

A RESEARCH BRIEFING FOR MEN OVER 40

Why Men Over 40 Look Puffy — And What Actually Reduces It

Four different problems wear the same word. Only one of them is fluid, and almost everything sold for it was never tested on a face.

You look in the mirror and your face is thicker than it used to be. Softer at the jaw, heavier under the eyes, a little swollen in a way that has nothing to do with what the scale says. It is worse in the morning. It is worse after a drink, after a bad night, after a long flight. Some days it is almost gone by lunch and some days it never lifts. This briefing takes that seriously, checks every popular explanation for it against the primary research, and reports what survives — including the considerable amount that does not.

Prepared by **Dr. John Spencer Ellis** · Health, Longevity and Performance Coach for Men Over 40 · johnspencerellis.com

START HERE

Fifteen questions, answered in one line each

Every answer below is defended, sourced and qualified later in the paper. Several of them contradict things you have almost certainly been told, and three of them contradict the premise of an entire product category.

Is “puffy” one thing?

No, and this is the most useful idea in the paper. It is at least **four unrelated things**: retained fluid, fat, structural change in the tissue underneath, and inflammatory swelling. They move on different timescales, they look similar, and they respond to completely different actions. A man treating the wrong one gets nowhere and concludes nothing works.

Which one is mine?

Use the clock. Fluid changes within **hours** and is worse on waking. Fat changes over **years** and never looks different in the evening. Structure changes over years and *moves* when you lie down. Inflammatory swelling arrives over hours and usually brings redness, heat or itch with it.

Has anyone actually measured fluid in a face?

No. Not overnight, not after salt, not after alcohol, not against cortisol, not in men and not in women. The mechanism research measures legs, necks, plasma volume and urine. The face research measures appearance ratings and fat volume. The two have never been joined. Every confident causal claim about a puffy face is an inference across that gap.

So what is the single highest-value thing to check?

Your medication list. It is the best-evidenced cause in the entire subject and the only one with hard numbers. Amlodipine at 10 mg caused swelling in **10.8%** of patients in the pooled trials; pioglitazone at 45 mg alongside insulin, in **26.1%**.

Does salt make your face puffy?

The measured data in men go the other way. In **32 healthy men** in a metabolic ward, raising salt elevenfold increased plasma volume but **did not increase total body water or body weight** — the authors described fluid moving *out of* the tissue spaces and into the bloodstream. Cutting salt hard does move real fluid, though: about **1.4 litres and 1.1 kg over six days** in nine men.

Is “cortisol face” real?

The sign is real. The attribution is not. A rounded face occurs in **81–90%** of people with Cushing's syndrome — a disease affecting **0.7 to 2.4 people per million per year**, mostly women. In one screening study of **369** overweight patients who already had at least two Cushing's features, **none of them had it**. No study has ever measured facial puffiness against cortisol in people without the disease.

Does inflammation make you look puffy?

Nobody has measured it. Searches for any human study relating CRP, IL-6 or TNF-alpha to visible swelling returned **no primary literature at all**. A 2026 review proposing exactly this pathway grades the inflammation link, in its own table, as “limited indirect evidence” and its lymphatic evidence as a “major evidence gap.” The acute version is real in sepsis and trauma; scaling it down to a sedentary 45-year-old's mildly raised CRP is an assumption.

Are eye bags fluid?

Usually not. The best imaging study — **orbital MRI in 40 people, 17 of them men** — found the tissue in front of the lower lid grew from **99 to 131 mm²** across age groups while the eye itself stayed the same size. That is **fat**. It does not change overnight, it does not respond to salt, and no cream reaches it.

What about my testosterone or my estrogen?

The story collapses on contact with the data. Men's estradiol does **not** climb with age — the free, active fraction falls in every dataset that measured it. Testosterone's own product label warns about sodium and water retention, but in the registration trials peripheral swelling occurred in **fewer than 1%** of men.

Does alcohol do it?

The rebound is real and measured. In **eight men** given alcohol in the evening and a water load the next morning, **44%** of that water was retained versus **12%** on the control night. But no study has ever photographed or measured a face after drinking. And the popular mechanism is half wrong — the supposed hormone suppression did not actually happen in that study.

Does bad sleep do it?

Yes, and this is the only thing anyone has ever measured properly. After 31 hours awake, blinded observers rated the same faces as having **more swollen eyes (+10.9 mm on a 100 mm scale, p=0.001)** and hanging eyelids. Ten people were photographed, five of them men, aged 19 to 32.

Will treating my sleep apnea fix my eye bags?

Apparently not. In the one study that looked, CPAP measurably reduced forehead volume and facial redness, and two-thirds of blinded raters picked the treated photograph as more alert — but there was **no detectable improvement in under-eye puffiness or dark circles**. The investigators called it surprising.

Do lymphatic massage, gua sha or an ice roller work?

There are **no trials**. None. Not for gua sha, not for ice rolling, not for facial massage with a puffiness outcome, in anyone. The nearest real evidence is manual lymphatic drainage in **208 women with breast-cancer arm swelling** — and the 7.11% it added on top of compression came from two of those trials and **83 women**, at borderline significance (P = 0.06).

What about drinking more water to flush it out?

Zero trials. The idea is physiologically coherent and completely untested. The one study of water intake and facial skin used **49 women aged 22 to 34**, measured no puffiness, and found the cheek was the one site where nothing changed.

When should I stop reading this and see a doctor?

If the swelling is **worse lying flat or bending forward**, if it does not lift by mid-afternoon, if it is asymmetric, painless and not itchy, or if it comes with breathlessness, frothy urine or visible veins across your chest. Part Four lists seven conditions worth ruling out and what distinguishes each one.

ABOUT THIS BRIEFING

Who wrote it, and how it was built



Dr. John Spencer Ellis

Dr. John Spencer Ellis has spent more than three decades in health, fitness and human performance — founding certification organizations used by tens of thousands of coaches worldwide, authoring Amazon #1 bestselling books, and producing and directing documentary films on health and human potential. He now works with men over 40 on longevity, health, fitness and performance. Full background and credentials.

What he is not. He is not a physician, a dermatologist, a nephrologist or an endocrinologist. Nothing here diagnoses a condition or replaces medical care. This particular subject sits unusually close to real disease — several of the conditions in Part Four are serious — and the paper says so at the point it matters rather than in a disclaimer at the end.

How the evidence was graded.

Every quantitative claim is traceable to a named primary source. Where sources disagree, both are printed. Sample sizes, study designs and funding conflicts appear wherever they change how much weight a finding deserves. Two cautions run through this entire literature and are flagged repeatedly: most appearance research studies women's faces and is then generalized to men, and most fluid research measures legs. Where a finding is male-specific, this paper says so. Where it is not, it says that too.

DISCLOSURE

- Nothing in this paper is sponsored. No clinic, supplement company, skincare brand, device manufacturer or pharmaceutical firm paid for, reviewed or influenced any part of it.
- Dr. Ellis sells coaching. That is the commercial interest behind this document, it is disclosed here, and the coaching section is marked.
- Every drug incidence figure in Part Three comes from trials the manufacturer ran. That is noted where the numbers appear.
- Several findings here argue against the premise of the men's aesthetics and supplement industries. They are printed anyway.

WHAT THIS PAPER DELIBERATELY DOES NOT CLAIM

It does not claim that salt makes your face puffy. It does not claim that stress gives you a “cortisol face.” It does not claim that inflammation causes visible swelling. It does not claim that lymphatic massage, gua sha, ice rolling or caffeine cream reduces puffiness. It does not claim that drinking more water flushes out fluid. It does not claim that your estrogen is rising. Each of those appears constantly in material aimed at men your age, and each fails for a different reason explained in the pages that follow.

PART ONE

What “Puffy” Actually Is

Four unrelated problems share one word — and the measurement that would tell them apart has never been taken.

CHAPTER 1

01

Four different things wearing the same word

They look alike in a mirror and behave completely differently in real life.

Consumer content treats a puffy face as a single condition with a single fix. It is not. At minimum it is four mechanically unrelated things, and the fastest way to tell them apart costs nothing and takes a day: watch the clock.

WHAT IT IS	WHAT IT'S MADE OF	HOW IT BEHAVES
Retained fluid true edema	Water and dissolved salts sitting in the spaces between cells	Changes within **hours**. Worse on waking, better by afternoon. Depends on posture. Dents briefly when you press it.
Fat including eye bags	Orbital fat, the cheek fat pad, ordinary subcutaneous fat	Changes over **years**. Identical morning and night. Completely indifferent to salt, water and sleep.

WHAT IT IS	WHAT IT'S MADE OF	HOW IT BEHAVES
Structural change	Skin laxity, ligaments and septa, bone resorption, fat pads sliding downward	Changes over **years** — but gravity *moves* it, which is why you look better lying down.
Inflammatory swelling	Leaky capillaries plus inflammatory cells	Arrives over **hours to days** and almost always brings redness, heat or itching with it.

The formal definition of edema is narrower than most people assume: fluid accumulates in the space between cells when the rate at which it leaks out of capillaries exceeds the rate at which the lymphatic system can carry it away. Note what that makes it — a *drainage* problem as much as a leakage one. In the modern understanding of capillary physiology, veins do not reabsorb much of what capillaries release; in most tissues a slight outward leak prevails all the time, and getting the fluid home is primarily the lymphatic system's job.

THE TEST TO RUN ON YOURSELF THIS WEEK

Photograph your face at 7 a.m. and again at 4 p.m., same room, same light, for three days. If the two photographs differ, you have a fluid component and the second half of this paper applies to you. If they are identical, you are looking at fat and structure, and no amount of salt discipline, sleep or cold water will change it — a fact worth knowing before you spend money.

CHAPTER 2

02

The hole in the middle of this subject

Nobody has ever measured the fluid in a human face. That sentence should change how you read everything else.

This paper was built by working outward from the primary literature on each proposed cause of facial puffiness. The same thing happened every time.

The mechanism research is genuinely good. It measures leg fluid volume by bioimpedance, neck circumference overnight, plasma volume, total body water by isotope dilution, urinary sodium, free-water clearance, calf tissue sodium by MRI. Much of it is done in men, in metabolic wards, with real controls.

The facial research is also real. It measures rated appearance, orbital fat area on MRI, soft-tissue contour, facial volume by 3D photography.

These two bodies of work have never been joined. Across sleep, sodium, alcohol, cortisol, aging and allergy, no study was located that measures facial or periorbital interstitial fluid — by any method, in either sex, under any exposure. The rostral fluid shift that happens when you lie down has been measured carefully and repeatedly, and it has been measured in the *legs and the neck*. The inference that the same fluid arrives in your face is mechanically plausible and has not been checked.

0
STUDIES MEASURING FACIAL FLUID

Not one, under any exposure, in either sex. This is the single largest evidence gap in the subject, and it is the reason this paper is more cautious than anything else you will read on it.

Why print this rather than quietly work around it? Because it is the difference between the two kinds of claim you will meet. “Cutting sodium reduces extracellular fluid by about 1.4 litres over six days” is a measurement, in nine men, in a metabolic ward. “Cutting sodium makes your face less puffy” is an inference. The first deserves your confidence. The second deserves a trial on yourself, which is what the protocol at the end of this paper is for.

