

Regen Professional Glycolic Treatment

Layers of the skin

The skin has three major layers. The innermost layer is Subcutaneous adipose tissue which provides physical protection for deeper structures as well as thermal insulation.

Above this layer is the dermis. This layer is composed of connective tissue with capillary blood vessels, sweat glands and nerve endings. This layer joins the outermost layer in a series of folds and projections.

The outermost layer is the epidermis. Cells from the epidermal/dermal junction (the basal layer) undergo changes as they mature and migrate to the skin surface where they are lost by attrition. The thickness of this layer can be as little as 0.05mm (eyelids) to as much as over 1mm (soles of feet, palms of hands). The rate of epidermal growth is controlled by compounds called chalone. If the skin has become injured either the rate of chalone production is reduced or chalone antagonists are released which result in greater epidermal growth to repair the injury.

The “normal” rate of movement of cells from the basal layer to the outermost layer of the epidermis (the stratum corneum) is approximately 28 days. This rate may increase to in excess of 40 days in mature adults which sometimes results in a skin surface which looks dull and dehydrated.

Skin secretions

Secretions onto the skin surface are derived from three types of glands;

1. Apocrine sweat glands. Produce a secretion that is a mixture of proteins, carbohydrates and lipids. The exact role of these glands is not properly understood. Bacterial action on these secretions is responsible for body odour.
2. Eccrine Sweat glands. Produce a secretion that is predominately water based and which is instrumental in the control of body temperature. Some waste products are eliminated via this method.
3. Sebaceous Glands. Produce a secretion that is predominately lipid based (squalene, lanosterol, cholesterol, phospholipids, free fatty acids and triglycerides). This secretion permeates into the stratum corneum as well forming a film over it. It is instrumental in the retention of water through the prevention of Trans Epidermal Water Loss, keeping microbial numbers on the skin in check, as well as in the protection of the skin from irritants. Loss of sebum from the stratum corneum leads to the skin becoming dry and cracked.

Skin aging

The process of aging of the entire body is not well understood, but many theories exist as to why aging occurs. Some physiologists believe that the aging process is inevitable and in fact that it may be programmed into cells even at birth. This theory is given some credibility by the observation that some degenerative changes in the body have commenced even before the all of the developmental changes have been completed.

One of the reasons cited for aging is the limitation of cells to reproduce themselves. Laboratory experiments have revealed that cells can only reproduce at a normal rate for approximately 50 reproductions and that after this the rate of reproduction falls dramatically. This inability to replace “old” cells with “new” ones eventually leads to lack of functionality and an inability to repair damage.

In the skin the aging process results in the following visible changes;

1. Thinning of the skin , mainly due to loss of the Subcutaneous adipose tissue. Even very inoffensive trauma to the skin may result in injury.
2. Dryness of the skin. Loss of sebum production (the client is said to be “alipidic”), loss of intercellular lipid materials and a slower rate of epidermal growth rate can all produce skin which is visibly drier.
3. Wrinkling and sagging. Due to loss of both collagen and elastin in the dermal layer, an inability to produce hyaluronic acid in sufficient quantities and the loss of subcutaneous adipose tissue. Other factors which can influence wrinkling and sagging are rapid weight change, smoking and repeated body movements (e.g line formation on the face secondary to tardive dyskinesia)
4. Uneven skin pigmentation. Hormonal changes as well as UV exposure can produce areas of uneven skin pigmentation

Our experience would tell us that these changes cannot be totally prevented, but that we can moderate them.

Photoageing

Exposure to UV radiation has a major impact on the skin. The visible effects of UV radiation are hyperkeratinization (thickening of the epidermis), uneven distribution of melanin, skin cancer and photo allergic reactions. Other changes that are not as visible in the short term are the breakdown of collagen elastin fibres and the disruption of DNA reproduction.

All of these effects serve to hasten the aging process. Hence photoageing is really premature ageing of the skin. Fortunately these changes can be prevented with the consistent use of a suitable sunscreen.

Australia has been at the forefront of sunscreen development now for many years. A totally natural sunscreen with SPF 30+ is now available. We recommend the use of sunscreens **at all times** and especially during a period of treatment with an Regen peel.

What is Glycolic Acid ?

