YOUTH EYE™ COMPLEX

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YOUTH EYE™ COMPLEX improves existing age-related changes and decreases ongoing aging in the periorbital area (also see YOUTH EYE™ COMPLEX Clinical Study).

THE PERIORBITAL AREA IN THE AGING FACE

The area surrounding the eye is termed the periorbital area and is the first visible area on the body to exhibit the changes of aging. Findings associated with periorbital aging include dark under-eye circles, "bagging" or loss of elasticity, shadowing in the tear trough (area beneath the inner eye where tears first track), "crow's feet" or wrinkling, and loss of opacity (increased translucency) of the under-eye skin. Skin here is thinner than other areas of the body, vessels are nearer the surface, exposure to the sun's rays is high and biologic protective mechanisms are less robust. Thus, the periorbital area mandates earlier and more aggressive protection to avoid early aging.

There are some differences among ethnic groups related to aging in the periorbital area. Blacks tend to report periorbital aging sooner in life than other groups. This relates to drooping in the lateral canthal area. The lateral canthal area is the cartilaginous support provided by the inner eyelid rims nearest the temple areas of the face. When structural integrity of the glycosaminoglycans forming cartilage and cartilage itself is lost, the lateral canthal angle decreases causing a "drooping" appearance of the outer eye and giving a more aged appearance. Asians tend to hyperpigment prior to wrinkling as aging occurs. Thus, individuals of Asian descent will be concerned with increasing pigmentation first and with wrinkling in their later years compared to Caucasians. This relates to the greater number of sebaceous glands in Asians, thicker skin in general and more numerous melanocytes which are the pigment-producing cells. Although the manifestations of periorbital aging seem to differ somewhat among genetic groups, the common denominator in all groups relates to free radical damage and inflammatory mediators as well as the individual's response to these stressors.

MECHANISMS OF PERIORBITAL AGING AND THEIR MODULATION

Free radical damage or "oxidative stress" is a primary cause of tissue damage and aging in the periorbital area as well as elsewhere. Antioxidants are extremely helpful in addressing this primary cause of aging. These antioxidants must be of sufficiently high quality to be functional and must be formulated in a manner that favors their deliverability to the site of action. Solar exposure bombards the skin with photons, small energy packets from the sun that are themselves free radicals. Sunscreen with deflection (i.e. "blocking") and/or absorption of photonic energy is essential in the perioribital area as elsewhere. Inflammation results from free radical damage and begets more damage and inflammatory change, thus perpetuating these processes. Wrinkling results from repeated low level inflammatory events and is actually scarring directly related to the body's attempt to heal these repeated occurrences.

Wrinkles can be improved by injecting Botulinum toxin (Botox), which is used to mediate neural transmission and muscle contraction, lessening the appearance of wrinkles. Other peptides have also been shown to decrease muscle contraction and decrease the appearance of wrinkles. If applied topically, these must be of a small enough molecular weight to penetrate the skin and exhibit activity on the myoneural (muscle-nerve) complex. Topical peptides used in cosmetic products affect the smaller, more superficial muscles rather than the deeper, subdermal muscles of expression targeted by Botulinum toxin.

The decreased thickness of the under-eye skin compared to other areas also contributes to more rapid aging here.

Since blood vessels are nearer the surface, the bluish coloration of the capillary venules and their reduced hemoglobin are more noticeable. Thickening of the skin under the eye would make the skin less translucent and would cause the underlying vessels to be less obvious. Collagen deposition can be encouraged by growth factors which encourage growth and differentiation of healthy skin cells. Thickening of the periorbital skin also makes capillary hemoglobin leakage less likely. Hemoglobin that leaks outside these small vessels is oxidized by sunlight and turns a darker color.

Sagging of tissue results in more prominent shadowing below the tear duct. Loss of elasticity may be addressed by encouraging collagen deposition, decreasing wrinkling and limiting oxidative damage.

Dark under-eye circles are termed periorbital hyperchromia. Some ethnic groups are more subject to this occurrence. Photodamage and inflammation produce a more intense hyperpigmentation in those with more numerous melanocytes in their skin (those having darker skin). Any factors increasing vascular congestion in the under-eye area will increase swelling and eventually produce dark circles. Allergists and pediatricians have long known their allergic patients will manifest dark infraorbital circles. The inflammation and vascular congestion associated with the allergic response can be so severe that the infraorbital areas actually appear bruised. These inflammatory responses are mediated by cytokines such as Prostaglandin E2 (PGE2) and Leukotriene B4 (LTB4), as well as other inflammatory mediators such as histamine and Interleukin-6 (IL-6). The body's own intrinsic antioxidant system tries to fight these processes with antioxidants such as superoxide dismutase (SOD). It has been clearly shown in research studies that as intrinsic (produced within the body) or supplied antioxidant levels increase, levels of inflammatory mediators decrease. Therefore, decreasing inflammation and increasing antioxidant protection preserves the vascular endothelium and decreases these dark circles by limiting vascular congestion.