READ THIS TWICE

- The honest form of almost every statement in this field is: this changes a physiological variable that sits upstream of facial puffiness, and nobody has photographed the faces.
- That is a weaker claim than any article or advertisement will make you.
- It is also the claim the evidence supports, and it tells you exactly how much money to spend before testing something on yourself.

CHAPTER 3

03

Eye bags are not puffiness

The most expensive mistake in this subject is treating fat as though it were fluid.

Three different things sit under and around the lower eyelid, and almost all consumer content conflates them.

True periorbital edema — fluid

Fluid in the loose tissue of the eyelid. It varies over hours, depends on how long you have been upright, and briefly dents under gentle pressure. When it is one-sided, think of a local cause. When it is both sides, think of something systemic. This is the only one of the three that responds to anything in Part Five.

Eye bags — fat, not fluid

In a cross-sectional study using high-resolution orbital MRI in **40 people, 17 of them men**, aged 12 to 80, the soft-tissue area in front of the eye's axis rose across the three age bands from **99 to 103 to 131 mm²**. The eyeball itself did not change size — 456, 463, 456 mm² — so the growth was not an artifact of a bigger globe. The conclusion was that lower-eyelid prominence with age is driven by **fat expanding**.

A CLAIM THE IMAGING DOES NOT SUPPORT

You will read everywhere that eye bags happen because the orbital septum — the sheet of tissue holding the fat back — weakens with age and lets fat herniate forward. Clinical reference works still state it. The authors of the MRI study above wrote, in plain language: **“There have been no studies to show that the orbital septum weakens.”** Two authoritative sources disagree here, and only one of them took measurements. This paper reports the disagreement rather than picking a side.

Festoons and malar mounds — the bags below the bags

Lower down, over the cheekbone, chronic collections of swollen tissue can form a second ridge with a surprisingly sharp lower border. That border is anatomical. Cadaver dissection work identified the **malar septum**, a sheet running from the bone of the eye socket down to the cheek skin about 2.5 to 3 cm below the outer corner of the eye, which behaves as a relatively impermeable barrier — fluid and blood pile up above its insertion rather than spreading into the cheek. That is why this kind of swelling has an edge to it.

Transient swelling in that region does respond to fluid measures. The chronic, sagging version is reported to respond poorly to all of them. Nobody knows how common festoons are: diagnostic criteria vary and most people never seek care, so there is no prevalence figure at all, and certainly none for men.

The practical consequence. A man buying caffeine eye cream for fat, or booking filler for fluid, is treating the wrong organ. Run the morning-and-afternoon photograph test in Chapter 1 before you spend anything. It costs nothing and it sorts you into the right half of this paper.

AND ONE IATROGENIC CAUSE WORTH KNOWING

Hyaluronic acid filler placed around the eye can itself cause recurrent eyelid swelling by obstructing lymphatic drainage. If your puffiness started after a cosmetic injection, that sequence is documented and worth raising with whoever performed it.

PART TWO

The Soft, Undefined Body

Most of what men call puffiness below the neck is not fluid at all — and the part that is moves with posture more than anyone expects.

CHAPTER 4

04

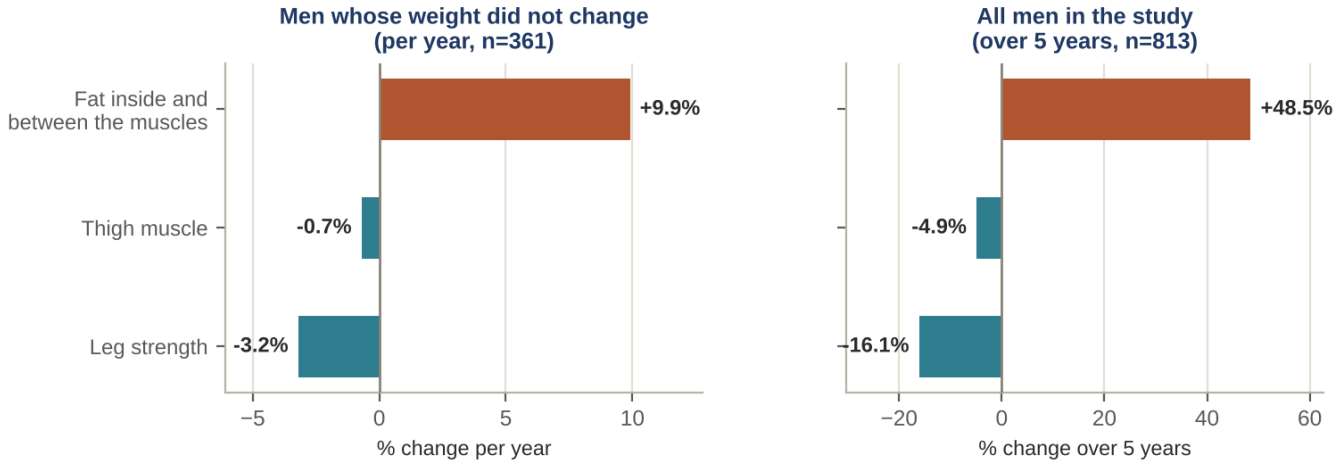
Same weight, different body

The best-measured explanation for looking softer at 50 has nothing to do with water.

A man steps on the scale at 48 and weighs what he weighed at 35, and concludes that something must be swollen, because nothing else explains the shirt. There is a better explanation, and it has five years of CT scanning behind it.

Same weight on the scale, different body underneath

Five years of CT scanning. The men on the left did not gain or lose weight over those five years.



Delmonico et al., American Journal of Clinical Nutrition 2009, Health ABC Study. 813 men, analysed separately from women, aged 70–79 at baseline — older than this report's readership, and the strongest dataset of its kind located for this review. Over the five years strength fell about three times faster than muscle size; among the weight-stable men, more than four times faster.

In the Health ABC study, **813 men** — analysed separately from the women — had their thighs scanned by CT at baseline and again five years later. Over those five years the men lost **4.9%** of their thigh muscle area and **16.1%** of their knee extensor strength, while fat inside and between the muscles rose **48.5%**.

The decisive number is in the subgroup. Among the **361 men whose weight did not change at all** across those five years, fat inside the muscle still rose about **9.9% every year** while the muscle itself shrank 0.7% a year and strength fell 3.2% a year — more than four times faster than size.

9.9%
PER YEAR, IN WEIGHT-STABLE MEN

the rate at which fat accumulated inside and between the thigh muscles of men whose body weight did not change over five years.

THE HONEST CAVEAT ON THIS DATASET

These men were 70 to 79 at baseline — older than this paper's readership. It is the strongest dataset of its kind located for this review, so it is the best available evidence, and it should not be presented as a measurement of 45-year-olds. The direction is almost certainly right; the rate in a man of 48 is unknown.

One further thing deserves saying because it is universally repeated and completely unmeasured: **no study has ever linked muscle loss to the visible appearance of the skin and soft tissue over it**. Not for the body, not for the face. The nearest literature notes that nobody has even measured the muscle mass of the facial muscles in men. The claim is plausible. It is not a finding.

WHAT TO TAKE FROM THIS

- If the scale has not moved and you look softer, the most likely explanation is composition, not water.
- That is a slower problem than fluid and a much more rewarding one, because the intervention — carrying more muscle — also happens to be the single best-evidenced thing a man over 40 can do for his health.
- It also means the mirror is telling you something true that the scale cannot see.

CHAPTER 5

05

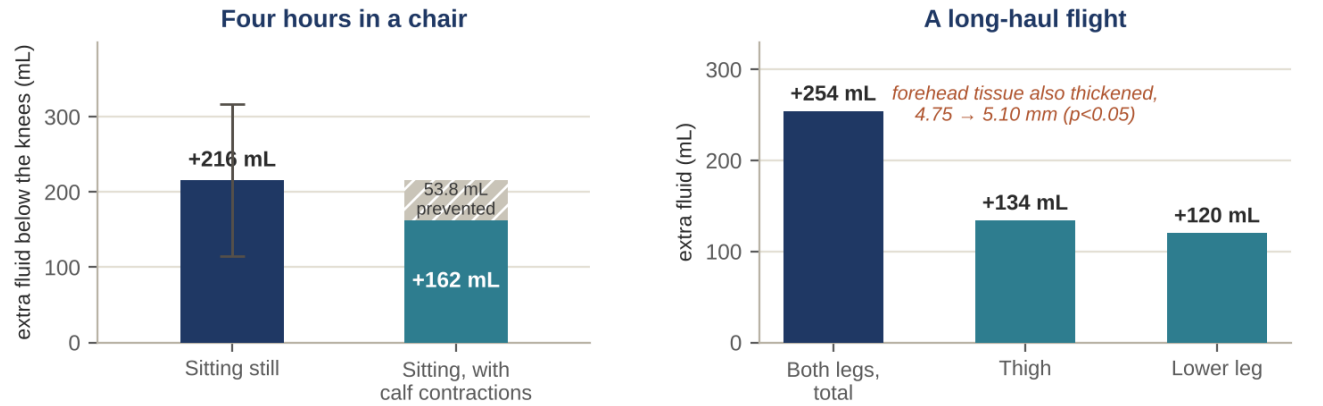
Gravity moves fluid all day, and nobody counts it

Two ordinary daily exposures shift measurable volumes of fluid around your body.

The fluid that does move in a healthy man mostly moves because of posture, and the quantities are larger than most people expect.

Two hundred millilitres, from an afternoon in a chair

Two measured exposures. Both are things a man over 40 does most days without thinking about it.



Left: Respiratory Physiology & Neurobiology 2017, 16 adults, randomised crossover, bioimpedance; sex not reported; ±101 mL as published, dispersion measure not stated. Right: Journal of Travel Medicine 2003;10(6):334, 20 travellers, 9 of them men, not analysed separately by sex; the flight is 9 hours in the abstract and 8 h 20 m in the methods.

In a randomized crossover study, 16 adults sat still for four hours while leg fluid was tracked by bioimpedance. Fluid below the knees rose by **216 mL**. When the same people contracted their calves against a pedal during the sitting bout, the accumulation was **53.8 mL smaller** — roughly a quarter of it simply prevented, by muscle contraction, at no cost.

On a long-haul flight, 20 travellers gained about **254 mL** across both legs, split roughly evenly between thigh and lower leg. The same study measured one upper-body site, and it is the only measurement in this entire review of a flight-associated change in facial tissue: **forehead tissue thickness rose from 4.75 to 5.10 mm**. It is one site, in 20 people, 9 of them men, not analysed separately by sex. It is also the closest thing that exists to evidence that travel puts fluid in your face.

What happens when you lie down

Overnight, that leg fluid redistributes upward. This has been measured carefully in **23 nonobese men**: the amount of fluid leaving the legs overnight correlated strongly with sleep apnea severity ($r = -0.773$), with the overnight increase in neck circumference ($r = -0.792$), and with how long the man had spent sitting the previous day ($r = -0.588$). Leg fluid change and neck change together explained **68%** of the variation in apnea severity.

