

# Lasting effect? Tendencies in anti-aging treatments

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Wrinkles - now customers can well do without these and that is the reason why they willingly buy the promoted anti-aging skin care products on the market. Aim of these products however should be the effective prevention of the skin aging process. According to Dr. Hans Lautenschläger empty words or short-lived agents only are not enough.

**T**reatment options of cosmetic products have seen major progress within the past few years. Many of us cannot believe their eyes when they see how people over 50 present themselves in today's media. On first sight there doesn't seem to be any more old people around. Although it should be mentioned that the daily glance into the mirror after the morning cleansing ritual regularly tells us that the aging process still cannot be stopped. Now, what exactly is behind these anti-aging products and what can they achieve?

## Just showing off and pretend...?

Most of the anti-aging products serve their purpose in the very sense of the term cosmetics which means decorating and embellishing. Besides their covering effects, specific pigments e.g. also reduce the optical appearance of wrinkles by means of a diffuse reflection of the incident light. Hyaluronic acid has a padding effect on the skin. Muscle relaxing peptides and exotic extracts make tiny wrinkles disappear. Just to mention a few examples of the rapidly developing product group.

In the true sense of the word however the term anti-aging is not an appropriate term to use in connection with the products mentioned above as it has no effect on the factual situation of aging. To avoid misunderstandings though it should be emphasized that there is no question about the importance of the mentioned products as so called effect products as they temporarily improve the optical appearance. Yet, what about actual anti-aging effects, and where exactly does the lasting effect start? Anti-aging is a catchy term hence the issue here is to prevent the premature aging of the skin. It is purely and simply impossible to turn back the biological clock and just spirit away the visible signs of the times. Crucial point here is to begin with preventive measures against the aging processes as early as possible. In this field major advances have been observed.

## Opposed aims

It is worth while looking back, as this perspective allows deducing future developments. Let's focus first on the cream bases i.e. the matrix in which the agents are embedded. Inextricably linked with them are the terms skin protection and recovery as the cream bases should aim at the maximum protection of the skin with a maximum recovery effect.

Dermatological studies however illustrate the problem that a maximum protection of the skin which can be achieved by applying vaseline film, paraffin or camouflage leads to a minimum natural skin recovery and hence is counterproductive in the long run. As the maximum natural recovery of the skin is more important on a long-term basis however compromises have to be made as far as skin protection is concerned. This led to the development of physiologically adapted cream bases i.e. skin barrier like structures which are designed to repair the skin barrier with substances that are produced naturally in the body or either similar substances, and avoid covering superficial films. That way the natural TEWL (transepidermal water loss) is repaired but not significantly reduced. The development of such systems was started around 15 ago and still shows continuous growth rates.

## Corneotherapy

At the same time Professor Kligman developed his concept of corneotherapy. His theory of outside-in-therapy has been proved in later studies and today it is a cornerstone in the prevention of problem skin together with the physiological cream bases. Corneotherapy concentrates primarily on the recovery of the skin barrier ("outside") with subsequent effects on the deeper skin layers ("in"). It is assumed that these emulsifier free systems will replace the conventional products in the long run.

### Well-adjusted skin protection

It is a matter of fact that a well-adjusted protection of the skin is of vital importance in corneotherapy. A principal column here is the protection against sun radiation which simultaneously is a major anti-aging protection by means of appropriate UV-A and UV-B filters. These protective measures however still are insufficient for particularly sun-addicted individuals. Also IR (infrared) radiation affects the skin and there are yet no filter substances discovered against it and even the prospects for a future remedy against their influence are rather poor. Besides the products on the market only common sense can help, in other words, it is recommended to stay in the shade. Continuous stress for the skin caused by day creams with UV filters should be avoided. This helps to ensure that the formation of the vitamins D<sub>2</sub> (ergocalciferol) and D<sub>3</sub> (cholecalciferol) is not prevented on a permanent basis. Further skin protection is provided by the NMF (natural moisturizing factor). Its significance for the prevention and treatment of barrier disorders has been emphasized again and again by Professor Kligman who actually pioneered the idea.

