



PREMIUM INGREDIENT SPECIALISTS



CERAMIDE-PCD[®]

THE NUMBER **1** INGREDIENT FOR HEALTHY, HYDRATED, YOUTHFUL SKIN[©]

The Essentiality of Ceramides in an Anti-Aging Skin Care Regimen

Numerous studies have reported the positive effects of supplemental and topical ceramides from rice on the skin barrier, including the moisturizing effect, reduction in roughness (i.e., wrinkles) growth of fibroblasts and anti-inflammatory effects among other benefits. In every case positive effects were shown with supplemental rice ceramides improving the health of the skin barrier and the benefits that brings.

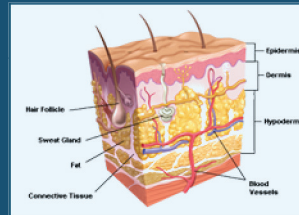
Skin Health 101 – Understanding your Skin

The skin is the largest organ of the body, with a total area of about 20 square feet. The skin protects us from microbes and the elements, helps regulate body temperature, and permits the sensations of touch, heat, and cold.

Skin has three layers:

- The epidermis, the outermost layer of skin, provides a waterproof barrier and creates our skin tone.
- The dermis, beneath the epidermis, contains tough connective tissue, hair follicles, and sweat glands.
- The deeper subcutaneous tissue (hypodermis) is made of fat and connective tissue.

Anatomy of your Skin



What we understand now is that there are a number of changes that occur in our skin as we age. The changes that occur with aging are the result of our overall nutritional status and a lifetime of exposure to our environment including the sun, UV light, wind, toxins and even topical chemicals. While most of us focus on the superficial appearance of our skin, when we look deeper into the structure of our skin, we find that the beauty or our largest organ is actually more than “skin deep”.

At the core of healthy skin are structural components that define the function of our skin. With aging, poor nutrition and environmental exposure, key structural components of our skin can become compromised impacting the health and appearance of our skin.

Interestingly, targeted nutritional supplementation can supply one of the key building blocks of healthy and youthful skin.

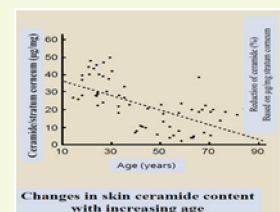
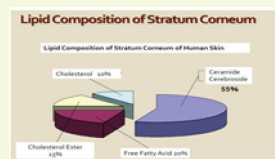
Structural Components of your Skin

Ceramide is the main component of the stratum corneum of the epidermis layer of human skin. Together with cholesterol and saturated fatty acids, ceramide creates a water-impermeable, protective organ to prevent excessive water loss due to evaporation as well as a barrier against the entry of microorganisms. With aging there is a decline in ceramide and cholesterol in the stratum corneum of humans.

The stratum corneum is the outer most layer of your skin. Its role is predominately as a barrier to protect you from external environmental insults and prevent excessive water loss across your skin. The cells of the stratum corneum, the corneocytes, and the lipids between them accomplish these functions. Disruption to this barrier, either through trauma or in certain dermatologic conditions such as atopic dermatitis or eczema, results in its function being compromised. The resulting decreased elasticity, increased susceptibility to infection and increased water loss can be problematic and lead to diminished skin function and appearance.

At the very basis of this recommendation are the findings demonstrated by Imokawa et al that the content of our skin ceramides decline with age.

If you knew that you could reverse or even prevent the loss of ceramides that occurs as a natural part of aging you would take action – right?!



Rice Ceramides - Promoting Skin Health in (3) Important Ways

1. Moisturizing

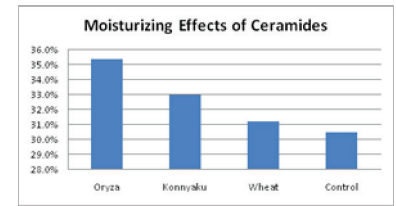
Did you know that water was actually the most important nutrient in keeping your skin healthy and youthful?