And it is modifiable. In a one-week randomized crossover in 12 people with venous insufficiency, wearing compression stockings during the day cut the overnight leg fluid shift by **154 mL (62%)**, cut the overnight neck circumference increase by **0.7 cm (60%)**, and reduced apnea severity by **36%**.

One sentence from that trial has to be printed alongside those three numbers, because without it they read as a causal chain the study did not demonstrate: **there was no significant correlation between the change in leg fluid and the change in apnea severity**. The stockings moved both. They did not show that one moved the other. And the sample was twelve people, half of them women, averaging 59 years old, all of whom had both venous insufficiency and moderate-to-severe apnea; the men were not analysed separately, and the work was part-funded by a commercial grant.

WHERE THE CHAIN BREAKS

Every link above is measured, in men, with instruments — up to the neck. Not one study has measured the facial component of the overnight shift, and no trial has tested whether reducing the shift reduces facial puffiness. Morning face is the most intuitive observation in this whole subject and it remains, formally, unmeasured.

Where John starts with this. Of everything in this paper, the sitting data are the easiest to act on and the least acted on. Most men over 40 sit for six to ten hours a day and have never once connected that to how they look and feel in the evening. The fix is not a product, a protocol or a purchase — it is calf contractions under a desk and standing up on a timer. Request an evaluation

CHAPTER 6

06

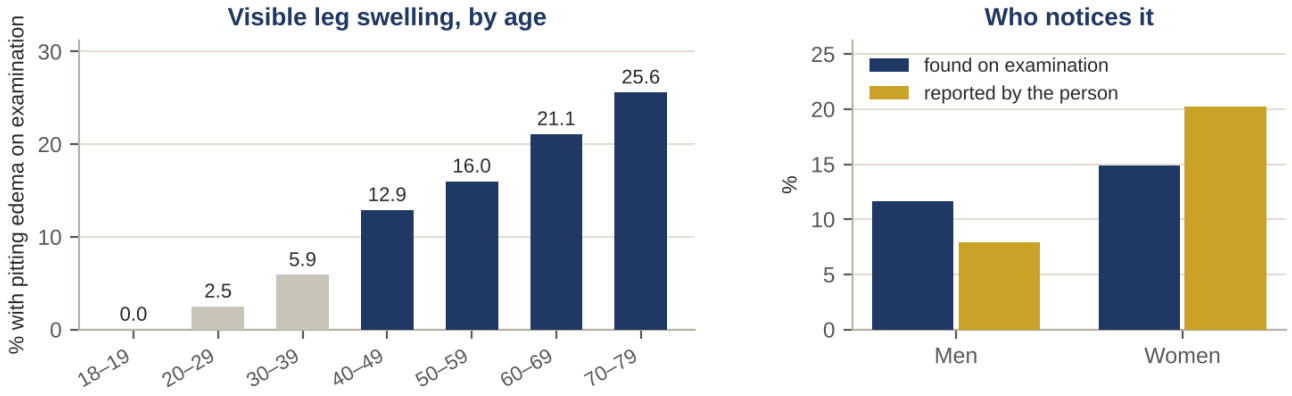
Swollen legs are common, and men are the ones who miss it

Measured swelling in the lower legs rises sharply in the forties, and men under-report it.

The Bonn Vein Study examined **3,072 people** — including 1,350 men — drawn at random from population registers rather than from a clinic. They were not patients and they were not volunteers with a complaint, which makes the figures unusually trustworthy.

Swollen legs are common, and men are the ones who miss it

Three thousand people examined at random from population registers — not patients, and not volunteers with a complaint.



Bonn Vein Study I (Rabe et al.), n=3,072 including 1,350 men, ages 18–79, CEAP class C3. The age breakdown is published for both sexes pooled only, so the rise cannot be stated for men on its own. The right-hand panel is sex-specific: men had more swelling on examination than they reported, and women the reverse.

Pitting edema in the legs more than doubled between the thirties and the forties, from **5.9% to 12.9%**, and kept climbing from there. That age breakdown is published for both sexes pooled, so the jump cannot be stated for men specifically — a limitation worth stating rather than glossing.

The sex-specific panel is the interesting one. On examination, **11.6% of men** had pitting edema, but only **7.9%** reported leg swelling when asked. Among women the relationship inverted — 14.9% on examination against 20.2% reported. Men in this dataset had more swelling than they knew about, and women had less.

Why this belongs in a paper about faces.

The leg is where the fluid sits during the day and the face is where some of it may go at night. A man who does not notice sock marks at six in the evening is also unlikely to connect them to what he sees at seven the next morning. Look at your ankles before you look at your eyes.

ONE CONTRADICTION WORTH PRINTING

A second population study, in Edinburgh, found chronic venous insufficiency *more* common in men than women (9% versus 7%), the opposite direction to Bonn's edema finding. The definitions and age ranges differ. There is no single reliable sex ratio for venous disease and this paper does not offer one.

PART THREE

The Causes, Ranked by What Was Actually Measured

Starting with the one that has hard numbers and almost never gets checked.

CHAPTER 7

07

Your medicine cabinet is the strongest suspect

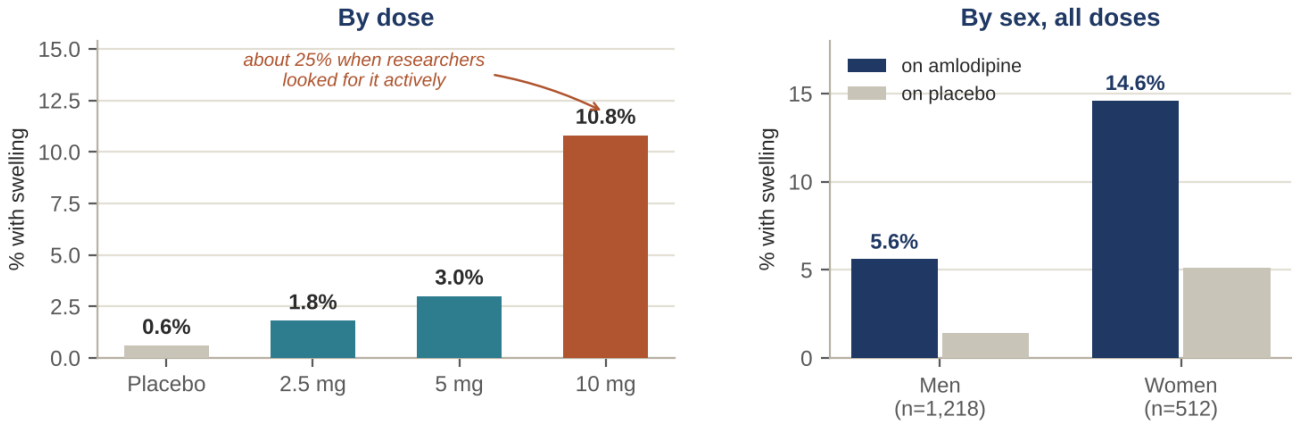
This is the best-evidenced cause of swelling in the entire subject, and the cheapest to investigate.

Everything else in this paper is an inference from mechanism. This chapter is different. Drug-related swelling has been counted, in thousands of people, against placebo, with doses and in some cases with men and women reported separately. If you are a man over 40 who has recently become puffy and you take any regular medication, start here.

Amlodipine, and why the dose matters so much

One blood pressure tablet, and how much it matters which dose

Amlodipine is one of the most prescribed drugs in the world, and swelling is its signature side effect.



FDA prescribing information, pooled placebo-controlled hypertension trials. The sex table is one of the very few places in this entire subject where men are reported separately — and men get this far less often than women do. The ~25% figure is from a review of active-surveillance trials; the underlying trial could not be verified, so it is shown as a note rather than a bar.

Amlodipine is among the most prescribed drugs on earth and swelling is its signature effect. In the pooled placebo-controlled trials it ran at **1.8% at 2.5 mg, 3.0% at 5 mg and 10.8% at 10 mg**, against 0.6% on placebo. A review of trials that went looking for swelling actively, rather than waiting for patients to mention it, reports about **a quarter** of people on 10 mg affected — the specific trial could not be verified for this paper, so treat that as a signal about measurement method rather than a hard rate.

The label also contains one of the very few sex-stratified swelling tables in this entire subject: **5.6% of men versus 14.6% of women** on amlodipine. Men get this considerably less often. They are also far less likely to mention it.

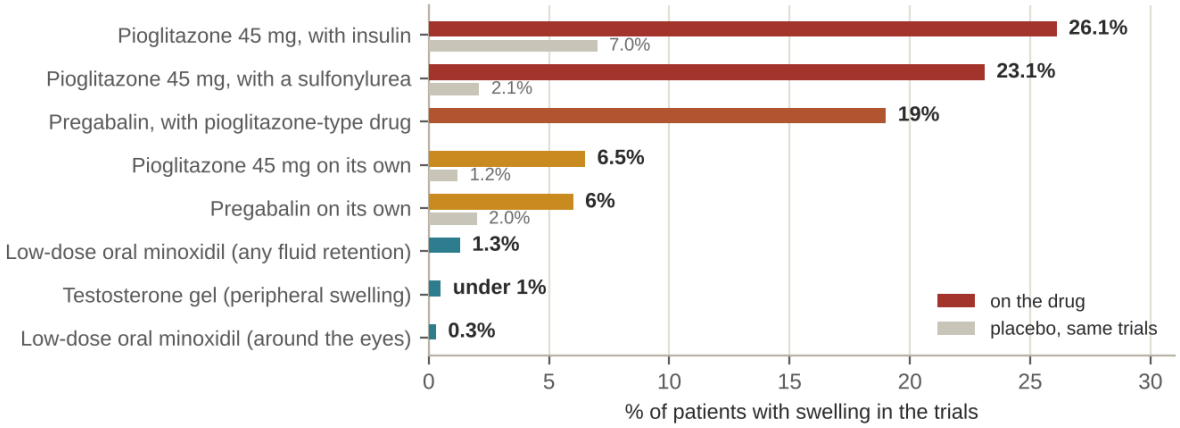
THE MECHANISM CHANGES THE RIGHT RESPONSE

Calcium channel blockers of this type widen the vessels *before* the capillary bed, which raises the pressure inside it and pushes fluid out. That is a **pressure** problem, not a salt-and-water-retention problem. It is why lowering the dose often fixes it, why adding an ACE inhibitor or ARB can normalise the pressure, and why reaching for a diuretic is the wrong reflex. None of this is yours to adjust — it is a conversation with the prescriber, and a well-informed one.

Everything else, and why combinations matter

The combinations are what get you

Each of these drugs is modest on its own. Stacked they are not — but read each against the placebo bar beneath it.



Figures from FDA prescribing information except minoxidil (JAAD 2021, 1,404 patients, 33% men, no control group, so no placebo bar). All label figures come from trials the manufacturers ran. Read the top bar carefully: 26.1% sits against a 7% background rate in the same trials, so the swelling attributable to the drug is about 19 points, not 26. Where no grey bar appears, no placebo figure is published — that is an absence, not a zero; for pregabalin with a pioglitazone-type drug, the published comparator is 3% on the pioglitazone-type drug alone. The 0.3% eye figure is the only published rate for swelling around the eyes from any drug in this review. The testosterone bar is drawn at 0.5% to stand for a label figure published only as "fewer than 1%."

