

Lots of actives for active people

You have a plan for your training, your nutrition and your shoes. What is the plan for your biggest organ?

By Dr Joan van Wyngaard — registered pharmacist, PhD in phytomedicine, founder and formulator of Vitant Skincare. And a runner.

On Sunday 13 June 2027, the Comrades Marathon will be run for the 100th time. Between now and then, tens of thousands of South Africans are going to spend more hours outdoors than they have in years. Long runs at sunrise. Time trials at five in the afternoon. Ninety-kilometre weeks through a Highveld summer and a Cape winter.

Every one of those athletes will have a training plan. Most will have a nutrition plan. Many will have a coach, a physio, a sleep target and a watch that tells them off for standing still.

Almost none of them will have a plan for the organ absorbing all of it. Skin is the largest organ in the human body — roughly two square metres of it — and it is the only one you take outside, uncovered, for four hours at a time.

The short version

You start losing collagen in your mid-twenties, at about 1% a year, whether you train or not. What you do outdoors decides how much faster than that it goes. Three things measurably slow it down: daily UV protection, vitamin C at a concentration and pH that actually works, and actives that signal your skin to rebuild. Everything else is detail.

The collagen clock started at 25

Collagen is the scaffolding of the dermis. It is what makes skin firm, elastic and thick enough to bounce back. It is also the thing you have been quietly spending since your mid-twenties.

Skin collagen content peaks between roughly 25 and 34. From early adulthood, fibroblasts — the cells that manufacture it — become less productive, and **collagen production falls by about 1.0% to 1.5% a year**. Across four decades that adds up to a decline of roughly a quarter of what you started with.

For women there is a second, steeper drop that has nothing to do with the calendar and everything to do with oestrogen. Through the first 15 to 18 years after menopause, skin collagen falls at an average of about 2.1% a year, and skin thickness by about 1.1% a year. Menopause is not a gentler slope. It is a step change.

None of this is caused by running. Endurance training does not age your skin. But the hours you train in are exactly where the second and much faster kind of collagen loss happens — and that one is entirely under your control.

What actually breaks collagen down

Ultraviolet, first and by a distance

UV raises the activity of matrix metalloproteinases — the family of enzymes whose job is to cut collagen and elastin apart. This is not a slow, cumulative wearing-down; it is an enzymatic response that switches on with exposure, and it switches on well below the dose that would burn you.

That last point is the one runners miss. You do not have to burn to lose collagen. UVA passes through cloud largely unimpeded, and UVA is the wavelength doing the structural damage. An overcast winter morning in Cape Town is not a day off. Neither is a 5 a.m. start that finishes at eight, by which time the UV index is already climbing.

Oxidative load, on top of it

Every long run generates reactive oxygen species. Systemically, a trained body handles that well — it is part of why the training works. On the surface it is a different story: skin that has been under UV, wind and sweat for four hours is doing that work with whatever antioxidant reserve it has left, and it does not get a gel at 20 km.

And then the towel

Sweat, salt and repeated towelling do two things at once. They remove the sunscreen film, and they strip the barrier lipids underneath it. Every time you dry your face you have taken off a meaningful share of what you applied, and the clock starts again.

About "runner's face"

It is not the running. It is the cumulative sun of thousands of unprotected hours, plus the volume loss that comes with very low body fat. The training is not the enemy. The unprotected hours are. Which is good news, because hours are something you can protect.

What actually protects collagen

Three things, in order of how much they matter.

1. UV protection. Nothing else comes close.

This is not a theoretical benefit. In a randomised controlled trial in Queensland, 903 adults were followed for four and a half years. One group was asked to apply broad-spectrum sunscreen to the head, neck, arms and hands every morning; the other used it whenever they felt like it. At the end, the daily group showed **24% less photoageing** measured on skin-surface microtopography. Real people, real sun, four and a half years.

The number on the bottle is the smallest part of this. Factor describes how much UVB is blocked while the film is intact. It says nothing whatsoever about how long that film survives sweat, a cap brim and a towel. **A well-applied SPF30 reapplied at halfway beats an SPF50 applied once at five in the morning.**

And the places people burn are remarkably predictable, which means they are almost entirely preventable: ears, the back of the neck, the nose, the lips, the tops of the cheeks, and the part line for anyone whose hair is thinning. A cap covers almost none of them. Add the backs of the hands and the tops of the feet for anyone in sandals or spikes.

