NDC 84991-0316-01 (5-count unit box)
(One Month Supply = 2 unit boxes)

Cut patch to size that covers the wound or incision
Leave on up to 48 hours before cutting new piece to cover the wound or incision.

Active Ingredient: Allantoin 0.75%
Inactive Ingredients: Hyaluronic Acid, Taxifolin

OTC ALUROderm Scar Patch is a hydrocolloid patch containing Allantoin 0.75%, Hyaluronic Acid, and Taxifolin (Dihydroquercetin). This combination of ingredients is designed to promote wound healing, reduce scarring, and protect the skin. It is utilized for various mildly exuding wound types. The waterproof exterior shields the wound from bacteria and foreign debris. The hydrocolloid interior will not adhere to the wound for easy application and removal.

Rapid skin repair is the key to reducing infection, relieving pain, and improving quality of life. *Molecules* 2023, *28*(19), 6989; https://doi.org/10.3390/molecules28196989

Allantoin 0.75%
The development of Allantoin for wound healing was reported as a natural band-aid in the treatment of skin wounds, which favors the development of natural scab by the organism and enhances wound contraction. The hydrogel shows a homogeneous distribution of Allantoin with purely physical interactions since the FTIR analysis did not register new functional groups. In addition, the study of the contact shows a high hydrophilic character. The use of Allantoin-enriched hydrogel reduced healing time by one-third, compared to the control group, even with full recovery of natural hair in the wound area possible within 15 days of treatment. In addition, this hydrogel enriched with Allantoin also demonstrated that the delivery of the extract into the wound site improves the wound healing rate. – *Saucedo-Acuña RA, Meza-Valle KZ, Cuevas-González JC, Ordoñez-Casanova EG, Castellanos-García MI, Zaragoza-Contreras EA, Tamayo-Pérez GF. Characterization and In Vivo Assay of Allantoin-Enriched Pectin Hydrogel for the Treatment of Skin Wounds. Int J Mol Sci. 2023 Apr 17;24(8):7377. doi: 10.3390/ijms24087377. PMID: 37108540; PMCID: PMC10138972.*

Allantoin is a heterocyclic organic compound produced by animals, bacteria, and plants. Different Allantoin-containing preparations have been used clinically to study its therapeutic effects in wound healing. These studies have shown that chronic wounds are often arrested in an inflammatory state, preventing proliferation and remodeling of the epithelium. Allantoin has also been shown to have multiple properties/effects expected to facilitate transition of a wound from an inflammatory to a proliferative state, including antioxidant and anti-inflammatory properties, direct antimicrobial effects, and keratolytic activity facilitating wound healing. Allantoin has been shown to facilitate proliferation of healthy tissue by promoting cell proliferation and extracellular matrix synthesis. Allantoin may also have a role in tissue formation and differentiation, specifically in stimulating the development of granulation tissue and epithelialization. Allantoin may also reduce scar formation by preventing epidural fibrosis. – *Journal of the American Academy of Dermatology, Volume 76, Issue 6, AB40 10.1016/j.jaad.2017.04.176 (Elsevier)*

Allantoin 0.75% (cont'd)
Allantoin stimulates tissue repair and wound healing through cell proliferation. Allantoin has also had significant effect on cellular multiplication in degenerating and regenerating peripheral nerves. – *PubChem, NIH, NLM & DrugBank*

Ongoing studies suggest that Allantoin possesses moisturizing and keratolytic effects, as well as abilities to increase the water content of the extracellular matrix and enhance the desquamation of upper layers of dead skin cells, all of which are activities that can promote cell proliferation. – *PubChem, NIH, NLM & DrugBank*

Ongoing studies suggest that there may exist a histological wound healing profile induced by Allantoin that leads to the amelioration and fastening of the reestablishment of normal skin. This facilitation of wound healing is supported by observations that wounds inflicted to which Allantoin preparations were applied histologically demonstrated increased vasodilation, presence of inflammatory exudates, number of inflammatory cells, angiogenesis, fibroblast proliferation, and increased collagen deposition when compared to wounds that did not receive any Allantoin administration. – *PubChem, NIH, NLM & DrugBank*

Allantoin is commonly applied for the purpose of stimulating the healing of wounds, moisturizing the skin, and soothing irritated skin. – *PubChem, NIH, NLM & DrugBank.*

Hyaluronic Acid – Inactive Ingredient
Hyaluronic Acid has great anti-inflammatory capacities, the ability to create a stable environment for the healing of wounds, and it provides hydration, elasticity, and firmness to the skin. It can be used for prevention and treatment of post-surgical infections. – *Almudena Núñez Fernández, Alvaro Gómez-Carrión, Ignacio Zaragoza-García, Carlos Martínez Sebastián, Paola Sanz Wozniak, Arturo Gómez Lara, Alvaro Saura Sempere, Rubén Sánchez-Gómez, Management of post-surgical infection of onychocryptosis with application of hyaluronic acid versus antibacterial ointments, Heliyon, Volume 8, Issue 8, 2022* https://www.sciencedirect.com/science/article/pii/S2405844022013871

Hyaluronic Acid is found in the body, joints, ligaments, skin, and tendons. The most important characteristics of Hyaluronic Acid are its biodegradability, biocompatibility, and viscoelasticity. Hyaluronic Acid has healing, lubricating, anti-inflammatory, moisturizing, and tissue regenerating activities, among others. The acid collaborates with the skin to preserve elasticity, turgor, and moisture. – *(Zhu et al., 2020)*