In recent times it has been discovered that the NMF moreover provides the most important natural protection against free radicals. This information challenges the significance of a multitude of radical scavengers which still are seen as anti-aging agents. Specifically in this sector the typical mechanisms of the cosmetic market turn up again - the wave-like topicality of active agents which means that they appear and disappear again. The consumer has hardly got accustomed to an agent, when a new and obviously more effective one is on the market. This mechanism which is controlled by marketing and publicity campaigns will continue in the future, however will not contribute to a substantial improvement of anti-aging products. By contrast, the "old-fashioned" NMF will continue to be a topical issue. This also applies for a variety of well-known and well-proven active agents which are still very popular as e.g. vitamins or essential fatty acids.

### Conventional agents - still up to date

Also in the field of active agent cosmetics it is hardly possible to reinvent the wheel. Many substances which are very important ingredients of anti-aging products are well-known and still up to date. This applies e.g. for essential fatty acids which support the recovery of the natural skin barrier in form of linoleic acid and which therapeutically prevent inflammatory

processes by means of the skin-similar metabolites formed from linoleic acid, alpha-linolenic acid and gamma-linolenic acid. These processes are stressful for the skin in the long run and cause the aging process.

Phosphatidylcholine gained from lecithin which chemically binds linoleic acid also is a carrier element - in form of liposomes and nanoparticles. These, on the other hand are an important component of the extended corneotherapy. By means of carriers and the active agents they transported the skin barrier will be opened for the penetration of agents and subsequently closed again with barrier like base creams. This is also an adequate technique for the application of masks.

Appropriate active agents are, above all the vitamins A, C and E, and the vitamins of the B-family and their derivatives. Even in the future there will not be major changes as there is evidence that the substances mentioned support the skin recovery and have proved successful for decades.

### Cosmetics and medicine

In recent times two further substance groups have been added i.e. phytohormones and custom-made peptides. Both of the groups already have a major impact on the metabolism of the skin. The proof of efficacy indicates a pharmacological background and points to a rather important development i.e. the approach between medicine and cosmetics.

Medical wellness is increasingly important. Frequently wellness therapies are combined with anti-aging treatments. And customers' expectancies are quite high. This means new opportunities for the cosmetic field but also competition as the current health policy contributes to the fact that more and more medical doctors are on the lookout for additional sources of income in order to secure their economic survival. That is how they discover these border areas and synergy fields.

### Extended margin

Consequently more and more practices are established with adjacent skin care institutes which concentrate their services on the areas mentioned before. This may result in a tough competition for already existing beauty institutes which are focused on conventional cosmetic treatments. Dermatological practices can also count on medical treatment techniques. Thus, it is a matter of taking countermeasures with appropriate concepts and professional training and of staying aware of these tendencies. The cosmetician is recommended to keep in mind that customer acquisition and loyalty in

these dermatological practices are based on a very simple principle: the dermatologist is responsible for the medical therapy and the cosmetic department deals with the supportive prevention following the therapy. The dermatologist can already make recommendations which will be hardly ever opposed by customers or patients.

Hence, cream bases may be used in the medical as well as in the cosmetic field. Inflammatory acne will be medically treated with a base cream containing antibiotics (pharmaceutical prescription) and after the successful therapy the treatment will be continued with the same base cream now containing preventive agents. This way the customers can benefit from a well-coordinated treatment on the part of the dermatologist as well as the cosmetician.

It is evident though that you don't have to stand by and watch. It is up to you to take action and secure your economic survival by means of professional competence and the appropriate decision for the adequate treatment and product portfolio.

#### **A more sophisticated point of view**

Basically, anti-aging is a misleading word. The natural aging process of the skin cannot be stopped. A multitude of internal and external influences however may cause premature skin aging which should come to a halt.

It is expected that a substantial skin care prevents the premature skin aging process. Consequently it is rather pointless to differentiate between normal skin care and anti-aging skin care. Anti-aging skin care is equivalent to a skin care concept with long term effects and should not be influenced by short-lived active agents.

Dr. Hans Lautenschläger