2. Vitamin C — which does two separate jobs

Vitamin C is a cofactor for prolyl and lysyl hydroxylase, the two enzymes that cross-link and stabilise collagen fibres. Without it, collagen synthesis is impaired. That is not cosmetic marketing; it is why scurvy dismantles connective tissue.

It is also an antioxidant, and it neutralises the free radicals UV generates before they get as far as switching on the enzymes that cut collagen. Protection and production, from one molecule.

Two things decide whether a vitamin C product does either. Concentration: below roughly 8% there is no meaningful biological effect. And pH: L-ascorbic acid has to sit below about pH 3.5 to cross the stratum corneum, because that is where the molecule loses its charge. Most pleasant-smelling, neutral-pH vitamin C serums fail on one or both.

Vitant's Glow Serum is L-ascorbic acid at 15%, formulated at pH 2.5–3.5, with ferulic acid — which stabilises the vitamin C and doubles its photoprotective effect. Applied in the morning under sunscreen, it makes the sunscreen work harder.

3. Actives that tell skin to rebuild

Protection stops the loss. Something still has to replace what is already gone. This is where the ingredient choice stops being a matter of taste and starts being a matter of evidence.

- **RetinART™** (ALGAKTIV®, Barcelona) — a fourth-generation marine bio-retinoid from *Chlorella vulgaris*. It activates only the RAR-β receptor, the one responsible for deep dermal remodelling, without triggering the epidermal receptors that make conventional retinol sting, peel and flake. Collagen I +126.57% (ex vivo); wrinkle depth -17.5% at Day 28 (in vivo). It is photostable, so there is no photosensitivity risk — which is why it can sit inside a morning SPF rather than being banished to the evening. Certified pregnancy-safe.
- **Exometics™ G** — vegan biomimetic exosomes from *Chlamydomonas reinhardtii*, named Mintel Most Innovative Ingredient 2026. It upregulates the COL1A1 and elastin genes and downregulates MMP1 and MMP3 — the same enzymes UV switches on. Both ends of the equation at once.
- **Collage™** — vegan collagen amino acids (glycine, proline, hydroxyproline: collagen's own building blocks) plus spermidine, a cellular-renewal signal, from *Haematococcus pluvialis*.

All three are ALGAKTIV® marine biotech actives, and all three come with a dossier. That matters more than it sounds: the difference between an ingredient with a study and an ingredient with a story is the whole difference between skincare that works and skincare that photographs well.

A recovery drink for your skin

You would not finish a long run and skip rehydration. Skin has the same window, and almost nobody uses it.

Collagen Quench is a leave-on jelly mask built on Collage™ at 3% — the collagen amino acids and the spermidine signal, undiluted by anything else. In a placebo-controlled in-vivo study at that exact 3% concentration (CompLife Italia, 30 women aged 40–60, single application, each subject acting as her own control), **ten minutes after one application**: hydration +24.9%, wrinkle depth -13.7%, radiance +31.4% — all statistically significant against both baseline and placebo. Hydration was still up 13.3% at 24 hours.

Ten minutes is your post-run shower, or the drive home from the club. On race morning it is the difference between a finish photo and a good finish photo. Left on overnight, it is a structural treatment rather than a rescue.

Sweat, friction and the skin under your kit

Breakouts on the back, chest and shoulders are not facial acne in a different postcode. They are what happens when sebum, sweat and friction sit under a wet technical top for three hours, on exactly the areas with the highest density of sebaceous glands — and on exactly the areas nobody is ever going to treat with a serum.

The bacteria involved do not live as loose individuals, either. *Cutibacterium acnes* builds a biofilm: a self-made shield the colony lives inside. It is why a wash can kill bacteria convincingly on a laboratory plate and still do very little on a back.

Vitant's Active Balancing Body Wash is built around ACTIFY® — a patented *Plectranthus aliciae* extract that came out of University of Pretoria research, and one of very few actives with laboratory data against the biofilm itself rather than only the bacteria in it: 83.3% inhibition of *C. acnes* within mature biofilms in an artificial sebum model, 82.8% inhibition of the AI-2 quorum-sensing signalling bacteria use to coordinate biofilm formation, and 99% inhibition of the bacterial lipase that turns skin sebum into the free fatty acids associated with breakouts. All in vitro, all measured on the ingredient.

