



## Vital Repair+® Clinical Results

Enfuselle Vital Repair+ exhibits significant antioxidant activity in cell cultures of human skin cells exposed to ultraviolet (UV) light.

### Title of study:

In-Vitro Study of the Effectiveness of a Unique Combination of Known Antioxidants, Vital Repair+, in Human Cell Cultures.

### Abstract:

This unique, patented (U.S. Patent No. 6,036,946) combination of ingredients composed of vitamins A, C, and E, along with panthenol, grapeseed extract, superoxide dismutase, and beta glucan, has been shown to protect against cellular death caused by exposure to the UV wavelengths of natural sunlight. The activity of this complex was found to be synergistic, that is, the activity of the complex was much greater than the sum of the activity of the individual components or the sum of the activity of those component materials.

The effectiveness of the Vital Repair+ complex has been demonstrated in human cell cultures in which free radicals were generated by exposing those cultures to ultraviolet (UV) light. When compared to cell cultures exposed to the same amount of UV light but not treated with Vital Repair+ or its component ingredients, the cell cultures treated with Vital Repair+ were found to exhibit a significantly lower number of cell deaths.

All cell culture measurements were made within 48 hours following exposure of the cell cultures to the UV light. These measurements were run in triplicate for each material tested and were conducted using techniques commonly employed in cell culture technology. When compared to cell cultures exposed to UV light in the absence of Vital Repair+, the following results were found:

**40%** reduction in the number of cell deaths.

Additionally, the reduction in the number of cell deaths in the cultures treated with Vital Repair+ was greater than any of the individual components of Vital Repair+ tested separately or the sum of their combined activities.

The reduction in cell death was accompanied by an increased number of living (viable) dividing skin cells in the cultures treated with Vital Repair+

### Conclusion:

The activity of this complex of antioxidants clearly demonstrates that Vital Repair+ is effective in blocking the complex cascade of free radical reactions brought about by exposure of skin to UV light.

### Reference:

Data on File, Shaklee Corporation.