DRUG	SWELLING RATE	WORTH KNOWING
Pioglitazone 45 mg	6.5% alone 23.1% with a sulfonylurea **26.1% with insulin**	Strongly dose-related. Can worsen or precipitate heart failure. Reverses on stopping. Needs a physician's decision, not yours.
Pregabalin	6% versus 2% on placebo **19% with a pioglitazone-type drug**	Same arterial mechanism as the calcium channel blockers. Usually appears in the first month or after a dose increase.
Prednisone 20 mg+ daily	61% facial change at 3 months	**This is fat redistribution, not fluid** — it accrues over 3 to 12 months and does not respond to anything in Part Five. The odds ratio for female sex was 10.87, on a very wide confidence interval of 2.4 to 59 — so the 61% overstates a man's risk, by an uncertain margin.
Oral minoxidil, low dose	1.3% any fluid retention **0.3% around the eyes**	Increasingly taken off-label by men for hair loss. That 0.3% is the only published rate for swelling around the eyes from any drug in this review.
Testosterone	under 1% peripheral swelling	The label warns androgens may promote sodium and water retention, and flags edema as serious in men with existing heart, kidney or liver disease. The registration-trial rate is low.
NSAIDs	no reliable rate	The robust measured effect is a small rise in blood pressure (around 5 mmHg) and about 0.3 kg of weight, not clinical swelling.

DRUG	SWELLING RATE	WORTH KNOWING
Inhaled or nasal steroid	rare	Almost always requires a second drug that blocks its breakdown — ritonavir, cobicistat, itraconazole, clarithromycin. An inhaler alone is a very unlikely cause.

Two drugs are commonly blamed and should probably be acquitted. **Finasteride** does not list edema at all in its four-year controlled study table; facial swelling appears only as a rare post-marketing allergic reaction with no rate attached. **SSRIs** have no retrievable swelling figure; their real fluid effect is a drop in blood sodium, which presents as confusion, lethargy and falls rather than a cosmetic problem — important, but a different conversation.

HOW TO READ EVERY NUMBER IN THIS CHAPTER

All of these rates come from trials the manufacturer designed and ran. That is not an accusation; it is simply how drug safety data are generated, and it is the relevant disclosure. It also explains the gap between the label's 10.8% and the roughly 25% found when researchers asked every patient directly.

The highest-yield hour in this entire paper. Write down every medication and supplement you take, with the dose and the date you started it. Mark anything that began within three months of the swelling. Take that list to your prescriber and ask one question: could any of this be doing it, and is there an alternative? Do not stop or change anything on your own — several of these drugs are dangerous to stop abruptly.

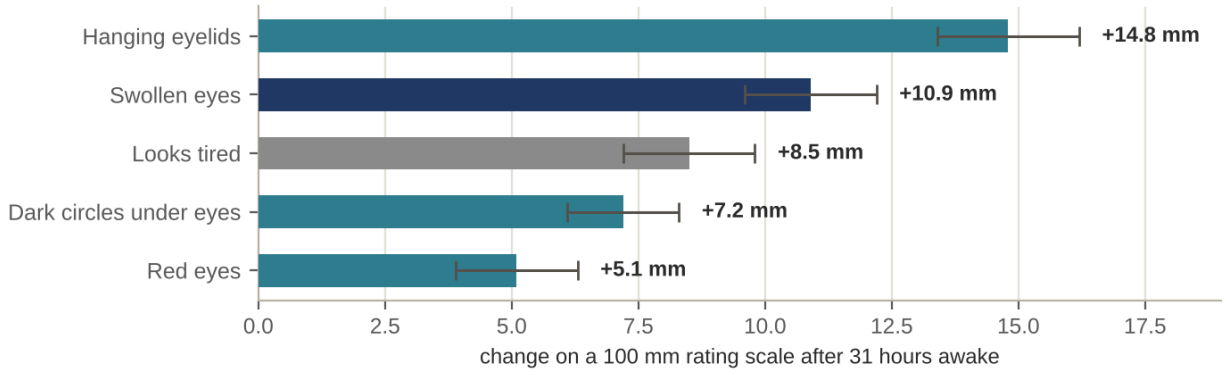
CHAPTER 8

08 Sleep: the only thing anyone has properly measured

One small, careful experiment is the entire controlled evidence base for a face looking puffier.

The only time anyone measured a puffy face

Forty observers rated the same ten faces twice: after normal sleep, and after 31 hours awake.



Sundelin et al., Sleep 2013;36(9):1355–1360. Ten people photographed — five of them men — aged 19 to 32, so nothing here is a 40-plus sample. Bars are SE. Every cue shown reached $p \leq 0.001$. Not an industry-supported study. This is the entire controlled evidence base for anything making a face look puffier.

Ten people were photographed twice at the same time of day — once after a normal eight-hour night, and once after five hours of sleep followed by 31 hours awake. Forty observers, blind to which was which, rated the faces on a 100 mm scale. The sleep-deprived faces were rated as having **more swollen eyes, by 10.9 mm (p = 0.001)**, along with hanging eyelids, darker circles, redder eyes, paler skin, more fine lines and droopier corners of the mouth.

Men were included and checked separately: the effects in the five men ran in the same direction, with the single difference that women were not rated significantly paler.

THREE CAVEATS, ALL OF WHICH MATTER

The sample was **ten people, five of them men, aged 19 to 32** — not a 40-plus sample. The exposure was 31 hours of total sleep deprivation on top of a short night, which is far beyond the chronic six-hour habit most men actually have. And the direction of inference runs one way: losing sleep made eyes look more swollen. Nothing here shows that **extending** sleep beyond normal reduces puffiness, because the comparison condition was a normal night.

The sleep apnea finding that should change your expectations

Moderate-to-severe sleep-disordered breathing affects roughly **half of men aged 40 to 85** — 49.7% in the best population-based study, which used full overnight polysomnography at home in 2,121 people. Given everything in Chapter 5 about fluid moving upward overnight, treating it ought to help the face.

In the one study that looked, it partly did and partly did not. Twenty adults with sleep apnea were photographed in 3D before and after at least two months of CPAP. Forehead surface volume measurably decreased and redness under the eyes and over the cheeks measurably decreased. Among 22 blinded raters, **68%** judged the treated photograph more alert, **67%** more attractive and **64%** more youthful.

THE NEGATIVE FINDING

- But there was no detectable improvement in under-eye puffiness or dark circles. None.
- The investigators described that as surprising and called for more research.
- Anyone selling you sleep apnea treatment as a fix for your eye bags is ahead of the only evidence that exists — which is not a reason to leave apnea untreated. It is a reason to treat it for the right reasons.

AND AN UNCOMMON CAUSE WORTH KNOWING

Case reports describe periorbital swelling caused by positive airway pressure therapy itself, proposed to involve air tracking through the tear duct system or escaping around the mask. No incidence figure exists. If your puffiness started when your CPAP did, mention it rather than assuming coincidence.

CHAPTER 9

09

Alcohol: the rebound is real, the face is not measured

And the mechanism everyone recites is half wrong.

The standard account runs: alcohol switches off the hormone that makes you retain water, you urinate it all out, your body overcorrects, and you wake up swollen. Two-thirds of that has been measured in men. One link has not.

In a crossover study in **eight healthy men**, each drinking 1.2 g of ethanol per kilogram of body weight between 6 and 9 p.m. on one occasion and fruit juice on another, with a standardized water load the next morning: alcohol increased urine output over the first three hours, then produced an antidiuretic phase from midnight to 6 a.m. The morning after alcohol, the men retained **44% ± 6%** of the water load, against **12% ± 4%** on the control morning.

44%

OF A MORNING WATER LOAD RETAINED

after an evening of drinking, against 12% on the control night. Eight healthy men, crossover design. This is the single best measurement of alcohol rebound fluid retention.

But the hormone did not behave as advertised. Vasopressin — the antidiuretic hormone the folk model says alcohol suppresses — **did not differ from the control session during the diuretic phase**. It was *higher* during the later antidiuretic phase and after the morning water load. So at this dose and this timing, the rebound half of the story is well measured and the suppression half is not supported.

WHAT HAS NEVER BEEN MEASURED

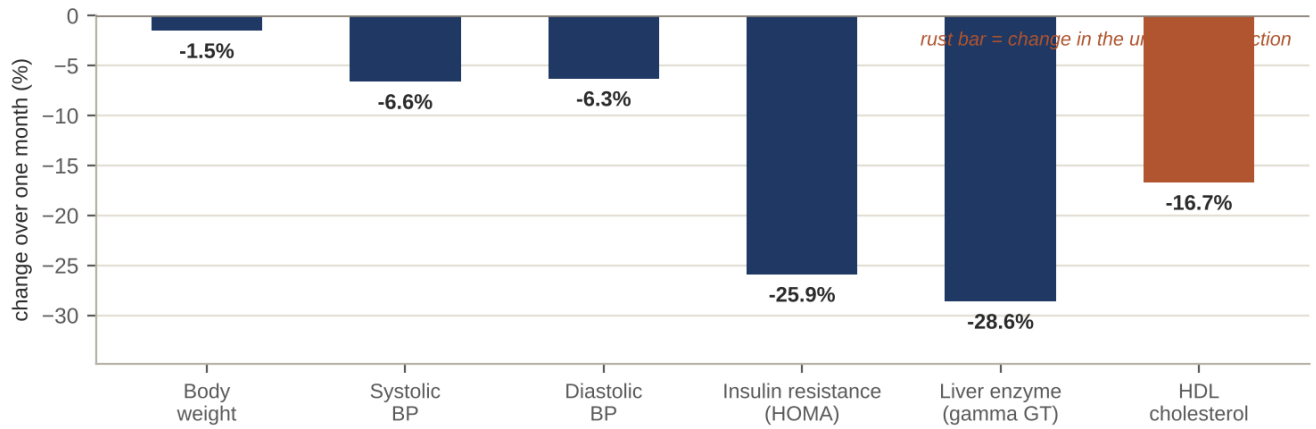
No study has photographed, scanned or otherwise measured a face after alcohol. Not one, in men or women, by any method. “Alcohol face” and “alcohol bloat” are, as far as this review can establish, entirely unmeasured constructs resting on real underlying physiology.

There is one measured negative worth printing for balance: in 16 active young men, a moderate dose — about 660 mL of beer, roughly 24 g of alcohol — produced **no difference** in body mass recovery, fat-free mass, fat mass or plasma volume compared with water. That study was partly funded by a beer-industry information body, and a null result is the direction such a funder would prefer, so weight it accordingly. But a single beer is clearly not the exposure that matters here.

A month off alcohol, on the other hand, does measurable things. In 94 drinkers at the Royal Free Hospital who stopped for a month, with 47 concurrent controls who did not:

One month without alcohol

Measured changes in 94 drinkers who stopped for a month. All of these reached P<0.001.



Mehta et al., BMJ Open 2018;8:e020673, Royal Free Hospital. 43 of the 94 were men; results were not reported separately by sex. In the 47 people who kept drinking, none of these changed significantly (P = 0.09 to 0.95). Observational, not randomised: people chose their own group and the groups differed at baseline. HDL fell because alcohol raises it.

