

Uses for Magnesium Sulfate: An Assessment Post Clinical Observation

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Magnesium sulfate has been used for many years in the field of medicine primarily as a soak for musculoskeletal conditions to help reduce swelling and facilitate recovery. Many of the properties of MgSO₄ were unrecognized but people knew it worked from the endorsement of the general population. Several years ago Elements Personal Care, Inc; representing the PQ Corporation, the largest producer of medical grade Magnesium Sulfate in North America, came to Temple University to ask us how we could help their research group of clinicians to expand the indications for the use of Magnesium Sulfate. We evaluated and endorsed a product that researchers had already developed called Go Soak Yourself, the product had been generally accepted by the public and the medical community for the classic indications for the use of MgSO₄. We did a series of examinations of the product to determine if it had edema reducing ability when used with venous insufficiency and it proved to be true. MgSO₄ soaks used in conjunction with compression helped to improve both the rate of healing of venous leg ulcers and the reduction of limb edema obtained by compression.

We used the therapeutic crystals as an addition to a wound dressing foam we were testing and found that the osmotic potential created by adding MgSO₄ to the foam helped the dressing attract and hold drainage from the wound. The vasodilation from the MgSO₄ and the enhanced transudate production aided in maintaining a moist wound bed, encouraging granulation tissue formation and reducing wound bed bio-load or bio-film formation under the dressing. These properties were postulated to help if MgSO₄ was put in formulations that would benefit from increased vasodilation such as: skin creams, cosmetic products, topical joint rubs and sprays, wound healing dressings and ointments, etc. Additionally the addition of select botanicals could have the effect of reducing blood pressure, stress, and anxiety as a soak, and even aiding healing and controlling biofilms in wound care products. Further evaluation of these potential uses should be evaluated along with other possible properties such and antimicrobial, antifungal, and analgesic possibilities to expand the product line.

Elements Personal Care, Inc. and the PQ Corporation has been able to produce a number of sprays and creams using all natural additives for many of these purposes that we have used to aid in the care of our patients. These products are well received by all of the patients we distributed them to with many preferring them to other less natural formulations. The widespread acceptance of MgSO₄ by the general public makes the distribution of a MgSO₄-based formula easy.