In adults, Hyaluronic Acid plays a role in skin healing. The healing pattern is dominated by collagen deposition and scarring, which reduces the wound size and encourages epithelialization. Fetal extracellular matrix contains large concentrations of Hyaluronic Acid – *Devlin H. The effect of hyaluronic acid scarring: a preliminary study. J Wound Care. 1994 Nov 2;3(8):375-377. doi: 10.12968/jowc.1994.3.8.375. PMID: 27922383.*

Hyaluronic Acid – Inactive Ingredient (cont'd)
Hyaluronic Acid has the potential to normalize keloid fibroblast characteristic features such as hyperproliferation, growth factor production and ECM deposition depending on the specific genotype of the keloid fibroblast cell line. This study suggests that Hyaluronic Acid can be used to replenish Hyaluronic Acid deposition in keloid fibroblasts, thereby decreasing fibrosis and ultimately decreasing keloid manifestation. – *Hoffmann A, Hoing JL, Newman M, Simman R. Role of Hyaluronic Acid Treatment in the Prevention of Keloid Scarring. J Am Coll Clin Wound Spec. 2013 Jul 1;4(2):23-31. doi: 10.1016/j.jccw.2013.06.001. PMID: 24936445; PMCID: PMC4054787.*

Taxifolin (Dihydroquercetin) – Inactive Ingredient
Taxifolin (Dihydroquercetin) is a kind of flavonoid that has a wide range of pharmacological activities and can improve skin repair and skin inflammation, including antioxidation, antivirus, and anti-inflammation, and has inhibitory effects on inflammation and microbial infection. It is a natural inhibitor of CD38, which consumes NAD+, and it can delay aging by increasing the level of NAD+. In addition, Dihydroquercetin can inhibit the aging process by keeping the skin structure intact, reducing the degree of collagen decomposition and skin oxidative stress, protecting collagen and its downstream related proteins from degradation, and further down-regulating the expression of apoptotic proteins, thus achieving the purpose of protecting the skin and delaying skin aging. Zhang et al. found that pretreatment of Dihydroquercetin composite nanofiber membrane can prevent inflammation, apoptosis, and oxidative stress signals during the overexpression of the UVA exposure pathway induced by MAPK (p-ERK, p-JNK, and p-P38)/nrf2. Immunofluorescence experiments also show that a Dihydroquercetin composite nanofiber membrane can reduce the fluorescence intensity of Caspase-3 and TNFα. – *PubChem, NIH, NLM & DrugBank.*

The MeSH Pharmacological Classification of Taxifolin is categorized as 'Anti-Inflammatory Agent, Non-Steroidal'. In addition to anti-inflammatory actions, they have analgesic, antipyretic, and platelet-inhibitory actions. They act by blocking the synthesis of prostaglandins by inhibiting cyclooxygenase, which converts arachidonic acid to cyclic endoperoxides, precursors of prostaglandins. Inhibition of prostaglandin synthesis accounts for their analgesic, antipyretic, and platelet-inhibitory actions; other mechanisms may contribute to their anti-inflammatory effects. It is a powerful antioxidant with excellent antioxidant, anti-inflammatory, anti-microbial and other pharmacological activities. – *PubChem, NIH, NLM & DrugBank.*

Taxifolin is a naturally bioactive flavonoid with superior antioxidant capacity than other common flavonoids closely related to phenolic hydroxyl groups (Sroka and Cisowski, 2003; Zu et al., 2014)

As a flavonoid, taxifolin has been found to have anti-inflammatory properties. taxifolin inhibited the enhanced activity of NF-κB in cerebral ischemia-reperfusion injury rats and demonstrated that this is caused by taxifolin's antioxidant action. Furthermore, taxifolin inhibits the infiltration of white blood cells and the expression of COX-2 and iNOS in cerebral ischemia-reperfusion injury, as well as the expression of Mac-1 and ICAM-1. (Gupta et al., 1971) (Wang et al., 2006)

Taxifolin (Dihydroquercetin) – Inactive Ingredient (cont'd)
Phenolic Flavonoids derived from plants possess antibacterial activities. The mechanisms of bacterial inhibition by phenolic flavonoids are: inhibition of cell plasma membrane function, nucleic acid synthesis and energy metabolism. Taxifolin is a flavonoid with strong antibacterial properties against *Staphylococcus aureus*, *Escherichiacoli*, *Shigella* and *Salmonella*. Inhibitors of SrtA do not interfere with bacterial growth but can weaken the virulence of bacteria. (Cowan, 1999) (Cushnie and Lamb, 2005) (Yang et al., 2019) (Suree et al., 2007; Hou et al., 2018)

Dihydroquercetin is loaded into wound dressings for the repair of skin lesions. The porous structure and excellent pore interconnectivity of nanofibers make them an ideal choice for wound dressing and wound healing because they have oxygen permeability, the ability to keep moisture at a required level, an inhibition effect on the invasion of exogenous microorganisms, and the ability to conform to the skin of the wound site and reduce scars [77,78,79]. Some studies have reported nanofiber membranes loaded with Dihydroquercetin. – *https://pmc.ncbi.nlm.nih.gov/articles/PMC10574795/*

Adding hydrophilic substrates such as Hyaluronic Acid to nanofiber membranes also improved the bioavailability of Taxifolin. – *Molecules. 2023 Oct 9;28(19):6989. doi: 10.3390/molecules28196989*