Every one of those changes reached p<0.001, and in the 47 people who kept drinking none of the same measures moved significantly (P = 0.09 to 0.95). Note two things in the small print. The study was **observational** — people chose their own group, and the groups differed at baseline, which is exactly the weakness that non-randomisation produces. And **HDL cholesterol fell** 16.7%, because alcohol raises HDL and stopping lowers it. An honest account prints that alongside the rest.

Neither body water nor any appearance measure was recorded in that study. The 1.5% weight change is weight, not fluid. One technical note for anyone checking the arithmetic: those percentages are the paper's own published figures, and they do not reconcile with its published medians — the absolute changes were about 1.6 kg of body weight and 11 mmHg of systolic pressure.

CHAPTER 10

10

Sodium: the surprise in this paper

The careful measurements in men do not support the mechanism everyone recites — and still point to cutting salt.

The standard claim is simple and intuitive: salt holds water, water goes into the tissues, the tissues swell. In healthy men, that has been tested properly more than once, and it is not what happened.

Raising salt did not expand body water

In a controlled metabolic-ward study in **32 healthy men**, assigned to intakes of 50, 200, 400 and 550 mEq of sodium chloride a day, plasma volume rose dose-dependently — by **315 ± 37 mL** at the highest intake. But **total body water did not increase and body mass did not increase**. The authors concluded that high sodium intake had produced a relative shift of fluid *from the space between cells into the bloodstream*, and described this as challenging the conventional view.

The space between cells is precisely where facial puffiness would live. In 32 men, raising salt elevenfold moved fluid the wrong way for the popular claim.

And higher salt made men drink less, not more

In two long-duration confinement studies in **10 healthy men**, salt intake was held at 12, 9 and 6 grams a day for at least 29 days each. At the higher intake the kidneys **conserved** water — free-water clearance fell by about 540 mL a day — and the men voluntarily drank about **293 mL a day less**. Body weight rose by roughly **0.41 kg**. The paper does not discuss swelling at all.

Where the sodium actually goes.

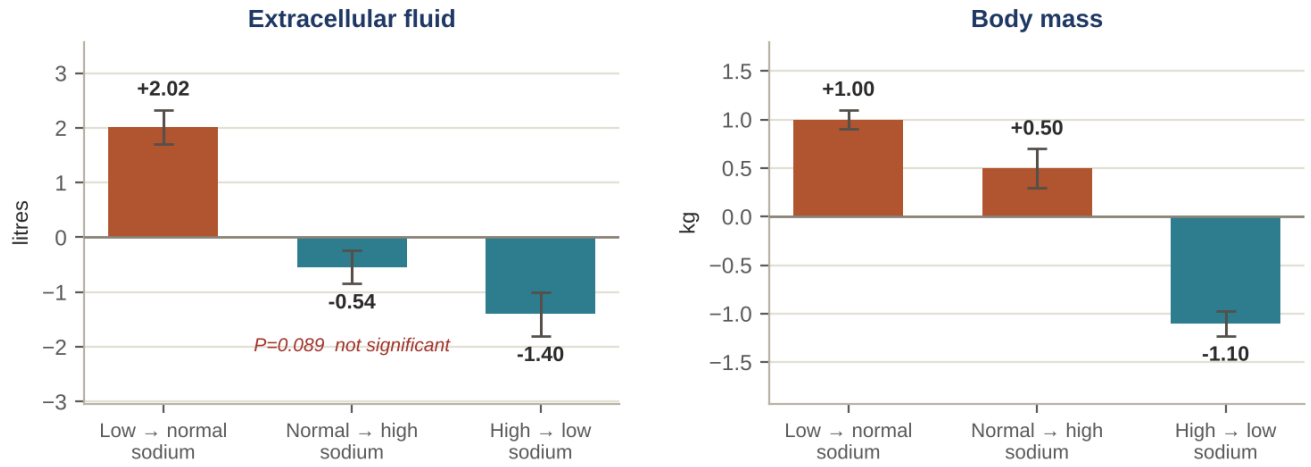
Some of it is stored in tissue in a form that does not drag water with it. In an MRI study of 56 healthy people and 57 with hypertension, muscle sodium rose with age **in men but not in women**, without a matching rise in muscle water. Skin sodium rose with age in both sexes and, unlike muscle, did bring water with it. The binding of that sodium to large negatively charged molecules has been demonstrated in **animals and in cell work, not in humans**, and those researchers describe the storage as *likely* an active process. That literature does not discuss swelling at all. What it does establish is that the simple salt-equals-water model is too crude.

So why does cutting salt still make the list?

Because going *down* is not the mirror image of going up, and the same research group measured that too.

Sodium moves real fluid — but not in a straight line

28 days in a metabolic ward. Nine healthy men. Each bar is the change produced by one step in sodium intake.



Heer et al., British Journal of Nutrition 2009;101:1286–1294. Nine men; sequential within-subject design, not randomised. Error bars are SEM. Note the middle pair: going from normal to high sodium did not further expand fluid volume.

Across 28 days in a metabolic ward, nine healthy men moved through four sodium levels. Going from low to normal added **2.02 litres** of extracellular fluid and a kilogram of body mass. Going from normal to high added essentially nothing more — the change was not statistically significant. And going from high back down to low removed **1.4 litres of extracellular fluid and 1.1 kg of body mass in six days**.

HOW TO HOLD BOTH OF THESE

- Fluid volume is not a straight line in sodium intake. Past a point, more salt stops adding fluid.
- But a hard cut from high to low genuinely removes litres, within days, measured in men.
- Nobody has photographed a face during any of this. Not one sodium study in this review measured facial or periorbital swelling, by any method.
- Which makes a one-week salt cut a reasonable experiment on yourself, and an unreasonable thing to be confident about in advance.

CHAPTER 11

11

Allergy: common in men, and almost entirely unquantified

One in five American men carries the diagnosis. Nobody has counted what it does to their eyes.

In the 2021 National Health Interview Survey, **21.1% of American men** reported both the symptoms and a diagnosis of seasonal allergy, rising to **27.9%** in the 45-to-64 band. That is a clean, nationally representative, sex-disaggregated figure — rare in this subject.

The national clinical practice guideline on allergic rhinitis lists **allergic shiners** — the dark, slightly swollen look under the eyes — among the physical findings. It attaches no frequency to it. It does not list periorbital swelling at all. No study was found giving the prevalence of allergic shiners in adults, in either sex, and no trial has ever tested whether treating allergic rhinitis reduces under-eye puffiness or dark circles as a measured outcome.

The usual mechanical explanation — that a congested nose impedes venous drainage from around the eye, causing blood to pool — is universally repeated and, as far as this review could establish, has never been measured directly. Present it to yourself as a reasonable theory, not a fact.

AN IRONY WORTH NOTICING

The first-line treatment for allergic rhinitis is a nasal steroid. Nasal and inhaled steroids are also, in rare documented cases, a cause of facial puffiness — almost always when combined with a drug that blocks their breakdown in the liver, such as ritonavir, cobicistat, itraconazole or clarithromycin. The treatment and a rare cause overlap. If you take both, mention it.

CHAPTER 12

12

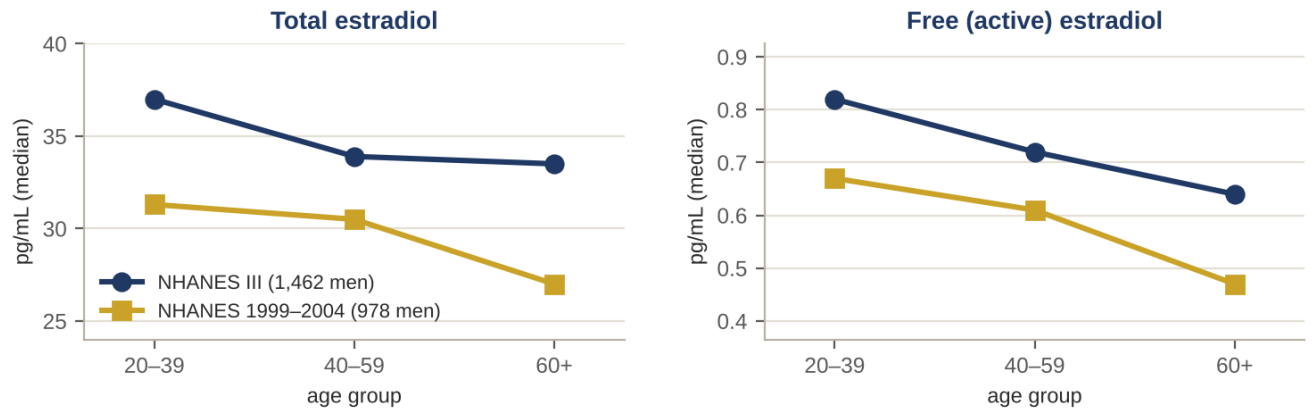
Hormones: the explanation that collapses

Rising estrogen, raging aromatase, testosterone water retention. Very little of this survives the data.

Few ideas are more established in men's health conversation than the notion that estrogen climbs after 40, that body fat drives it, and that the result is a soft, swollen, feminised look. It is a tidy story. The best measurements do not support it.

Men's free estrogen does not climb after 40

Two nationally representative surveys. Every line goes down, and the active fraction falls fastest.



Journal of the Endocrine Society 2019;3(10):1825, men only, cross-sectional, measured by immunoassay. Two others belong beside it: a mass-spectrometry study of 1,461 men found TOTAL estradiol rising with age while free estradiol fell — free estradiol falls in every dataset that measured it — and the one study to follow the same men over time (725 Australian men, mean age 53, mass spectrometry) found estradiol falling 1.1 pmol/L a year, with age not predicting the change.

The only **long-term study following the same men**, using mass spectrometry rather than an immunoassay — 725 Australian men, mean age 53, measured five years apart — found estradiol **falling by 1.1 pmol/L per year**, with age not a significant predictor of the change once other factors were accounted for.

The two nationally representative American surveys above, covering 1,462 and 978 men, found both total and free estradiol declining across the age bands. A large cross-sectional study using mass spectrometry found total estradiol rising with age but **free — biologically active — estradiol falling**. That is the pattern: free estradiol falls in every dataset that measured it.

The testosterone-to-estradiol ratio does narrow with age. But in the Massachusetts Male Aging Study — 1,709 men aged 40 to 70, followed for 7 to 10 years — **total testosterone fell 1.6% a year within the same men**, and comparing men of different ages, free testosterone fell about **2% a year** and bioavailable testosterone 2 to 3%. The ratio narrows because the top of the fraction falls, not because the bottom rises.

THE AROMATASE CLAIM HAS NO HUMAN NUMBERS BEHIND IT

No primary human study was located quantifying aromatase activity in fat tissue as a function of age in men. The claim is everywhere in clinical reviews; the reviews do not supply it. One widely cited review supports its aromatase statement with a study of **leptin levels in boys with pubertal gynecomastia**. That is paediatric data standing in for a claim about middle-aged men.