Dry skin arises from distress or damage to the skin's lipid barrier—the permeable outer layer of fatty substances that shields skin cells from harmful elements while allowing in moisture and nutrients. Combined with a decrease in sebum production, this structural deterioration exposes skin cells to external threats and contributes to what is known as trans-epidermal water loss (TEWL) as cells become dehydrated and the skin visibly starts to suffer. While a moisturizer may offer temporary relief, until the source of the cell disruption is isolated and corrected, dry skin will continue to be a problem. Studies and findings suggest the ceramides are a key factor in moisture maintenance and barrier function of the stratum corneum, both of which are considered to be a factor in wrinkle formation.

The Moisturizing Effects of Oryza Ceramide® (in vitro) Versus Wheat and Konjac

The moisturizing effect of ceramide was established by several clinical studies. In these reports, the moisturizing effects of ORYZA CERAMIDE® were compared with other commercially available ceramides. ORYZA CERAMIDE®-PCD demonstrated superior moisturizing effect with moisturizing ratio of 35%.

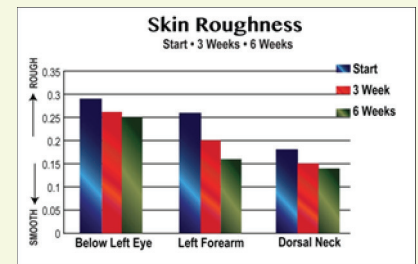
From the chart above, it is clear that ORYZA CERAMIDE offers superior moisturizing effects versus other ceramide sources. With more moisture and a solid skin barrier, other benefits occur including fewer wrinkles and skin roughness, more resistance to inflammation and improved overall health due to a stronger barrier against the outside world.



2. Reduction in Roughness and Wrinkles

Wrinkles form in both the epidermis and the dermis -- and their appearance varies depending on the layer in which they form. As you age, your epidermis loses its ability to hold on to moisture, which leads to fine lines in the skin's surface. Deep in the skin, collagen and elastin break down; this weakens the skin's support structure. At the same time, fat starts to disappear from the skin's deepest layers, which leads to sagging. Together, these effects create deeper wrinkles, like frown lines and furrows.

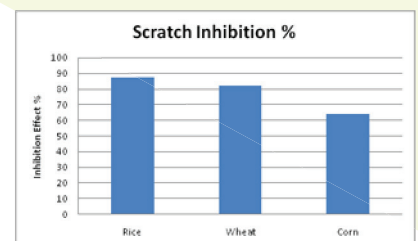
In a double blind, placebo-controlled study of six weeks duration, 40 mg of daily intake of rice ceramides provide by Oryza was tested for skin moisture content, smoothness, roughness, and scaliness (degree of dryness of the stratum corneum). Both dermatological and three dimensional microscopic skin surface analysis were performed. The results of this study in the improvement of roughness/wrinkles are clearly demonstrated for the ORYZA CERAMIDES.



3. Effects on Anti-inflammatory Activities

Besides their moisturizing and barrier effect, ceramides also exhibit anti-allergic and anti-inflammatory activities. Oral administration of rice ceramides decreased scratching action in mice. Inflammation as a part of an allergic response, aging or chronic dehydration of the skin can all negatively impact skin health.

The ability of ORYZA CERAMIDES to limit the outward expression of inflammation through scratch inhibition, demonstrates the promotion of a healthy inflammatory response. Of the plant based ceramides tested in this study, ORYZA CERAMIDES inhibited mass cell degranulation with the greatest potency.



ORYZA CERAMIDES: Your Total Solution for Skin Health

As our skin ages, research has shown that the content of ceramides in our skin decreases. This decrease in ceramide content leads to a number of changes that impact the overall health and appearance of our skin, including reduced moisture levels, increased roughness and inflammation.

ORYZA CERAMIDES offer proven benefits in counteracting the impact of aging on our skin. Supplementing daily with only 40 mg of ORYZA CERAMIDES improves ceramide content, increases moisture levels, reduces roughness and promotes a healthy inflammatory response.

ORYZA CERAMIDES have been shown to be more effective than other plant ceramides and offer superior nutritional support for the concern of aging skin.

ORYZA CERAMIDES
the number one ingredient for healthy,
hydrated youthful skin!



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The AGG Portfolio Features Ceramide PCD and Other Premium Nutraceutical Ingredients