Glycolic Acid is a small organic molecule that belongs to a group of compounds called alpha hydroxy acids (AHA's). It is the smallest of the group that also includes compounds such as Lactic Acid, Tartaric Acid and Malic Acid.

A related group of compounds are the beta hydroxy acids that include Salicylic Acid and Citric Acid.

What is the function of Glycolic Acid in skincare ?

The use of AHA's actually dates back to Egyptian times. It is said that Cleopatra used milk derived preparations (Lactic Acid) as part of her skincare programme. (She is also said to have sent servants to the Dead Sea in Israel to bring back the salts and muds from it's shores !)

Modern research into AHA's commenced thirty years ago and today their method of action is fairly well understood.

In simple terms AHA's are able to "dissolve" the "glue" that binds cells together in the stratum corneum (hence the term "chemical peel"). The result is to exfoliate the skin surface and thus remove old cell skins and expose a smoother, softer and fresher looking skin surface. Fine lines can be reduced and the complexion is made to look more uniform (especially in those clients with uneven skin pigmentation). A long term benefit is the stimulation of collagen production in the dermis.

Whilst all clients will benefit from AHA treatment the most dramatic results are often seen in mature clients where the rate of cellular renewal is slower and the complexion has a tendency towards dullness. Young clients with acne may also achieve excellent results during treatment with AHA products and hence be spared treatment with other treatment options such as oral medications.

The effect of concentration and pH on effectiveness of Glycolic Acid treatments

Glycolic Acid is the smallest molecule in the AHA family of compounds and hence has the greatest ability to penetrate into the very small spaces between the epidermal cells.

Like all organic acids Glycolic Acid in the presence of water exists in an equilibrium with it's conjugate base (Glycolate ion)



Since the Glycolic Acid is the active agent (Glycolate ion is very much less active) the higher the Hydrogen ion concentration (i.e the lower the pH) the more Glycolic Acid will be present and less Glycolate ion.

Hence a product that contains 30% Glycolic Acid at a pH of 2 will be more active than one that contains 30% Glycolic Acid at a pH of 3. Because of this products with a very low pH may still be highly effective with concentrations of Glycolic Acid considerably lower than 30%.

A word of caution – Acids and bases (even those generally considered weak in chemical terms) can have dramatic effects on the chemistry of the skin. Use them carefully and with due care so as not to cause injury to your client.

Which Regen treatment product should I use ?

The Regen product range now comprises Glycolic Acid 30% ph 3.0, Lactic Acid 30% ph 1.8 and Salicylic Acid 20% Unbuffered.

The client response will vary for each product. However generally speaking the relative strengths of the peels from weakest to strongest is Glycolic, Lactic, Salicylic. The difference in activity from the Lactic to Glycolic is minimal, however the Salicylic is significantly more active than either the Glycolic or Lactic products.

Glycolic is a good all purpose peel being suited to most skin types. It is best on skins that are normal or slightly oily or dry. Being the weakest of the peels it is also suggested for clients that have not had a peel before.

Lactic can also be used on all skin types. It is a larger molecule than Glycolic and hence penetrates a little slower than does Glycolic and it therefore often perceived by clients as being gentler. It is also more oil soluble than Glycolic which means that it penetrates into oily skin types better and it is more moisturising than Glycolic. For these reasons it is well suited to clients with very dry or combination or oily skin types. It can also be used on clients as a variation away from the Glycolic treatment.

Salicylic is a potent peeling agent. A 20% solution is similar in potency to an Unbuffered Glycolic 40%. Salicylic is much more oil soluble than either Glycolic or Lactic and hence works very well on oily acne skin. However acne clients that are being treated for the first time should have 1-3 Lactic acid treatments before being treated with Salicylic. Salicylic will treat more deeply than either Glycolic or Lactic and we suggest that the contact time on initial treatment should not exceed 1 minute. Subsequent treatments should then be tailored around the response achieved during this initial treatment. Longer contact times may eventually cause the skin to darken prior to peeling and clients should be made aware of this possibility before treatment. Good client record keeping is essential. All clients being treated with Salicylic **MUST** use adequate sunscreen and moisturising treatments for at least 2 weeks after the treatment.