The 65% gynecomastia figure, and why it is misused

You will see it stated that around 65% of middle-aged and older men have gynecomastia. The figure is real: 214 men examined, 65% overall, peaking at 72% in the 50-to-69 band. But those were **hospitalized inpatients** — a population enriched for medication exposure, liver and kidney disease and malnutrition, all of which independently cause it. **No community-based prevalence estimate for middle-aged men was located at all.** The inpatient figure should never be quoted as a general one.

One distinction from that literature is genuinely useful: **pseudogynecomastia is fat; true gynecomastia is glandular tissue**. For a soft chest in a man over 40 these are different findings with different significance, and they are told apart by examination, not by looking in a mirror.

Testosterone therapy

The product label states that androgens “may promote retention of sodium and water” and warns that edema can be a serious complication in men with existing heart, kidney or liver disease. In the registration trials, **peripheral swelling occurred in fewer than 1%** of hypogonadal men; gynecomastia in 1 to 3%. Swelling and fluid retention appear in the post-marketing section without any incidence figure, so a frequency cannot be derived.

The clearest gap is this. There is an entire clinical literature in which men's estradiol is deliberately and substantially lowered — in one series of 44 men on testosterone given anastrozole, median estradiol fell from 65 to 22 pg/mL. **That study did not measure fluid retention, swelling or weight, and reported no symptom outcomes at all.** There is no human evidence that lowering a man's estradiol reduces fluid retention or visible swelling, because the outcome has never been collected.

WHERE THIS LEAVES YOU

- Men's free estradiol falls with age. It does not rise.
- The testosterone-to-estradiol ratio narrows because testosterone drops.
- Testosterone therapy can cause fluid retention — the label says so — but the measured rate in trials is under 1%, and facial swelling has never been measured in any testosterone trial.
- If you are on testosterone and taking an aromatase inhibitor to control puffiness, you are acting on a hypothesis nobody has tested.

CHAPTER 13

13 “Cortisol face”: a real sign, borrowed from the wrong disease

The most confidently marketed cause in this category has the thinnest evidence in it.

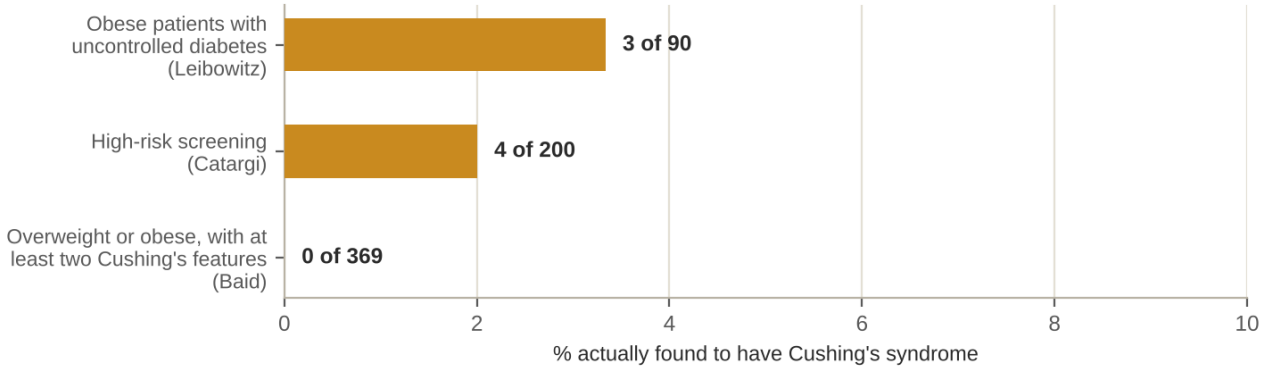
A rounded, swollen, heavy-looking face attributed to stress hormone is one of the most widely circulated ideas in men's health content. The sign it borrows is real. Everything after that is the problem.

Where the sign actually comes from

A rounded face occurs in **81 to 90%** of people with Cushing's syndrome, and facial plethora — a flushed, full appearance — in **70 to 90%**. Those are among the highest-frequency features of the condition. But endogenous Cushing's syndrome has an incidence of **0.7 to 2.4 people per million per year**, and in adults the pituitary-driven form runs about **three or four women to every man**. The archetypal patient is a woman, and there are very few of her.

Where “cortisol face” comes from, and where it isn’t

A round face is a real sign — of a disease affecting 0.7 to 2.4 people per million per year, mostly women.



Screening studies summarised in Sharma, Nieman & Feelders, Clinical Epidemiology 2015. These are deliberately high-suspicion groups, chosen because they already looked like candidates. In the largest and most selected of them, nobody had it. No study has ever measured facial puffiness against cortisol in people who do not have this disease.

The screening studies are the decisive evidence. Researchers went looking for Cushing's in deliberately high-suspicion groups — people who already looked like candidates. They found 3 cases in 90 obese patients with uncontrolled diabetes, and 4 in 200. In the largest and most selected group of all — **369 overweight or obese patients who already had at least two additional features of Cushing's syndrome** — they found **none**.

Does ordinary stress do it?

There is a recognised category for conditions that raise cortisol without being Cushing's syndrome, and emotional stress sits in it, alongside severe illness, intense exercise, caloric restriction, chronic alcoholism and major depression. The authoritative description of that category contains three sentences that go most of the way toward answering it.

1. **Cutaneous and muscle signs are "seldom present"** in these states.
2. In **major depression** — where cortisol is substantially elevated in most patients — clinically evident Cushing's syndrome is **"rarely encountered."**
3. People with abdominal obesity, hypertension and abnormal lipids **"lack the specific signs"** of excess cortisol.

Stress-related cortisol secretion is linked in that literature to abdominal obesity, high blood pressure and insulin resistance. It is **not** linked to facial features. And the chapter nowhere states that psychological stress alone produces facial rounding.

What steroids actually cause, and it is not fluid

The one setting where a visibly changed face is well documented is prescribed steroids — and what they produce is not swelling. In a prospective study of 88 patients starting at least 20 mg of prednisone a day, the cumulative incidence of facial and neck **lipodystrophy** was **61% at three months** and 69% at twelve. Lipodystrophy is **redistributed fat**. It accrues over three to twelve months. It does not arrive overnight, it does not lift by mid-afternoon, and it does not respond to a single thing in Part Five.

That study also found sex to be the strongest predictor: the odds ratio for female sex was **10.87**, on a very wide confidence interval of 2.4 to 59. So the 61% figure overstates a man's risk, by a margin the data cannot pin down. Three quarters of the sample were women and the men were not analysed separately.

THE ONE EXCEPTION WORTH KNOWING

Chronic heavy alcohol use can produce a genuine cushingoid picture. In a pool of fewer than 50 reported cases of alcohol-associated pseudo-Cushing's, moon face appeared in 90%, alongside muscle weakness in 81% and truncal obesity in 75% — and it usually resolves after at least a month of abstinence. This is a chronic-alcoholism entity, not a heavy-weekend one, and it is a reason to take a month off seriously rather than a reason to blame your cortisol.

WHERE THIS LEAVES YOU

- No study has ever measured facial puffiness, facial volume or facial roundness against cortisol in people who do not have Cushing's syndrome and are not taking steroids. Not one.
- The claim borrows a sign from a disease affecting roughly one or two people per million per year and applies it to a universal experience.
- And the version of it that is real — the steroid version — is fat accumulating over months, not fluid arriving overnight. It would not respond to any of the advice attached to it.
- One honest residue: chronic stress is linked to abdominal weight gain, and weight changes the shape of a face. That is a slower, duller mechanism than the one being sold, and nobody has measured it on a face either.

CHAPTER 14

14 Inflammation: the claim with no measurement anywhere

An idea that organises an entire product category, and has never once been measured against a face.

“Chronic inflammation makes you look puffy” is the organising idea behind an enormous amount of content, supplementation and testing aimed at men over 40. Three independent checks were run on it for this paper.

1. **Direct search.** No human study was located that measured CRP, IL-6 or TNF-alpha against visible puffiness, facial swelling or limb swelling, in any population. Every top result was a supplement blog, a clinic page or a symptom checker.
2. **The nearest serious attempt measures something else.** A 2026 analysis of 9,717 adults positions the extracellular-water fraction as a proxy for inflammation — while stating in its own limitations that **CRP, IL-6 and TNF-alpha were not available in its dataset**. It reports no correlation between any inflammatory marker and any fluid measure. One of its authors is employed by the company that makes the measuring device.
3. **The proponents grade their own evidence as absent.** A 2026 review specifically proposing a lymphatic-dysfunction pathway rates the chronic-inflammation link, in its own summary table, as “limited indirect evidence” and its direct lymphatic evidence as a **“major evidence gap.”** Its supporting material is mouse high-fat-diet models and cell-culture work.

What *is* established is the acute version: in sepsis, trauma and capillary-leak states, cytokines increase vascular permeability and fluid floods the interstitium. That is real, well characterised and nothing like the situation of a sedentary 45-year-old with a mildly raised CRP. Scaling the one down to the other and concluding visible facial puffiness is the unsupported step, and it has never been measured.

INFLAMMAGING IS NOT EVEN UNIVERSAL

The background assumption — that inflammation inevitably rises with age — took a serious hit in 2025. Across four cohorts, the composite inflammation-with-age slope was 0.04 per year in Italy and 0.02 in Singapore, but **0.00 in the Bolivian Tsimane** and 0.01 in the Orang Asli. IL-6 showed no correlation with age at all in the Singapore cohort. The authors concluded that inflammaging as conventionally measured is **“not a quantitatively or qualitatively universal aspect of human aging,”** and attributed the difference chiefly to environment and infection burden.

One more link in the popular chain also fails. It is often said that fat inside the muscles drives systemic inflammation. In a study of 1,897 people including 947 men, a one-standard-deviation increase in abdominal intermuscular fat was associated with roughly 21% higher IL-6 and 20% higher CRP — but **both associations lost significance once visceral fat entered the model**. The inflammatory signal tracks visceral fat, not the fat in the muscle.

None of this means inflammation does not matter. It means the specific claim that it makes your face look puffy has no measurement behind it, and that the products sold on that claim are sold on an assumption.

Why John bothers to print this. A man who believes inflammation is swelling his face will buy an anti-inflammatory supplement stack and an IgG food panel, and will change nothing that matters. The same man, told the truth, checks his medication list, sees his doctor about his thyroid, cuts his drinking for three weeks, and stands up every hour. One of those two men gets a result. Request an evaluation

PART FOUR

When It Isn't Cosmetic

Seven conditions to rule out before you buy anything — and the specific feature that distinguishes each one.

CHAPTER 15

15

The things worth ruling out first

Facial swelling sits unusually close to real disease, and the clinical literature barely covers it.

A point worth making before the list. The standard primary-care review of edema covers generalized pitting edema, chronic leg swelling, venous insufficiency, clots, sleep apnea and lymphedema — and **does not mention the face at all**. A man presenting with facial puffiness is in a space where the clinical literature is thin. That is exactly why this list matters, and why the discriminating features are more useful than the conditions themselves.

