



# ARNICA

KREM - JEL  
MORLUK, ÖDEM VE KAS SERTLEŞMELERİNDE



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- MORLUK, ÖDEM VE KAS SERTLEŞMELERİNDE KULLANILMAKTADIR.
- ANTİENFLAMATUAR, ANALJEZİK VE ANTİOKSIDAN ETKİYE SAHİPTİR.
- KREM VE JEL OLARAK 2 FORMU MEVCUTTUR.



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## ARNICA MONTANA FLOWER

- Kuzey-Orta Sibirya, Avrupa ve Batı Amerika'da yetişen bir bitkidir.
- Antienflamatuar, Analjezik ve Antioksidan etkileri vardır. (3A)
- Arnica'nın farmakolojik etkiyi taşıyan aktif bileşenleri
- Helenalin (Seskiterpen Lakton)
- Flavonlar,
- karoten ve tanenlerdir.



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## ARNICA ETKİ MEKANİZMASI

Arnica'nın içerisinde yer alan Helenalin,

- İltihap üretimini sağlayan genleri kontrol eder ve iltihabi taşıyıcı transkripsiyon faktörü Nf-kB'nin aktifleşmesini engeller.
- Antienflamatuar ve analjezik etki gösterir.





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## ARNICA ETKİ MEKANİZMASI

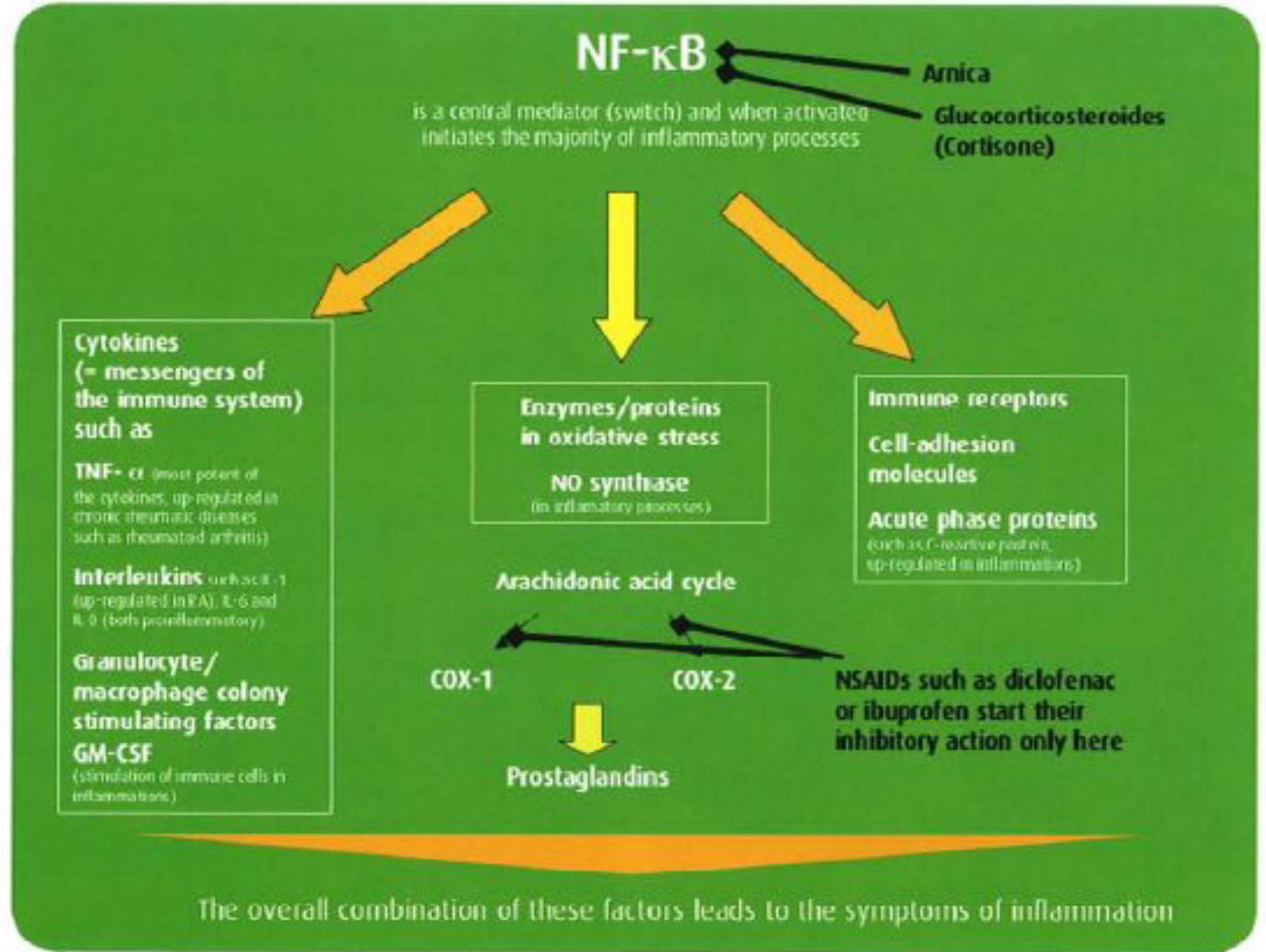


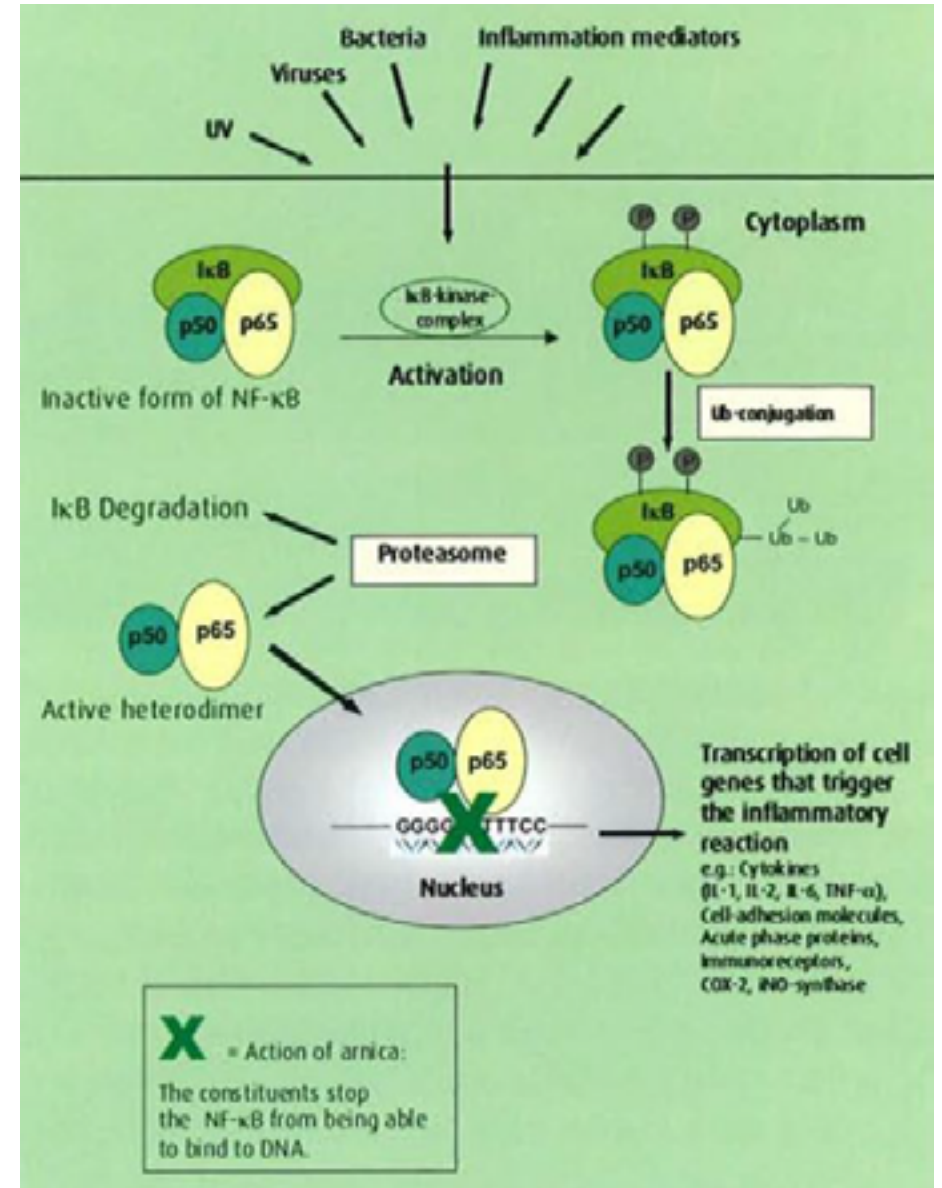
Figure 3: Diagram of the sites of action of arnica and NSAIDs in the inflammatory process



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## ARNICA ETKİ MEKANİZMASI



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## YARDIMCI ETKEN MADDELER;

### SARI KANTARON (HIPERICIN)

- Antienflamatuar,
- Analjezik ve
- Antioksidan etkiye sahiptir.

Tedeschi E, Menegazzi M, Margotta D, Suzuki H, Forstermann U, Kleinert H. Anti-inflammatory actions of St.John's wort: inhibition of human inducible nitric-oxide synthase expression by down-regulating signal transducer and activator of transcription-1 alpha [STAT-1alpha] activation.