Alongside it sits LactoSporin®, a postbiotic from *Bacillus coagulans* fermentation, at 0.5%. That is not a round number chosen because it looked good on a pack. 0.5% is the exact concentration at which its inhibition of 5-alpha reductase — the enzyme that converts testosterone to DHT and drives sebaceous output — was measured at its highest: 17.17%, against 13.57% at 1% and 7.30% at 2%. More would deliver less.

Most brands cannot tell you why an active sits at the level it sits at. That is the question worth asking them.

What a routine actually looks like

Deliberately short, because a fourteen-step routine is a routine you abandon in week three. This one was built by someone who also has to get out the door for a long run.

- 1. Morning, three steps, under four minutes.** Cleanse. Glow Serum (vitamin C) on clean skin, then wait two minutes. Sunscreen last, taken right up to the orbital bone and over the ears and the back of the neck. Men: cleanse, sunscreen. Two steps.
- 2. In the bag.** The sunscreen goes with you. Reapply every two hours and again immediately after you towel your face. Sunglasses are eye-area skincare, not an accessory — squinting folds the thinnest skin on your body in the same place, hour after hour.
- 3. After.** Body wash in the shower, while the pores are still open and the salt is still on you. Collagen Quench when the skin needs bringing back — after a long one, after a race, before an occasion.
- 4. Night.** Cleanse, then the treating step: a RetinART™ moisturiser, or Wrinkle Relaxant with Exometics™ G and Collage™. This is when repair actually happens.

Developed by an active pharmacist, for active people

Vitant was formulated by Dr Joan van Wyngaard — a registered South African pharmacist with a BPharm, an MSc in Pharmacology, an MBA and a PhD in phytomedicine, and more than twenty years in pharmaceutical regulatory affairs and clinical research. She built the range around ALGAKTIV® marine biotech actives for an unglamorous reason: she wanted to read the dossier before she believed the claim.

Every figure in this article has a study behind it, and the study type is named — ex vivo, in vitro or in vivo — because those three words are the difference between evidence and enthusiasm. The range is manufactured in South Africa. She also runs.

Prepare to look your best.

The 100th Comrades Marathon is on Sunday 13 June 2027. That is about nine months away. Your training plan is already written, and you will follow it to the kilometre. This is the other plan — the one for the organ everyone can see.

Mentioned in this article

Glow Serum (L-ascorbic acid 15% + ferulic acid) · SkinSmart Day Cream SPF 30 (with RetinART™) · Everyday Sunscreen · Sport 24 SPF 50 · Collagen Quench Leave-on Jelly Mask (Collage™ 3%) · Wrinkle Relaxant (Exometics™ G + Collage™) · Active Balancing Body Wash (ACTIFY® + LactoSporin®) · Structure & Firming Body Lotion (UpLift™) · Lifting Eye Cream (UpLift™ + caffeine)

vitant.co.za · joan@vitant.co.za

Sources

Collagen loss with age and after menopause: Reilly DM, Lozano J. Skin collagen through the lifestages: importance for skin health and beauty. *Plastic and Aesthetic Research* 2021;8:2.

Sunscreen and photoageing: Hughes MCB, Williams GM, Baker P, Green AC. Sunscreen and prevention of skin aging: a randomized trial. *Annals of Internal Medicine* 2013;158(11):781–90.

Vitamin C mechanism, concentration and pH; ferulic acid synergy: Al-Niaimi F, Chiang NYZ. Topical vitamin C and the skin: mechanisms of action and clinical applications. *Journal of Clinical and Aesthetic Dermatology* 2017;10(7):14–17.

RetinART™, Exometics™ G, Collage™ and UpLift™ data: ALGAKTIV® (Barcelona) manufacturer dossiers and clinical study reports held on file by Vitant.

Collage™ 3% single-application study: CompLife Italia S.r.l., controlled in-vivo study, 30 female subjects aged 40–60, contralateral half-face, report issued 10 July 2024.

ACTIFY® data: Blyde Botanics Active Ingredient Portfolio 2026 (University of Pretoria patent). LactoSporin® data: Majeed M et al., *Cosmetics* 2020;7(3):70.

2027 Comrades Marathon date: Comrades Marathon Association.