When vitamins and pro-vitamins (vitamin precursors) were topically applied for 8 weeks in a group of Asian women, dark circles decreased noticeably. There was an additional associated decrease in wrinkles in the same group. In other studies, centella asiatica and its active ingredients asiaticoside, asiatic acid and madecassic acid caused a significant decrease in wrinkling. Centella asiatica is a potent wound-healer and these effects may be antioxidant, anti-inflammatory, DNA-modulating and/or other.

Apoptosis is a process of programmed cell death in which damaged cells are eliminated. Encouraging the death of damaged cells through apoptosis acts on important checkpoints in the synthesis of new cells. This can either delay cellular development until DNA repair occurs and the cell is made functional again or can facilitate the death of a cell too damaged to be repaired. Apoptosis is important during any type of cellular damage but particularly so in photoaging. When sunburn from UVB damage occurs, the damaged cells, termed "sunburn cells", are actually cells experiencing apoptotic death. Although the apoptotic process incorporates biologic stopgap measures to limit inflammation accompanying this type of cell death, some inflammation still occurs with apoptosis – thus leading to some increase in free radical damage.

YOUTH EYE™ COMPLEX IMPROVES THESE PERIORBITAL AGING PROCESSES

YOUTH EYE™ COMPLEX contains several potent ingredients, many of which act in concert with each other to affect aging in the periorbital area. As previously discussed, this area of the face ages first and most severely in all ethnic groups, although the exact aging appearance may vary somewhat according to ethnicity.

Peptide technology—also known as protein or amino acid technology, or sometimes epigenetics—is one of the fastest-growing areas of biochemistry. The short-chain peptides in YOUTH EYE™ COMPLEX are beneficial in a number of ways. They decrease wrinkling by direct action on the myoneural terminal and encourage growth and development of thicker

infraorbital skin that is less translucent, firmer, and causes deeper dark circles to be less visible. Other proteins and peptide chains provide the "building blocks" for synthesis of healthy collagen. This also thickens skin and decreases wrinkles. The glycosaminoglycans (GAGs) within the product are plant-derived. Soy and wheat proteins are designed to locate, adhere to and repair damaged sites. Copper tripeptide-1 signals fibroblasts to commence collagen synthesis and repair, incorporating these amino acid building blocks to thicken periorbital skin and improve collagen architecture.

Vitamins and pro-vitamins in the formula are encapsulated within liposomes. This provides a delivery system that carries the active ingredients to the desired site where they support healthy metabolism.

The visibility of wrinkles is immediately improved as the wrinkle is smoothed. YOUTH EYE™ COMPLEX is also intensely hydrating which instantly decreases the appearance of wrinkles.

Although powerful, this "intelligent" formula is gentle and designed to repair and rebuild skin in an orderly way. Individual ingredients are able to recognize where they should go for optimum benefit and are packaged within delivery systems to reach their site of action. The damaged portions of cells transmit specific signals which the formula ingredients are able to recognize. The particular ingredients are then able to bind to the damaged area and begin repair.

The product lessens inflammation which also improves the aging periorbital area. Anti-irritant and anti-inflammatory effects protect the oil-soluble and water-soluble parts of the skin cell at all times and decrease free radical damage.

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YOUTH EYE™ COMPLEX STUDY

Baumann/Miami Cosmetic Research Group

"Improvements in Periorbital Area by Ethnic Group"

STUDY OBJECTIVE— Improvements in the periorbital area were evaluated by ethnic groups for subjects using Youth Eye Complex.

STUDY DESIGN—Youth Eye Complex was applied twice daily on the periorbital area by 89 subjects for 30 days. Their responses to Youth Eye Complex were evaluated by improvements in the following parameters: periorbital wrinkling, fine lines, dryness, roughness, hydration, and puffiness. Subject responses were further analyzed by their ethnic groups.

SIGNIFICANCE OF STUDY—The periorbital area often exhibits earlier changes associated with aging than other areas of the face and body. This relates to a number of physiologic differences unique to this facial region. Periorbital skin is often thinner and more delicate. It often is more sensitive to topical products as well as environmental insults. Its superficial vasculature makes discoloration more evident . Both photoaging and intrinsic free radical damage are visible at earlier ages in this area. The eyes and surrounding skin are one of the first facial areas evaluated during interpersonal encounters. For these reasons, the periorbital area is especially important in the aging and photodamaged individual.

