Subject: topical n-acetylcysteine gegen photodamage...
Posted by tristan on Tue, 07 Nov 2006 19:19:17 GMT
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ok, hat jemand ne ahnung welche konzentration nac die genommen haben? jemand den fulltext? seitdem dieses journal über nature.com läuft hat die uni keine freigabe dafür

J Invest Dermatol. 2003 May;120(5):835-41.
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Topical N-acetyl cysteine and genistein prevent ultraviolet-light-induced signaling that leads to photoaging in human skin in vivo.
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Human skin is exposed to solar ultraviolet radiation. Ultraviolet radiation damages human skin and results in an old and wrinkled appearance, called photoaging. We have previously reported that molecular mechanisms by which ultraviolet light causes photoaging involve activation of growth factor and cytokine receptors in keratinocytes and dermal cells. They lead to downstream signal transduction through activation of mitogen-activated protein kinase (extracellular signal-regulated kinase, c-jun N-terminal protein kinase, and p38) pathways. These signaling pathways converge in the nucleus of cells to form an activated complex of transcription factor activator protein 1 (cFos/cJun), which induces matrix metalloproteinases that degrade skin connective tissue. In addition to cell surface receptor activation, generation of reactive oxygen species by ultraviolet radiation is believed to be critical in triggering mitogen-activated protein kinase pathways. We investigated the ability of (i) ultraviolet irradiation to generate reactive oxygen species in human skin in vivo; and (ii) genistein, which possesses both tyrosine kinase inhibitory and antioxidant activities, and n-acetyl cysteine, which can be converted into the endogenous antioxidant glutathione, to impair responses to ultraviolet light that eventuate in photoaging in human skin in vivo. Ultraviolet irradiation caused a rapid and significant increase in hydrogen peroxide levels in human skin in vivo. Pretreatment of human skin with genistein inhibited ultraviolet-induced epidermal growth factor receptor tyrosine kinase activity, whereas n-acetyl cysteine did not. Genistein inhibited ultraviolet induction of both extracellular signal-regulated kinase and cJun N-terminal protein kinase activities. n-Acetyl cysteine inhibited extracellular signal-regulated kinase but not cJun N-terminal protein kinase activation. Both genistein and n-acetyl cysteine prevented ultraviolet induction of cJun protein. Consistent with this, genistein and n-acetyl cysteine blocked ultraviolet induction of cJun-driven enzyme, collagenase. Neither genistein nor n-acetyl cysteine acted as sunscreens as they had no effect on ultraviolet-induced erythema. These data indicate that compounds similar to genistein and n-acetyl cysteine, which possess tyrosine kinase inhibitory and/or antioxidant activities, may prevent photoaging.