CONDITION	WHAT MAKES IT DIFFERENT	WHAT TO DO
Underactive thyroid	Swelling that is **non-pitting** and **does not lift by mid-afternoon**, with cold intolerance, fatigue, constipation, hoarseness, dry coarse skin, slow pulse. The swelling is not free fluid at all — it is a gel-like substance deposited in the skin, which is why pressing it leaves no dent.	A TSH blood test. Cheap and definitive.
Kidney disease	In adults the usual first sign is **progressive leg swelling** with weight gain and fatigue; facial and genital swelling belong to advanced disease. Frothy urine is the giveaway. The strong “puffy eyes means kidneys” association is a *paediatric* pattern.	A urine dipstick. The single highest-yield cheap test in this list.
Heart failure	Dependent swelling, **worst at the ankles and worst at the end of the day**, with breathlessness on exertion, waking breathless, or needing extra pillows. A man whose swelling is worst in the face in the morning and gone from his legs is not describing this.	See a physician promptly if breathlessness is present.

CONDITION	WHAT MAKES IT DIFFERENT	WHAT TO DO
Liver disease	Abdominal swelling, spider-like vessels on the skin, red palms, jaundice, easy bruising, breast tissue. Note the trap: breast tissue occurs in both liver disease and testosterone therapy, so it does not discriminate on its own in a man on testosterone.	Liver function tests and an honest alcohol history.
Obstruction of the great vein in the chest	The one that must not be missed. Facial and neck swelling **worse on bending forward or lying down**, with dilated veins across the chest or neck, facial flushing, breathlessness, cough or hoarseness. Swelling of the face and neck is the most common finding, at around 80%; breathlessness at around 63%; around 70% of cases are caused by a malignancy, most often in the lung. Those figures come from a narrative review rather than a primary cohort.	**Urgent medical assessment**, especially in a current or former smoker, or anyone with a central line or pacemaker.
Angioedema from a blood pressure drug	Swelling of lips, tongue or face developing over hours, **asymmetric, not itchy and with no hives** — the absence of hives is the key discriminator. ACE inhibitors cause 20 to 40% of emergency visits for angioedema, at roughly 0.1 to 0.7% over five years, and only about 10% of cases start in the first month, which is why the drug is so rarely suspected.	**Emergency care** for any tongue, throat or voice involvement. Antihistamines and steroids generally do not work on this kind.
Dermatomyositis	A **violet or lilac discoloration of the upper eyelids**, with or without swelling, plus weakness rising from a chair or lifting arms overhead, a sun-pattern rash, or changes over the knuckles. The rash comes first in around 40% of cases.	Prompt medical assessment. In adults this diagnosis triggers a cancer screen.

TWO MORE THAT ARE RARE BUT RECOGNISABLE

Thyroid eye disease is the one condition where the distribution itself is diagnostic: the cheekbone area is usually *spared*, with bulging eyes and lid retraction instead. **Melkersson-Rosenthal syndrome** produces recurrent, often one-sided, painless facial or lip swelling together with a fissured tongue and sometimes facial nerve weakness. Any recurrent facial swelling accompanied by a facial droop needs a neurologist, not an antihistamine.

The four questions a doctor will ask, so have the answers ready. Is it worse lying flat or bending forward? Does it lift by mid-afternoon or persist all day? Does it dent when you press it? Is it symmetrical? Those four answers, plus your medication list, narrow this list faster than any test.

PART FIVE

What Actually Reduces It

Fifteen interventions, graded on the strength of the evidence behind them — then a protocol you can run in two weeks.

CHAPTER 16

16

The evidence ladder

What is supported, what is merely plausible, what has never been tested, and what makes things worse.

What the evidence actually supports

Fifteen things men are told to do about puffiness, graded on the strength of the evidence behind them.

Cutting sodium	STRONG	−1.1 kg / −1.4 L in 6 days (9 men)
Compression, leg ulcers	STRONG	Heals ulcers. Not a puffiness finding
Cutting alcohol	MODERATE	−1.6 kg, −11 mm Hg in 1 month
Protecting sleep	MODERATE	Losing it raises rated eye swelling
Exercise	MODERATE	CRP effect size 0.26; +1.1 kg lean mass
Losing fat	MODERATE	hsCRP −24.7% at 6 months
Head elevation	MECHANISM ONLY	Gravity. No trial has measured it
Cold / ice	MECHANISM ONLY	Vasoconstriction. Temporary by definition
Potassium	WEAK	Cochrane null; WHO effect only in hypertensives
Anti-inflammatory diet	WEAK	Mediterranean CRP effect not significant
Lymphatic massage, gua sha	WEAK	Limb lymphoedema only. No facial study
Caffeine creams, peptides	NO EVIDENCE	No trial with a puffiness endpoint
Drinking more water	NO EVIDENCE	Zero trials. Untested hypothesis
Elimination diets	NO EVIDENCE	Zero trials with a swelling outcome
Diuretics	HARMFUL	Rebound +2 kg in 4 days (series, all women)

Verdicts from a review of the primary literature. 'No evidence' means no trial has measured the outcome — not that the intervention has been shown to fail.

Two things about that chart need saying before you use it.

First, **“no evidence” does not mean “shown to fail.”** It means nobody has measured the outcome. Several of those items might work. They have simply never been tested on a face, or in some cases never tested at all.

Second, the top of that ladder is graded on evidence for *fluid and blood pressure*, not on evidence for appearance, because — as Chapter 2 established — appearance evidence essentially does not exist. Sodium reduction is the only item in the entire list with a male fluid-kinetics dataset behind it, and even it has never been tested against a photograph.

CHAPTER 17

17

What to do, in order

Ordered by the strength of the evidence, not by how interesting it sounds.

DO FIRST	**Audit your medications** — the only cause in this paper with hard numbers, and the one most likely to be yours. Chapter 7.
DO FIRST	**Rule out the medical causes** — a TSH and a urine dipstick cost almost nothing. Chapter 15.
STRONG	**Cut sodium hard, for a week** — going from high to low removed 1.4 L of extracellular fluid and 1.1 kg in six days, in nine men in a metabolic ward. Never measured on a face.

Practically: this means cooking, because most dietary sodium in a Western diet arrives in restaurant food, bread, processed meat and sauces rather than from the shaker. Do it properly for seven days or do not bother — a modest reduction is not what was measured.

MODERATE	**Stop drinking for three to four weeks** — 94 drinkers who stopped for a month lost 1.5% of body weight and 6.6% of their systolic blood pressure, with a concurrent control group that changed nothing.
MODERATE	**Protect your sleep, and get apnea treated** — 31 hours awake measurably increased rated eye swelling. Treating apnea improved forehead volume and facial redness — but not eye bags.
MODERATE	**Train, and keep the muscle** — exercise reduced CRP across 83 trials and 3,769 people, some of those trials not randomised; resistance training added 1.1 kg of lean mass in older adults. The calf-pump effect is separately confirmed by plethysmography.

MODERATE	**Lose fat if you are carrying it** — in a randomized trial of 710 people, 275 of them men, a 6.7% weight loss came with a 24.7% fall in hsCRP at six months.
MECHANISM	**Break up sitting; contract your calves** — four hours sitting still put 216 mL into the lower legs, and calf contractions prevented about a quarter of it.
MECHANISM	**Raise the head of the bed** — the hydrostatic logic is sound and it is standard after facial surgery. No trial has ever measured it for ordinary morning puffiness, in anyone.
MECHANISM	**Cold on the face, briefly** — cooling constricts blood vessels; this is why it is universal in post-operative care. It is temporary by definition and has never been tested on ordinary morning puffiness.
CONDITIONAL	**Compression, if you have leg swelling** — strong Cochrane evidence for healing venous ulcers; low-to-very-low certainty for ordinary swelling in varicose veins. Daytime stockings did cut the overnight fluid shift by 62% in 12 people.

ON POTASSIUM, WHICH YOU WILL SEE RECOMMENDED EVERYWHERE

The two major evidence syntheses disagree. The Cochrane review found **no statistically significant** blood pressure effect across five trials. The larger WHO-commissioned analysis found about 3.5 mmHg systolic — but **only in people with hypertension**, which most readers are not. No trial of potassium has measured fluid volume as a primary endpoint, and none has measured appearance. Eating potassium-rich food is sensible for other reasons. It is not an anti-puffiness intervention.

CHAPTER 18

18

What to stop doing

Five things that are either untested, contradicted, or actively likely to make you worse.

HARMFUL	**Diuretics for cosmetic puffiness** — a documented rebound of 2 kg in four days and 6 kg in ten days after stopping, taking two to three weeks or longer to resolve.

This is the clearest harm in the paper. Diuretics treat fluid overload from heart, kidney or liver disease. Taking one when you are not fluid-overloaded is not a cosmetic adjustment; it is an induced physiological derangement, with risks including volume depletion, potassium and sodium disturbance, gout, impaired glucose tolerance and kidney injury — compounded in men over 40 who may already be on blood pressure drugs or anti-inflammatories. And when you stop, you will be puffier than when you started, for weeks. One documented case gained 6 kg in the ten

days after withdrawal.

The case series behind that finding was all female and small, so the exact numbers are not a male dataset. The direction is not in question.

NO EVIDENCE	**Gua sha, ice rolling, facial massage** — no trials. Not one, for any of them, with a puffiness outcome, in anyone.

The adjacent real evidence makes the gap clearer rather than smaller. Manual lymphatic drainage has a Cochrane review — in **208 women with arm swelling after breast cancer treatment**, a pathological, protein-rich fluid accumulation following surgical disruption of lymph nodes. That is a different condition, not a severe version of a puffy face. Within it, compression bandaging did the work, reducing swelling by 30 to 38.6%, and adding manual drainage on top contributed a further **7.11%** — a figure that comes from two of those trials and **83 women**, at borderline significance (P = 0.06).

The single facial-exercise trial points the other way entirely. It was **uncontrolled, 16 completers, all women**, and its significant finding was *increased* cheek fullness — it is being studied as a treatment for age-related volume **loss**. Using it to support an anti-puffiness routine inverts its own result.

AND THE ANATOMY THE TECHNIQUE RESTS ON IS CONTESTED

Lymphoscintigraphy in 25 patients found the preauricular node was the first drainage point in **72% of cases regardless of where the tracer was injected**, and the authors concluded their data do not support the classical eyelid drainage map. Any massage direction taught from that map is being taught from contradicted anatomy.

NO EVIDENCE	**Caffeine eye creams and peptide serums** — no randomized placebo-controlled trial of a topical with a measured puffiness endpoint exists.

The closest study found measured the wrong thing: 18 people, **open-label with no control group**, published in a conference proceeding rather than a journal, using a named commercial product, with no conflict-of-interest statement, measuring **pigmentation** — not puffiness, which it did not assess at all. Retinoids, separately, have credible evidence for periorbital *wrinkles* and none at all for puffiness. The two should never be conflated, and in marketing they routinely are.

NO EVIDENCE	**Drinking more water to flush it out** — zero trials. The one study of water intake and facial skin used 49 women aged 22 to 34 and measured no appearance outcome.

There is an interesting detail in that study worth knowing: of all the sites measured, the cheek was consistently where effects were **absent**. Stay normally hydrated for every other reason. Do not expect it to drain your face.