There are also unique skin differences across ethnic groups. For example, Asian skin tends to be thicker than Caucasian skin. Asian skin tends to pigment earlier in life due to free radical damage and other stressors. Caucasian skin will wrinkle before it will hyperpigment in response to damage. African-Americans tend to report earlier drooping in the lateral canthal area. There may be unique concerns by ethnic group as to which parameters are most important in the periorbital area at various ages. Although the expressions of periorbital aging differ somewhat among ethnic groups, the common denominator in all groups relates to free radical damage, pro-inflammatory mediators, and the individual's response to these stressors.

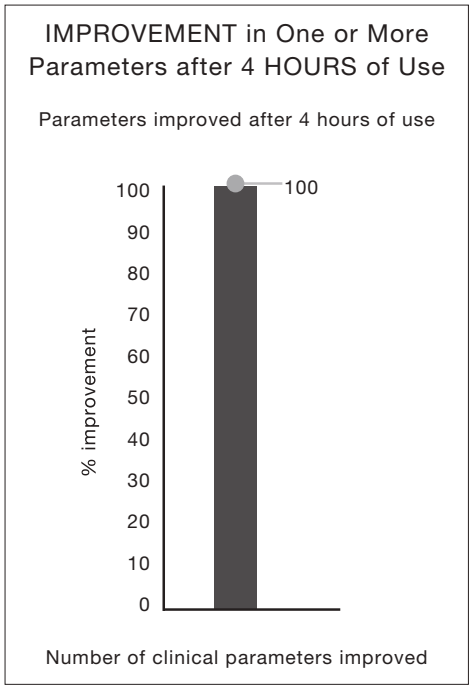
RESULTS AND CONCLUSIONS

Response to Youth Eye Complex in the Entire Group of Subjects—These results are detailed in the data tables that follow the summary below.

For the entire group of subjects, the improvements in periorbital wrinkling and fine lines began after only 4 hours of use.

Wrinkles and fine lines steadily improved through each time period examined. At 30 days:

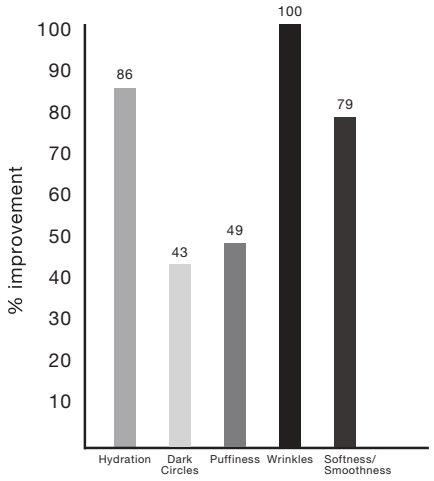
- 62% of subjects noted a definite or strong improvement in wrinkles and fine lines; 79% of subjects felt softer smoother periorbital areas; 73% noted significant improvement in at least one noticeable periorbital wrinkle.
- Of this group, 62% of them improved in many or all wrinkles.
- Hydration in 86% of all subjects improved significantly.
- Under-eye dark circles improved in 43% of subjects.
- Puffiness improved in 49% of all subjects.



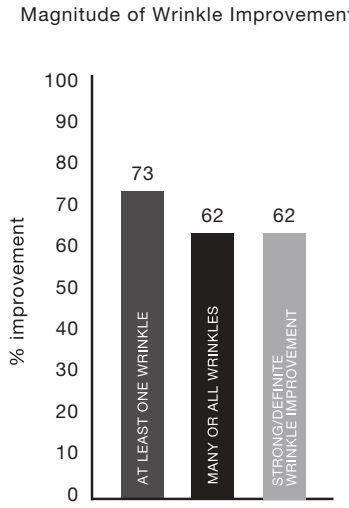
IMPROVEMENT in WRINKLES through Every Time Period in ALL GROUPS

4 hours	Yes
1 day	Yes
7 days	Yes
30 days	Yes

Parameters improved in 30 days in ALL GROUPS



Magnitude of Wrinkle Improvement



Compatability of YOUTH EYE™ COMPLEX with User's Skin

(number of subjects reporting)

Greasiness	0%
Stickiness	0%
Heaviness	0%

Ethnic Responses- Subjects were divided into Caucasion, African-American, Hispanic, or Asian ethnic groups. Every ethnic group noted improvements in the periorbital area with use of Youth Eye Complex. This data is explained in the paragraphs below and the tables following. To score positive in this segment the subjects strongly or moderately agreed their use of the product improved this parameter. Mild or slight improvements were not scored.

Hispanic Group- 100% of Hispanics reported the product resulted in smoother, softer periorbital skin; 88% noted their wrinkles were smoother; 75% said their skin was firmer. 100% reported improved hydration with use of Youth Eye Complex.

Asian Group- 85% of Asians noted their periorbital skin was better hydrated; 71% of Asians thought their skin was smoother; 57% experienced decreased wrinkles and fine lines. The higher percentages noted in hydration in the Asian group at least partly reflects the earlier tendency to dryness in this group.