Using Regen Professional Treatments

Step 1. Client Examination

Careful examination of the clients skin is vital. A client card should be kept for each client with notations of the following details;

- a. Skin type (from oily to very dry or combination)
- b. Presence of lines, their depth and location.
- c. Presence of acne lesions, rosacea or psoriasis
- d. Presence of broken capillaries.
- e. Presence of uneven skin pigmentation
- f. Other skin features that may be present including skin tags, scars and milia.

Clients with any disruption to their stratum corneum **should not be treated**. This would include physical damage such as grazing or sunburn. Treatment of these clients can proceed once the stratum corneum has recovered from these injuries. Other conditions that would be contraindications are; active herpes, pregnancy or breast feeding, prior adverse reactions to chemical peels, a history of adverse sun reactions, thick scars, some medications especially Roaccutane (used by acne sufferers) or recent radiation treatment for cancerous conditions.

Active acne can be treated, although you should monitor closely the clients reaction to application of the Regen Professional Treatment.

If the client has existing skin conditions of a more serious nature (e.g psoriasis or dermatitis) treatment should only occur after the client has consulted with their medical practitioner and even after this treatment should be cautiously monitored.

Step 2. Tailoring a programme with your client.

Next discuss with your client the advantages and limitations of Regen treatment. At this point you need to inform your client that the general appearance of the skin will be improved with Regen treatment. This will mean that the skin will generally look fresher, **fine** lines may be reduced and uneven pigmentation reduced.

At this point it is recommended that you should discuss with your client factors that may be causing some of the changes and what they should do about them. In particular smoking cessation and the regular use of sunscreens are highly recommended actions to prevent the further development of photageing.

Clients with acne lesions may notice a flare in their condition in the first few weeks to a month of therapy after which the condition usually settles.

Clients with uneven skin pigmentation should consider the home care use of skin lightening products. These products inhibit tyrosine dehydrogenase in the melanocytes and hence inhibit the production of melanin. These agents can be used in conjunction with AHA homecare products.

Clients should also use an AHA homecare product to reinforce the effects of the Regen Professional Treatment. In fact the results of the Professional Treatment will

be much less if not assisted by the use of homecare products. Your Regen distributor will recommend the relevant product to be used by your client.

Clients should be aware before the treatment is applied to their skin of the possible sensations that they may experience during the treatment. These may include some pinkness of the skin, some itching and skin tightness. These symptoms are normal and usually abate during treatment.

Step 3. Cleansing

Cleanse the clients skin with a gel foaming cleanser. These types of cleansers are effective in removing sebum from the skin without leaving any oil behind. This ensures that the peeling agent is not hindered in it's action.

Step 4. Application of the Regen Professional Treatment

Each Regen product has a list of safety and first aid directions on the container. It is mandatory that each therapist using the product is familiar with these prior to treating a client. Place a small amount of the peeling agent into a small glass dish and apply a small amount of the peel to the clients skin avoiding those areas in which the stratum corneum is already thin (e.g the eye area). We recommend the use of small to medium fan brushes to gently spread a thin layer of Regen Treatment onto the clients skin.

Special care needs to be taken with the Salicylic treatment which is very thin and which needs to be applied sparingly to avoid the product running into the eye area.

The treatment is applied to the skin for one to five minutes depending on client response. **Once the product has been applied to the skin DO NOT leave the client.** Some clients may experience some stinging or itching. A hand held fan may reduce these effects to allow the product to remain on the skin. The product should be removed immediately from the skin of any client that complains of undue discomfort. If discomfort persists after the product has been removed use a small amount of baking soda in water to cleanse the area. This will neutralise all remaining traces of peeling agent. It is important to carefully remove the product from all the areas to which it has been applied.

Step 5. Apply a suitable day cream

Apply the appropriate day cream for your clients' skin type.

Step 6. Use the client prescription form to tailor a homecare programme for the Client.

Remember that the benefits that the client will gain can only be maximised via the use of appropriate homecare products.

Step 7. Rebook the client for the next treatment.

The period between salon peels should be between 2 to 4 weeks. Client response will vary, but noticeable results are usually achieved in 4 to 6 treatments. It is recommended that no more than 8 treatments should be undertaken in a series of treatments. A period of between 3 to 6 months between series of treatments is recommended.

Regen Professional Homecare Programme

Morning; Cleanse with

Tone with.....

Sunscreen.....

Day Cream.....

Evening; Cleanse with

Tone with.....

Night Cream.....

