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A New Way to Increase Glutathione Levels in the Body

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Blood glutathione levels have been identified as one of the most important indicators of overall health. Unfortunately, immune system stress can deplete antioxidants, including glutathione, in the body. Glutathione, the master antioxidant of the body, has a range of diverse metabolic functions including acting as a free radical scavenger, recycling and maintaining functional levels of Vitamin C and Vitamin E, and supporting cell repair, collagen synthesis, and wound healing.

The present methods used for elevating blood glutathione levels include oral supplementation of L-Glutathione, or the amino acid precursors of glutathione, as well as injection of glutathione. Each of these methods has severe drawbacks. For example, glutathione itself is destroyed by stomach acids making oral supplementation ineffective for significantly elevating blood levels.

Glutathione is a tripeptide composed of the amino acids cysteine, glycine, and glutamic acid. While oral supplementation of these amino

acids does often show elevated levels of blood glutathione, these results are unpredictable, and supplementation must be given at least 3 times per day to have any meaningful effects. Injection of glutathione does produce elevated levels of glutathione in the blood for a short time, however this method is undesirable on a daily basis as it is both expensive and inconvenient.

The LifeWave glutathione patch is a new method for increasing glutathione levels by stimulating acupuncture points on the body with a combination of pressure and infrared energy. The LifeWave glutathione patch is a non-transdermal patch that does not put any chemicals or drugs into the body. The LifeWave glutathione patch contains natural nontoxic crystals that absorb body heat to generate infrared signals that cause the body to produce more endemic glutathione. Clinical studies utilizing blood analyses indicate an average rise of more than triple the blood glutathione over a period of 24 hours.

Glutathione is a natural antioxidant, composed of

three linked amino acids, that is continuously produced by the cells of the body. Glutathione plays a vital role in maintaining a healthy immune system by helping the body fight off viruses and other types of infections. It also protects cells against toxic stress and it has a critical role in removing toxins from the body, including heavy metals such as mercury. This is important because exposure to many drugs, toxic metals, and toxic chemicals will reduce glutathione levels in the body. However, when glutathione levels are replenished, the body will use glutathione to remove these toxins.

LifeWave's glutathione skin patches have been designed to increase the body's production of glutathione by sending information signals, not chemicals, into the body. This is a completely new type of technology that has never been available before.

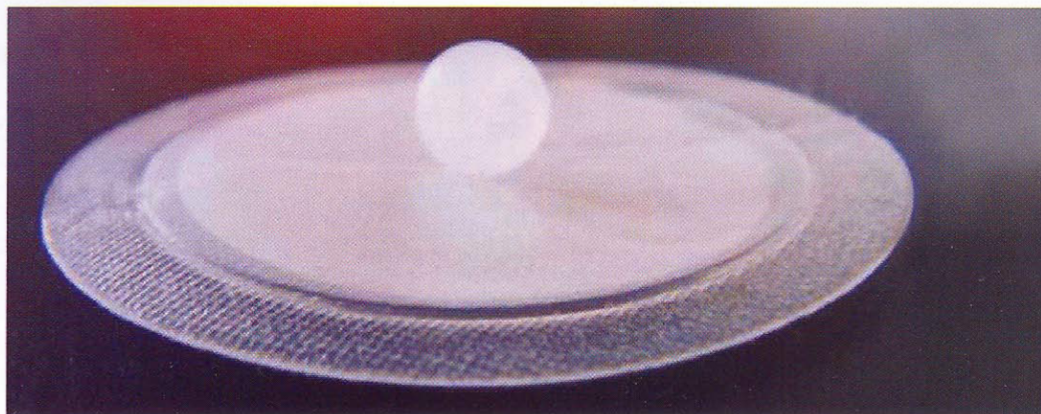
A controlled study was performed to independently examine the effectiveness of the LifeWave glutathione patch for significantly elevating blood levels of glutathione over a period of first 24 hours and then over several days. The experimental protocol utilized 15 test subjects. Objective data was obtained from both

**Glutathione
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blood and urine samples.

Baseline data was collected for all subjects and blood glutathione levels were measured and assessed in umole/L. Urine samples were also collected with the objective of determining if the LifeWave glutathione patch increased the release of heavy metals in the urine. After the baseline blood and



urine samples were collected, the LifeWave glutathione patch was applied approximately 2" below the subject's belly button. Each subject was required to return to the laboratory every 24 hours so that additional blood and urine samples could be collected. This was repeated 5 times. As blood and urine samples were collected they were immediately forwarded to an analytical laboratory

for testing. The results of this study regarding those subjects wearing the LifeWave glutathione patch are shown below.

Analysis of this data shows that all participants had increases in blood levels of glutathione during the period of this study as compared to the base line. In addition, the average increases in blood glutathione levels were three and four times the baseline levels.

1. Jones DP, Brown LA, Sternberg P. Variability in glutathione-dependent detoxification in vivo and its relevance to detoxification of chemical mixtures. *Toxicology*. 1995 Dec 28;105(2-3):267-74.
2. Lomaestro BM, Malone M. Glutathione in health and disease: pharmacotherapeutic issues. *Ann Pharmacother*. 1995 Dec;29(12):1263-73.
3. Martensson J, Meister A. Glutathione deficiency decreases tissue ascorbate levels in newborn rats: ascorbate spares glutathione and protects. *Proc Natl Acad Sci U S A*. 1991 Jun 1;88(11):4656-60.
4. Meister A. Glutathione-ascorbate acid antioxidant system in animals. *J Biol Chem*. 1994;269:9397-400.

Glutathione Increase Via Patch

Subject #	Base Line	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
1	1664	2256	2323	6481	7841	7158
2	1618	2430	2425	2500	8064	7953
3	1629	2370	2350	6226	6879	6499
4	1699	6693	2312	6948	8305	7532
5	1708	6868	6971	7096	7989	7601
6	2295	8619	8607	8403	10000	2270
7	2241	10000	2323	8645	8368	8546
8	2361	8033	10000	8692	10000	2238
9	2348	8042	2357	10000	2370	2265
10	2377	8150	8349	10000	2223	10000
11	2333	10000	10000	10000	10000	7992
12	1596	9553	8636	9276	2361	8100
13	1992	7787	10000	10000	9418	7645
14	2512	10000	10000	10000	10000	10000
15	1939	10000	10000	10000	8068	10000