. It is one of the most potent natural antioxidants. Several small clinical trials suggest benefit in AMD, eye fatigue, and accommodation, but most are small, short, and use surrogate outcomes. No trial has tested astaxanthin against an AMD progression endpoint.

Giannaccare G, et al. *Mar Drugs* 2020;18(5):239. doi: [10.3390/md18050239](https://doi.org/10.3390/md18050239)

Bilberry — night vision (verdict: skeptical)

The WWII RAF-pilots-eat-bilberry-jam story launched a supplement industry, but the famous claim failed rigorous testing: a systematic review of placebo-controlled trials found bilberry anthocyanosides do not improve night vision. No meaningful human data exists for AMD outcomes. If you enjoy bilberries as food, eat them — but don't buy the pills for vision.

Canter PH, Ernst E. *Surv Ophthalmol* 2004;49(1):38-50. doi: 10.1016/j.survophthal.2003.10.006

Manuka honey eye drops — dry eye (verdict: watching)

Sterile medical-grade Manuka honey drops (e.g., Optimel) have antibacterial (methylglyoxal), anti-inflammatory, and osmotic activity on the ocular surface — a plausible fit for evaporative dry eye. Small studies show symptom improvement in post-cataract and contact-lens populations, and a review reported improved corneal staining and meibum quality. Caveats: stinging on instillation is common, trials are small, and it is not a first-line therapy — the trifecta (lipid tears + omega-3 + warm compresses) comes first.

García-Bardera J, et al. *Front Ophthalmol* 2026. doi: 10.3389/fopht.2026.1812914

Prinz J, et al. *Pharmaceuticals* 2023;16(5):762. doi: 10.3390/ph16050762

How we decide what goes on the watchlist

- **Gets on:** plausible mechanism + at least one human study, or a compelling animal/in-vitro mechanism chain.
- **Gets off (promoted):** replicated, larger trials with clinically meaningful endpoints.
- **Gets off (removed):** replicated null results, safety signals, or retractions — we update this chapter and note the change.
- **Never gets on:** no biological plausibility, no human data, and a marketing page instead of a methods section.

Chapter 10 — How to Read a Supplement Label

The supplement aisle is a minefield. Here is how to tell if a product actually matches the research, or if you are paying for expensive urine.

The 5-second rule

- **Proprietary blend** — hides individual doses; you have no idea if you're getting a therapeutic amount.
- **'Fish oil concentrate' without 'rTG'** — almost certainly ethyl ester (poor absorption).
- **Beta-carotene in an eye formula** — increases lung cancer risk in smokers and recent quitters.
- **Zinc >40 mg without copper** — causes copper-deficiency anemia over time.
- **No third-party testing seal** (NSF, USP, IFOS, ConsumerLab) — you're trusting the manufacturer's word.

Ingredient forms that matter

- Omega-3: rTG (re-esterified triglyceride) over ethyl ester.
- Vitamin E: d-alpha-tocopherol (natural) over dl-alpha (synthetic).
- Vitamin B12: methylcobalamin over cyanocobalamin.
- Magnesium: glycinate/threonate over oxide. Zinc: picolinate/citrate over oxide.
- Folate: methylfolate (5-MTHF) over folic acid.

Match the dose to the study

- AREDS2: lutein 10 mg + zeaxanthin 2 mg + zinc 25–80 mg + copper 2 mg.
- Dry eye (DREAM/omega-3 studies): EPA + DHA $\geq$ 2,000 mg/day as rTG.
- Floater studies: match the exact published formulation — VitroCap N (L-lysine 125 mg, Vit C 40 mg, *Vitis vinifera* 26.3 mg, zinc 5 mg, *Citrus aurantium* 100 mg) or the 190/95/95 mg bromelain/papain/ficin enteric-coated spec.

PART VI

The Daily Toolbox

Screens, sunglasses, and making floaters less visible

Chapter 11 — Screen Setup for Floaters

Floaters are shadows, and shadows are most visible against bright, uniform backgrounds — exactly what a white webpage or a light-mode IDE gives you. The higher the contrast, the more your visual system flags the floater as an object to track. You cannot eliminate floaters, but you can dramatically reduce the contrast that makes them pop.

Quick win: dark mode everywhere

- OS level: macOS → System Settings → Appearance → Dark; Windows → Settings → Personalization → Colors → Dark.
- Browser: Chrome/Edge/Safari follow the OS. Firefox: Settings → General → Dark.
- Code editor: VS Code Ctrl+K Ctrl+T → 'Dark+' (same for Cursor); JetBrains → Darcula.
- Docs/Office: Google Docs → View → Theme → Dark; Notion and Obsidian → Appearance → Dark.
- Terminal: iTerm2 or Windows Terminal → dark profile.

Monitor settings that actually help

- Lower brightness to 30–50% to match room lighting — floaters fade when the background dims.
- Enable dark mode with reduced pure-black backgrounds (pure black + white text creates new contrast halos).
- Increase font size and line spacing — fewer eye movements, less floater pursuit.
- Use 'reduce motion' / grayscale where helpful to remove distracting animation.

Chapter 12 — Sunglasses for Floaters

Floaters love bright, uniform skies. The right lenses cut the contrast that makes them visible without turning the world into a cave. Good floater sunglasses do three things: reduce overall brightness, increase contrast with a tint, and cut glare with polarization.

Lens tint (most important)

- **Brown / amber / copper** — best all-rounders; boost contrast with a warm tone; great for driving.
- **Rose / vermilion** — highest contrast enhancement; excellent overcast; slight color distortion.
- **Green (G-15)** — classic; good color balance, moderate contrast.
- **Avoid pure grey / smoke** — neutral density only; it dims everything equally and floaters stay just as visible relative to the background.

Other features

- Polarized: non-negotiable — cuts reflected glare that creates visual 'static.'
- UV400 / 100% UV: protects macula and lens; standard on reputable brands.
- Backside anti-reflective coating: prevents bounce-back glare from behind.
- Large or wraparound frames: block peripheral light that illuminates floaters from the side.

Citations

Every study referenced in this book, grouped by topic. The live version of this list — with any corrections or updates — lives at floatersfocus.org/citations.

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About the author

NP Bate, Ed.S., built Floaters Focus after two posterior vitreous detachments, a retinal tear, and a macular pucker — all before age 55. The site and this book exist to translate eye research into plain English: what the evidence actually says, what is a waste of money and why, and when to see a doctor — yesterday, this week, or next year.

Disclaimers

The content in this book is for informational and educational purposes only and does not constitute medical advice. It is not a substitute for a personalized examination by a licensed eye care professional. Always consult your ophthalmologist or optometrist before starting any supplement (including AREDS2 or omega-3), using any eye drop or over-the-counter treatment, or delaying or discontinuing prescribed treatment. If you experience a sudden onset of many new floaters, flashes of light, a curtain or shadow in your vision, sudden vision loss, wavy lines, severe eye pain, or sudden double vision, seek immediate medical attention.

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