

## TO THE READER:

These studies were performed by a nationally known, independent testing laboratory. These studies were funded by Facial Concepts, Inc.

**NOTE:** The second study confirmed the conclusions of the first study, specifically that mechanically aided resistance exercise increases facial muscle strength and produces a corresponding increase in facial firmness. The second study also demonstrated that changing the Facial-Flex® elastic bands weekly significantly accelerated and increased the results achieved. The elastics fatigue with use. Changing them maintained a more consistent level of resistance during exercise. In the first study, the elastic bands were not changed until they broke.

Studies	Firmness	Strength	Skin Blood Flow	Period
Study 1	+22.1%	+75%	+10%	15 weeks*
Study 2	+32.5%	+250%**	*	8 weeks

\*The first study was extended 60 days beyond the initial 90 day test period. Skin blood flow was not measured in the second study.

\*\*At the end of the second study, participants were able to perform 2-1/2 times the number of Facial-Flex repetitions than they were able to perform at the beginning of the study.

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# FACIAL-FLEX

Clinical Study Abstracts

Presented by invitation at the 1992 Annual Meeting of  
the Society for Investigative  
Dermatology, Baltimore, MD USA.

Clinical Research, American Federation for Clinical  
Research, Volume 40 Number 2,  
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## Changes in facial skin biomechanics due to a mechanically aided resistance exercise program

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**Abstract:** Facial appearance is particularly influenced by the underlying muscles of facial expression since they are directly attached to the skin. Consequently, age-associated changes in facial wrinkles and sags are not only due to loss of dermal elasticity, but also might reflect weakened facial muscles. In the present study, 15 healthy older females with some signs of facial laxity followed a mechanically aided facial exercise program based on progressive resistance for 3 months. Baseline, mid-point and end-point measurements of the biomechanical properties of the lower cheek were obtained with Dia-Stron Dermal Torque Meter. This type of rotational extensiometer measures both extensibility and recoil by electronically sensing the twisting movement of a motorized disc as it is turned on and off. Although the mid-point session values were not significantly different from the baseline values, by the end of the 3 month treatment period, highly significant differences were achieved. We found that extensibility had decreased primarily due to a reduction in “creep” while at the same time recoil was enhanced. Both of these biomechanical changes were quite consistent with the primary perception of the panelists that their facial skin had become firmer and more elastic. The overall pattern of change also corresponded nicely to changes in the condition of their facial muscles as measured by the time they could hold a high resistance load.

*Presented by invitation at the 1992 Annual Meeting of the Society for Investigative Dermatology, Baltimore, MD USA*

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*This study was funded by Facial Concepts, Inc.*

## A mechanically aided resistance exercise program for sagging facial muscles

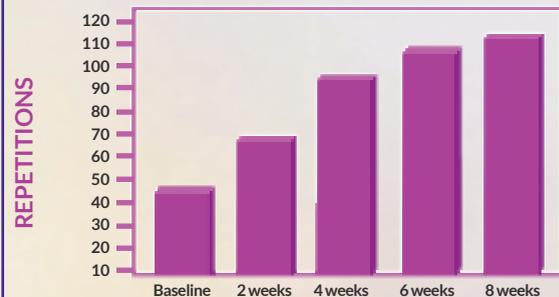
Gary L. Grove, PhD, Stan Rimdzius, BS  
Charles R. Zerweck, PhD

**Abstract:** Facial appearance is particularly influenced by the underlying muscles of facial expression because they are directly attached to the skin. Consequently, age-associated changes in facial wrinkles and sags are not only due to loss of dermal elasticity, but also might reflect weakened facial muscles. In the present study, eight healthy, older females with some signs of facial laxity followed a mechanically aided facial exercise program based on progressive resistance for eight weeks. Muscle strength and skin tone were measured at baseline and during the treatment period. We found that biomechanical extensibility had decreased which was quite consistent with the primary perception of the panelists that their facial skin had become firmer and more elastic. The overall pattern of change also corresponded nicely to changes in the condition of their facial muscles as measured by the time they could hold a high resistance load of the number of repetitions within a fixed time frame.

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**Linebaugh Test**  
Average Number of Repetitions



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