# NECKPERFECT™ COMPLEX CLINICAL STUDY

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**Study performed by BioScreen Testing Services, Inc.**

## STUDY OBJECTIVE

The progressive decline in appearance of the neck area seen with aging is especially difficult to correct without invasive procedures. Many individuals wish to achieve improvements in this area but are reluctant to undergo surgical correction. A product that non-invasively improved the configuration of the neck would be very desirable for those wishing to improve their appearance overall and avoid or delay invasive treatments of the aging neck. This study examined the ability of iS CLINICAL® NECKPERFECT COMPLEX to improve the appearance of the neck area in subjects with an aged neck configuration.

## STUDY DESIGN

The effectiveness of NECKPERFECT COMPLEX to improve the appearance of the aging neck was evaluated both objectively and subjectively throughout a three month time period. Female subjects in overall good health between the ages of 35 and 65 from different ethnic groups participated in the study. NECKPERFECT COMPLEX was applied twice daily.

Parameters were evaluated with scientific instruments, by clinical grading, and by subject evaluations. Participants were examined at the beginning of the study, at week 2, week 4, and week 12. Categories of assessment included:

- Skin hydration by Corneometer
- Skin firmness by Cutometer
- Skin elasticity by Cutometer
- Skin texture/smoothness by VisioScan
- Digital photographs

Subjects were instructed to apply NECKPERFECT COMPLEX to the neck area twice daily for the entire three month study period. For standardization, a neutral cleanser and broad spectrum sunscreen were also supplied.

## SIGNIFICANCE OF STUDY

The neck is a particularly problematic area as changes of aging develop. The deteriorating configuration of this area that accompanies aging usually causes emotional distress yet is difficult to improve without invasive modalities. Changes in the neck that accompany aging include sagging, longitudinal banding, crepiness, loss of chin definition, deterioration of skin texture, and superficial and deep wrinkling. Although individuals would like to lessen these changes, many are reluctant to engage in surgical procedures for a variety of reasons including; perceived risks, discomfort, expense, and/or personal preference.

Cosmeceuticals successfully providing changes in the neck area are much sought after by consumers and yet are very difficult to find since this area of the body is difficult to improve. This leads to frustration with both the cost of purchasing such products as well as the time involved with carefully selecting them. NECKPERFECT COMPLEX dramatically improves the appearance of the aging neck as shown in these objective study results.

## RESULTS AND CONCLUSIONS

Results indicated statistically significant improvements in measurement parameters that included objective instrument measurements, clinical grading, and subject assessments. Subjects own assessments of the effectiveness of NECKPERFECT COMPLEX in improving their neck areas were very high and indicated a desire to continue using the product. Results of the evaluations obtained by medical instrument, clinical grading, and subject evaluations demonstrated –

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- Increased skin hydration
- Improved skin firmness
- Improved skin elasticity
- Improved skin texture and smoothness
- Improved appearance of fine lines and wrinkles
- Improved overall appearance of neck profile and configuration

At study conclusion, all of the above parameters were significantly improved. Mathematical representations of several of these improvements are provided below.

SKIN FIRMNESS AND ELASTICITY BY CUTOMETER – The cutometer measures elastic and firmness properties of skin that are biomechanically related to complex interactions in the content of elastin fibers, collagen fibers, and glycosaminoglycan ground substances. The Cutometer MPA 580 manufactured by Courage Khazaka in Germany was used to measure the resistance against suction deformation of intact skin in living subjects.

| SKIN FIRMNESS % OF SUBJECTS IMPROVED | | |
|---|---|---|
| 2 weeks | 4 weeks | 12 weeks |
| 77% | 77% | 77% |

*Firmness improved immediately and strongly and improvements were maintained*

| SKIN ELASTICITY % OF SUBJECTS IMPROVED | | |
|---|---|---|
| 2 weeks | 4 weeks | 12 weeks |
| 63% | 70% | 83% |

| ELASTICITY MEASUREMENT VALUES | |
|---|---|
| 2 weeks | 12 weeks |
| 7.96 | 14.04 |

*Elasticity improved 76% from week 2 to week 12*

One of the most distressing events of neck aging is loss of neck firmness and elasticity. These qualities are also the most difficult to correct by non-invasive means. An extremely high percentage of subjects improved immediately with use of NECKPERFECT™ COMPLEX. Furthermore, because these objectively measured improvements were maintained and even increased throughout the study period, they are expected to be maintained even farther into the future.