African-American Group- 67% of African-Americans noted more youthful periorbital skin with use of Youth Eye Complex; 88% of African-Americans saw improved hydration; 55% experienced decreased fine lines and wrinkles. Similar to Asians, these responses are consistent with the tendency of African-American skin to wrinkle later in life but experience impaired hydration and increasing dryness at earlier ages.

Caucasion Group- 77% of Caucasions experienced smoother, softer periorbital skin; 79% saw improved fine lines and wrinkles.

Ethnic Groups with improvement in at least one Parameter

Asian	Yes
Hispanic	Yes
African-American	Yes
Caucasion	Yes

Specifics of Improved Parameters by Ethnic Groups (percent improved)

	Smoothness/ Softness	Wrinkling	Firmness	Hydration
Asian	71%	57%		85%
Hispanic	100%	88%		100%
African-American		55%	75%	88%
Caucasion	77%	79%		

BEFORE AND AFTER PHOTOS USING YOUTH EYE COMPLEX

This is a single subject at 5 different times during the study period.

Time periods photographed were:

TIME ZERO I 4 HOURS I 2 DAYS I 7 DAYS I 30 DAY

TIME ZERO

4 HOURS

2 DAYS

7 DAYS

30 DAYS

INNOVATIVE SKINCARE®

YOUTH EYE COMPLEX™

5.0 pH +/- 0.5 15ml £82.00

SMOOTHS I HYDRATES I REGENERATIVE

YOUTH EYE COMPLEX™ is a breakthrough formula that utilises "intelligent proteins" to combat the signs of aging at a cellular level. These proteins are clinically proven to target damaged sites and help regenerate skin. Dermal structure is strengthened and the formation of collagen and elastin is encouraged. As a result, skin is stronger and better able to resist damage. Powerful peptides, key growth factors, and potent antioxidants rapidly reduce wrinkles, puffiness, and dark under-eye circles to keep skin moist, smooth and protected all day long.

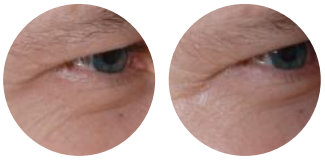
BENEFITS

- Rapidly smoothes & hydrates
- Reduces puffiness, dark circles
- Strengthens & rebuilds damaged dermal structures
- Reduces appearance of fine lines ,wrinkles & crows feet
- Provides powerful antioxidant protection

CLINICAL TEST RESULTS

IMMEDIATE

Immediate smoothing and plumping of fine lines and wrinkles in the eye area occurs. Skin appears less puffy, less distended, and more hydrated.



Before After 3 hours

LONG-TERM

Increased and continued collagen and elastin synthesis rebuild and strengthen the dermal structure, resulting in continued reduction of more pronounced wrinkles. Dark under-eye circles become less pronounced by inhibiting melanin synthesis and strengthening delicate skin.

Before After 12 days

KEY INGREDIENTS	INGREDIENT BENEFITS
SODIUM HYALURONATE (hyaluronic acid-botanically derived) 15.0%	Humectant, demonstrates hydrophilic properties – attracts and binds up to 1800 times its molecular weight in water
ACETYL OCTAPEPTIDE-3 5.0%	Reduces expression wrinkles by neuromuscular mediation.
PSEUDOALTEROMONAS FERMENT EXTRACT 3.0%	Encourages collagen synthesis and protects collagen via MMP effects; strengthens dermis for less puffiness.
HYALURONIC ACID MICROSPHERES (botanically derived) 3.0%	Pure hyaluronic that has been cross-linked, dehydrated and encapsulated into microspheres. Combined with water in the epidermis, the microspheres act like tiny sponges, absorbing and expanding, filling in wrinkles.
HYDROLYZED WHEAT PROTEIN AND HYDROLYZED SOY PROTEIN 3.0%	Boosts collagen synthesis, standardizes fibril diameter and spacing, inhibits enzymatic destruction.
COPPER TRIPEPTIDE HGF GROWTH FACTOR (proprietary)	Small peptide chain that encourages and directs cell maturation and development. Promotes healing of the pathological effects of aging, encouraging healthy dermal restructuring and healing of wrinkles and stretch marks.
GLYCOSAMINOGLYCANS 2.0%	Potent antioxidant that stimulates collagen synthesis and improves micro circulation, capillary flow and vascular tone. Promotes wound healing and the reduction of scar tissue.
RETINYL PALMITATE (vitamin A), TOCOPHERYL ACETATE (vitamin E), ASCORBYL PALMITATE (vitamin C), PANTOTHENIC ACID (vitamin B5), PHYTONADIONE (vitamin K) 0.10%	Pro-vitamins necessary for healthy skin metabolic function; helps lessen dark under-eye circles

Stockist Enquiries: isclinical.co.uk. For further information, images and samples please contact
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