CONTRAINDICATED	**IgG food sensitivity panels** — explicitly rejected as a diagnostic tool by both the American and European allergy bodies.

The American Academy of Allergy, Asthma and Immunology endorses the European position that IgG4 food testing should not be used diagnostically, and states the matter plainly: **"The presence of antibody does not indicate disease."** A positive result may simply reflect a normal immune response to a food you eat. Their specific warning is that misreading these panels leads to nutritionally inadequate diets that are hard to sustain — and that foods a person tolerates well should not be eliminated on the basis of a positive test.

In fairness, one good recent trial complicates the picture: a randomized, double-blind, sham-controlled study across eight centres found an IgG-guided elimination diet beat sham for **abdominal pain in diagnosed irritable bowel syndrome** (59.6% versus 42.1%). That is a real result, for a different problem, in diagnosed patients. It is not a licence to use an IgG panel to explain a puffy face, and nobody has tested it for that.

As for the specific foods: **no primary study at all** was located testing nightshade, dairy or gluten elimination against a measured swelling or appearance outcome. Searches returned wellness blogs and practitioner marketing exclusively. Diagnosed coeliac disease and true IgE food allergy are different matters entirely — real conditions, with real swelling, requiring diagnosis.

CHAPTER 19

19

The fourteen-day audit

Since nobody has measured this properly, the only reliable experiment is the one you run on yourself.

Everything in Part Five is evidence about populations. What you need is evidence about you. This sequence is designed so that each step is either free or cheap, and so that you change one variable at a time — which is the entire point and the thing almost nobody does.

Days 1 to 3 — establish what you actually have

1. Photograph your face at **7 a.m. and 4 p.m.**, same room, same light, no expression. Three days.
2. Each evening, look at your ankles and shins for sock marks and press a thumb above the ankle bone for five seconds.
3. Write down every medication and supplement with dose and start date. Mark anything that began within three months of the change.
4. Note how much you sat, what you drank, and how you slept, each day.

Read the result. If the morning and afternoon photographs differ, you have a fluid component and the rest of this works. If they are identical, you are looking at fat and structure — go back to Chapter 3, and spend your money and attention somewhere useful.

Days 4 to 14 — remove the two biggest variables

5. **No alcohol.** Not reduced. None.
6. **Sodium down hard.** Cook. No restaurant food, no processed meat, no bread-heavy days, no sauces from jars. The measured step that removed over a litre ran six days; you are giving it eleven.
7. **Stand up every hour** and do 20 calf raises. Under a desk counts.
8. **Raise the head of your bed** by two to four inches, from the frame rather than with extra pillows.
9. Keep photographing at 7 a.m. and 4 p.m.

Both of those run to day 14, not to day 7. The measured sodium step was six days, so give it more than that.

From day 8, alongside the above — sleep, and the medical check

10. **Fixed wake time**, seven days, no exceptions, and seven to eight hours in bed.
11. If you snore, wake unrefreshed, or anyone has seen you stop breathing, **ask for a sleep study**. Half of men aged 40 to 85 have moderate-to-severe sleep-disordered breathing.
12. Book the appointment: take your medication list, ask for a **TSH and a urine dipstick**, and ask the one question in Chapter 7.
13. Reintroduce alcohol on day 14 only, at your normal amount, and photograph the next morning. That single comparison will tell you more about your own face than this entire paper can.

Stop immediately and see a doctor instead if the swelling is worse lying flat or bending forward, if it does not lift by mid-afternoon, if it is one-sided and painless with no itch, or if it comes with breathlessness, frothy urine, or visible veins across your chest. Part Four explains why each of those matters.

WHAT A FAIR RESULT LOOKS LIKE

A real fluid component should visibly improve within that fortnight, and the alcohol reintroduction on day 14 should produce a visible morning difference. If fourteen honest days change nothing at all, you have learned something genuinely valuable: this is not fluid, no product aimed at fluid will help, and the question becomes body composition, structure, or a medical cause you have not found yet.

PART SIX

Where a Coach Fits

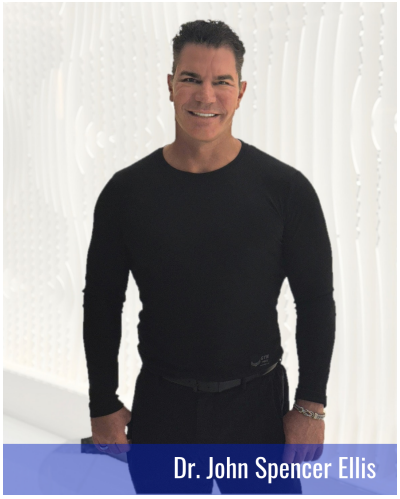
What this kind of problem actually needs, and what it doesn't.

20

CHAPTER 20

How John works on this

Mostly by stopping men from solving the wrong problem.



Dr. John Spencer Ellis

Almost everything in this paper is free. That is not an accident of the subject — it is the finding. The items with real numbers behind them are a medication review, a blood test, a urine dipstick, a week without alcohol, a week of cooking your own food, standing up every hour, and sleeping properly. Not one of them is for sale.

So the honest question is what a coach adds. Three things, and none of them is information.

Sorting the problem before you spend on it

The most common failure in this area is a man spending a year and several thousand dollars treating fat as though it were fluid, or fluid as though it were inflammation. The four-way distinction in Chapter 1 takes three days to resolve and almost nobody runs it, because nobody told them it mattered. Getting that right first changes everything downstream.

Changing one thing at a time

Men do not generally fail at this because the interventions are hard. They fail because they change six things at once for nine days, see nothing clear, and conclude none of it works. A protocol only teaches you something if it is run as a protocol. That is a discipline problem, and discipline problems are what coaching is actually for.

Knowing when to send you to a doctor instead

Part Four exists because this particular complaint sits close to real disease, and because the standard clinical review of swelling barely mentions the face. A coach who cannot recognise a thyroid picture, a urine dipstick question or the specific pattern that needs urgent assessment is a liability in this area. John is not a physician and does not diagnose. Knowing which conversation belongs with one is part of the job.

Underneath all of it sits the larger finding of Part Two: in the measured literature, the ageing male body does not get puffier. It gets softer, because muscle is replaced by fat inside the muscle and strength falls faster than size. That is a slower problem than fluid and a far more rewarding one, because the work that fixes it is the same work that extends how long you stay capable. Most men arrive asking about their face and leave with a training programme, and they are right to.

Health, Longevity and Performance Coaching for Men Over 40. Strength and body composition, sleep, alcohol, nutrition, and the unglamorous audit work that most of this paper turns out to consist of. Online worldwide, by phone and video. Request an evaluation · Watch the YouTube channel

THE SHORT VERSION

If you read nothing else

1. **"Puffy" is four different problems.** Photograph your face at 7 a.m. and 4 p.m. for three days. If they differ, it is fluid. If they match, it is fat and structure, and nothing in Part Five will touch it.
2. **Nobody has ever measured fluid in a human face.** Every causal claim you will read, including the sensible ones, is an inference across that gap. Treat confident advice accordingly.
3. **Check your medication list first.** It is the only cause with hard numbers: 10.8% on 10 mg of amlodipine, 26.1% on pioglitazone with insulin, 19% on pregabalin with a pioglitazone-type drug.
4. **Rule out the medical causes.** A TSH and a urine dipstick are cheap. Swelling that is worse lying flat or bending forward, or that never lifts by afternoon, is not cosmetic.
5. **Cut salt hard for a week and stop drinking for a month.** These are the two best-evidenced levers, measured in men, and both are free.
6. **Stand up every hour.** Four hours sitting still puts 216 mL into your lower legs, and calf contractions prevent a quarter of it.
7. **Stop buying the rest.** Caffeine creams, gua sha, ice rollers, water loading and IgG food panels have no trials behind them for this, and diuretics will leave you worse than when you started.
8. **And the real story is below the neck.** In weight-stable men, fat inside the muscle rose about 10% a year while strength fell more than four times faster than muscle size. That is what most men are actually seeing, and it responds to training rather than to anything in a jar.

Sources. Every figure in this briefing is traceable to a named primary source. Principal references include: Heer et al., *British Journal of Nutrition* 2009 and *American Journal of Physiology — Renal Physiology* 2000; Rakova et al., *Journal of Clinical Investigation* 2017; Sundelin et al., *Sleep* 2013; Chervin et al., *Journal of Clinical Sleep Medicine* 2013; Redolfi et al., *American Journal of Respiratory and Critical Care Medicine* 2009 and 2011; Heinzer et al., *Lancet Respiratory Medicine* 2015; Delmonico et al., *American Journal of Clinical Nutrition* 2009; Darcy et al., orbital MRI, 2008; Rabe et al., Bonn Vein Study; Mehta et al., *BMJ Open* 2018; Sharma, Nieman & Feelders, *Clinical Epidemiology* 2015; Fardet et al., *Journal of the American Academy of Dermatology* 2007; Wu et al., *PLOS ONE* 2018; Jasuja et al., *Journals of Gerontology* 2013; Franck et al., *Nature Aging* 2025; de Wardener, *Kidney International* 1981; Ezzo et al., Cochrane CD003475; Dickinson et al., Cochrane CD004641; Aburto et al., *BMJ* 2013; He, Li & MacGregor, *BMJ* 2013; Fedewa et al., *British Journal of Sports Medicine* 2017; the AAAAI 2010 position statement on IgG4 testing; NCHS Data Brief No. 460; and the FDA prescribing information for amlodipine, pioglitazone, pregabalin, testosterone gel and finasteride.

Important disclaimer. Dr. John Spencer Ellis is a coach, consultant, advisor and educator. He is not a medical doctor, registered dietitian or licensed therapist, and does not diagnose, treat or prescribe, order or interpret laboratory tests, or recommend medications. This guide is educational and is not medical advice. Facial and body swelling can be the presenting sign of serious disease, and several such conditions are described in Part Four specifically so that they are not missed. Nothing here should delay medical assessment. Do not start, stop or change any medication on the basis of this document; several drugs named here are dangerous to stop abruptly, and any change belongs with the prescriber. Much of the research summarized here is observational or mechanistic; where it is observational it establishes association rather than proving causation, and no finding here predicts any individual outcome. Dr. Ellis has no financial interest in any supplement, device, clinic, testing service or pharmaceutical product named in this document. © Dr. John Spencer Ellis. All rights reserved.



WORK WITH JOHN

Health, longevity and performance coaching for men over 40

Most of what this paper recommends is free, and most men still do not do it — not because it is hard, but because nobody sorted the problem first and nobody held them to running one change at a time. That is the work. Strength and body composition, sleep, alcohol, nutrition, and the unglamorous audit that the evidence keeps pointing back to. Online worldwide, by phone and video.

DR. JOHN SPENCER ELLIS

2780 S. Jones Blvd, Ste 200-3464
Las Vegas, NV 89146-5623, USA
(480) 382-2464
johnspencerellis@gmail.com
Serving men nationwide and worldwide by phone and video

CONTACT

Web: johnspencerellis.com
Contact: johnspencerellis.com/contact
About: johnspencerellis.com/about
YouTube: @coachjohnspencerellis