SKIN HYDRATION BY CORNEOMETER – The corneometer measures hydration of human skin based on actual water content of intact living skin. The Corneometer CM 825 manufactured by Courage Khazaka in Germany was used to measure hydration with capacitance changes indicating tissue moisture content.

| SKIN HYDRATION % OF SUBJECTS IMPROVED | | |
|---|---|---|
| 2 weeks | 4 weeks | 12 weeks |
| 97% | 100% | 100% |

Skin hydration improved immediately with NECKPERFECT COMPLEX. These extremely high improvements held and even increased further by study end. A volumized epidermis is critical not only for healthy skin but also for preserving comprehensive youthful architecture of the neck area.

SKIN TEXTURE BY VISIOSCAN – Skin was optically monitored with the VisioScan VC98 consisting of a high resolution chip, an objective, and a UVA light source. Illumination over an area of 6mm x 8mm was provided by halogenide lighting. The stratum corneum absent reflections from deeper skin layers is monitored and computer analysis performed to obtain a smoothness measure.

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| SKIN TEXTURE % OF SUBJECTS IMPROVED | | |
|---|---|---|
| 2 weeks | 4 weeks | 12 weeks |
| 17% | 47% | 73% |

| SKIN SMOOTHNESS MEASUREMENT VALUES | |
|---|---|
| 2 weeks | 12 weeks |
| 14.35 | 25.02 |

*Skin smoothness improved 74%
from week 2 to week 12*

SUBJECT EVALUATIONS OF NECKPERFECT™ COMPLEX –
Subjects were asked to assess NECKPERFECT COMPLEX
in terms of a number of parameters related to skin
improvements they experienced while using this
product. Their evaluations are quantified in the
following data tables.

| EVALUATION PARAMETER | 2 Weeks | 12 Weeks |
|---|---|---|
| Improved neck sagging | 72% | 80% |
| Skin looks or feels firmer | 85% | 85% |
| Improved skin tone and texture | 80% | 87% |
| Satisfied with overall results from product | 82% | 85% |

ADVERSE EVENTS – There were no product-related adverse
events during the course of the study. NECKPERFECT
COMPLEX was tolerated very well by all subjects.

BEFORE AND AFTER PHOTOS – Digital photos were
taken during the progress of the study. The photos
illustrated improvements for a wide variety of subjects
of differing ages, severity of aging changes, beginning
neck configuration, and body weight.

### Improvement in wrinkling and crepiness



Before | After 12 weeks

### Improvement in sagging, deep wrinkling and crepiness



Before | After 12 weeks

### Improvement in skin texture, sagging and wrinkling



Before | After 12 weeks

CONCLUSIONS – Aging brings changes in neck
architecture that are very difficult to improve with topical
products and that are also emotionally distressing for
the individual experiencing them. Frustration increases
when products fail to meet expectations.

Changes seen with aging in the neck include sagging, longitudinal banding, crepiness, loss of chin definition, deterioration of skin texture, and superficial and deep wrinkling. This study shows that use of NECKPERFECT™ COMPLEX can help correct the appearance of the aging neck area.

This study of actual subjects using NECKPERFECT COMPLEX for three months proved that carefully designed product with superior ingredients can lessen the visual changes seen with aging of the neck. This study was particularly significant because the positive results were so noticeable. Considering the objectively measured dramatic improvements, it is not surprising that the subjects were impressed with their personal results and responded with extremely positive opinions about NECKPERFECT COMPLEX.

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