



Mind the GAP!

Dr Adam Sheridan proves how major cosmetic procedures can be avoided with his practical guide to skin actives.

REGULAR READERS AND patients will be well aware of my penchant (some would say obsession) to extol the virtues of supportive skin care and environmental skin protection at every opportunity. Now that that we are all on board with the skin basics, what next? Deep acid peels and full face-lifts at 10 paces?

Easy as it may be to jest, it is quite surprising how often patients are tempted to pursue this non-linear progression. Having actively bought into basic skin care and been impressed by the results, many are quick to impatiently seek out the next step to improve their skin and overall appearance. In the absence of a carefully mapped-out pathway, the siren call of online and social media marketing is strong and often pulls people towards more dramatic, risky treatments than would otherwise be indicated.

It is our duty as skin care professionals to guide patients away from needless risk and harm, and deliver them safely to proven and effective treatments.

As the title of this article suggests, it is important to be aware of, and attend to, the gap between basic skin care and more dramatic cosmetic interventions, in order to serve our patients and clients well.

So, how do we bridge this gap? Answering this question is the key to boosting results and engaging and retaining more people in active care of their skin. Repeated robotic instruction to 'moisturise and wear sunscreen' can risk boredom in your clients. It is human nature to constantly seek out the novel and new. Having the next steps

in place, with a structured path forward mapped out, keeps people interested and engaged in their skin care routine and presents an educational opportunity regarding the importance of evolving this over a life time.

Our top 'gap-fillers' are prescribed ingested supplements with body-wide health and skin benefits (see previous articles) and a suite of prescribed topicals we refer to as 'skin actives'. We shall focus on the latter in this article.

I must give credit where it is due and thank Melanie De Vincentis RN (Phoenix Dermatology), Dr Hema Sundaram (Dermatologist, USA), Elliott Milstein (CEO Biopelle, USA) and George Kypreos (CEO Dermocosmetica, Australia) for their generous assistance in producing this article.

Top skin actives

VITAMIN A

Retinoids remain the undisputed rulers of active skin repair.

Foremost of these is tretinoin (all-trans retinoic acid). Tretinoin binds to the nuclear RA and RX receptors to exert powerful anti-ageing and photo-damage repair actions. Tretinoin is a prescription-only agent and it should be noted that its powerful effects therefore trade off with potential side effects including skin irritation, and systemic effects such as birth defects. We shall not discuss this further here, other than to encourage you to engage with medical colleagues when a powerful medical-grade retinoid effect is called for.

Retinol is a precursor of tretinoin, and commonly acts as the cornerstone for cosmetic products, being less expensive to produce and not requiring a prescription for use. Most of the clinical effect relies upon absorption into the skin and conversion to tretinoin. It is unsurprising to note that this less potent agent is associated with fewer side effects such as irritation, but should still be avoided during pregnancy.

When choosing a retinol for your clients, seek out a stable formulation with high bioavailability of vitamin A, low irritation, and a cosmetically elegant presentation – you want clients to embrace it and use it regularly!

The vehicle in which the retinol is delivered is just as important as the retinol itself. Debate continues to rage regarding presentation in an emulsion vs suspension vs high and low protein concentrations. As with everything – DYOR (do your own research). We generally favour suspensions for their

high penetration and bioavailability, with low irritation and high protein concentrations, as this promotes conversion to the active metabolite and 'holds' moisture in the skin to counter potential irritation.

Prime indications for retinoids include: fine lines, wrinkles, textural changes, benign keratoses, skin laxity and epidermal pigmentation.

Common side effects are: stinging, burning, itching, redness. (NB - side effects can be a sign of activity)

Our usage instructions: cleanse skin, pat dry, then apply the product sparingly. Allow adequate time for absorption (3-5mins) and note that rubbing does not speed absorption. Generally apply in the evening (advanced users may also apply in the morning) and follow with a moisturiser. Always use in conjunction with daily broad spectrum UV protection. Consider 'treatment holidays' if undue or unexpected irritation occurs. Note that side-effects such as irritation and erythema may actually signal efficacy, so encourage modified use until these signs and symptoms abate.

DNA REPAIR

DNA is essential for cellular function and survival. These may be damaged through UV and environmental forces as well as through age-related replication errors (Chinese whispers).

Pigmentation, erythema, broken vessels and textural change are visible markers of sustained DNA damage, past and present. Extreme DNA damage manifests as accelerated ageing and skin cancer.

DNA repair enzymes now exist and are available for topical use. Modes of action include severance and extraction of UV damage-induced pyrimidine dimer chains, repair of damaged DNA, and anti-methylation to reduce degradation of cells by sugar.

DNA repair enzymes are best combined with ingredients that reduce further DNA damage through broad spectrum UV protection and anti-oxidant action.

Creatine is a current 'buzz' product; it protects DNA from UV damage and improves function of cellular mitochondria which are a key manager of the life cycle of all cells.

We generally use combinations of DNA enzymes presented in a moisturising base; alternate nightly to nightly as indicated and tolerated. The DNA repair agent should be applied directly to skin following cleansing and a pat dry. We advise against moisturising pre-application as this dilutes the product and may unwittingly reduce the potency of action. Side effects are rare but may include mild erythema (redness); as with retinoids this may actually be an indicator of efficacy.

GROWTH FACTORS

Growth factors are proteins that stimulate cell differentiation and growth, thereby countering UV and environmental toxin-induced free radical cell damage. They also work to rebalance against the natural attrition of native growth factors produced in the skin.

Skin active growth factors are predominantly derived from fibroblasts and work to counter environmental and age-related skin damage and to improve texture, lines and skin clarity/radiance.

Growth factors are an excellent choice for individuals of all ages and presentations as they work to prevent and repair the various forms of skin damage and ageing.

We have observed the benefits of growth factors applied morning or night as part of a rounded skin care regime comprising environmental protection, antioxidants and related skin actives.

STEM CELL PRODUCTS

These represent the new frontier of active skin care. It is important to cut through the marketing speak and understand that many products labelled

'stem cells' do not contain actual stem cells and do not activate their increased production. Most 'stem cell' products will contain a variety of active products produced by stem cells. These include peptides (signal increased collagen production); growth factors (initiate cell repair and division); cytokines (initiate inflammation cascade to drive tissue healing and regeneration); and antioxidants (insulate cells from free radical damage).

True stem cell products worthy of the name, are rare, and rightly occupy a prized position in the armoury of dermatologists. A true stem cell product will activate the production and migration of skin stem cells. As a secondary benefit they will upregulate production by the stem cells of beneficial bioactive products such as those mentioned above.

In short, an effective stem cell agent drives increased construction of cellular factories (stem cells) as well as the increased productivity of each of the factories themselves.

Stem cell products are effective in working to reverse both extrinsic and intrinsic ageing and decline.

These products are best combined with retinoids, DNA repair agents, and growth factor products. A combined approach establishes a positive feedback loop: more stem cells producing more peptides, growth factors and antioxidants; acting on a skin environment stimulated by retinoids and growth factors, and protected by DNA repair agents.

We prefer to apply stem cell agents at night as this synchronises with the body's natural regenerative rhythms.

How to choose and use skin actives:

Investigate the supporting evidence/science
Research and monitor for side effects

Don't be shy to ask the pharmaceutical representative or doctor's personal experience with the products - how long have they observed results in patients/themselves, and what have they seen go right and go wrong?

Be sure to consider alternatives, including a simplified treatment regime

DYOR, and always keep learning!

I hope you are enjoying your professional beauty journey. I welcome your feedback and suggestions for future articles, and as you continue your journey and alight at your next destination... be sure to 'mind the gap!' ■



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