The Journal of Pharmacology and Experimental Therapeutics 2003; 307 [1]: 254-261



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## YARDIMCI ETKEN MADDELER;

### AT KESTANESİ(ESCIN)

- Antienflamatuar,
- Analjezik ve
- Antioksidan etkiye sahiptir.

Damar duvarını güçlendirerek, damar geçirgenliğini azaltır.  
Morluk ve ödemi tedavi eder.



Pittler MH, Ernst E. Horse-chestnut seed extract for chronic venous insufficiency. A criteria-based systematic review. Arch Dermatol 1998 Nov; 134 [11] : 1356-1360

Suter A, Bommer S, Rechner J. Treatment of patients with venous insufficiency with fresh plant horse chestnut seed extract: a review of 5 clinical studies. Adv Ther 2006 Jan-Feb; 23 [1]: 179-190



# ARNICA

## KREM - JEL

### MORLUK, ÖDEM VE KAS SERTLEŞMELERİNDE

Arnica Montana'nın Morluk, ödem, kas ve eklem ağrılarındaki etkileri German Commission-E tarafından onaylanmıştır.

#### Arnica flower

**Latin Name:** *Arnica montana* or *A. chamissonis* subsp. *foliosa*  
**Pharmacopetal Name:** Arnicae flos

#### GERMAN COMMISSION E

##### Overview

Arnica grows up to two feet in the mountainous regions of Europe and western North America (Foster, 1998; Grieve, 1979; Schulz et al., 1998). American arnica species include *A. fulgens*, *A. sororia*, and *A. cordifolia*. In Europe, *A. chamissonis* is cultivated in addition to *A. montana* to fill the demand for the estimated three hundred arnica-containing tinctures, ointments, and homeopathic remedies manufactured for the German market (Foster, 1998). Dried orange-yellow flower heads supply a therapeutic volatile oil, that contains fatty acids, aromatic terpenes, flavonoids, tannins, and sesquiterpenes of the helenalin type (Leung and Foster, 1998).

##### Uses

Herbs with Similar Uses

The Commission E approved the external use of arnica flower for injuries and for consequences of accidents, e.g., hematoma, dislocations, contusions, edema due to fracture, rheumatic muscle and joint problems. It is also approved for use in inflammation of the oral and throat region, furunculosis, inflammation caused by insect bites, and superficial phlebitis.

##### Contraindications

Herbs with Clearer Contraindications

Arnica allergy.

#### Arnica flower

**Latin Name:** *Arnica montana* or *A. chamissonis* subsp. *foliosa*  
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Arnica soothes sore muscles and reduces pain and inflammation. Europeans and Native Americans, who referred to arnica as mountain tobacco and leopard's bane, used it for sprains, bruises, and wounds (Grieve, 1979). Swedish physicians, alternative medical practitioners of the late nineteenth and early twentieth centuries, recommended it for contusions and injured muscles, swellings, and chronic sores or abscesses (Bilgiclioglu, 1988). Rubbed on the head, arnica tincture was said to stimulate hair growth (Grieve, 1979). Some physicians recommended internal use for depression, dyspepsia, typhoid, pneumonia, anemia, diarrhea, and cardiac weakness (Foster, 1998).

Contemporary studies demonstrate in vitro antimicrobial, anti-inflammatory, analgesic, hypnotic, respiratory stimulating, and uterine activities (Schulz et al., 1998). Experimental trials suggest further potential uses. Arnica enhanced immune responses in laboratory animals against *Listeria monocytogenes* and *Balantidium coli* (Leung and Foster, 1998). One trial found that bile and liver enzyme levels improved when rats with carbon-tetrachloride-induced hepatic toxicity were administered phenols obtained from arnica (Bilgiclioglu, 1988). However, internal use of Arnica and helenalin is not recommended. Cardiac toxicity has been demonstrated, and animal effects on respiration and the uterus require further study. Oral administration of arnica is often accompanied by severe side effects. For this reason the monograph refers to the herb's external use only, in contrast to the comment section in the German Pharmacopoeia that refers to the internal use of a tea infusion of arnica for circulatory disorders of the heart and brain (DAB 9, 1978).

##### Chemistry and Pharmacology

Herbs with Similar Pharmacology

The Commission E reports that when applied topically, arnica preparations have antipruritic (anti-inflammatory) activity. In cases of inflammation, arnica preparations also show analgesic and anesthetic activity. In animal studies, helenalin and dihydrohelenalin were found to have analgesic, antitumor, antimicrobial and anti-inflammatory activity (Commission E, 1998; Grieve, 1979; 1975). In vitro experiments concluded that helenalin also works as an immunostimulant (Leung and Foster, 1998).

##### Uses

Herbs with Similar Uses

The Commission E approved the external use of arnica flower for injuries and for consequences of accidents, e.g., hematoma, dislocations, contusions, edema due to fracture, rheumatic muscle and joint problems. It is also approved for use in inflammation of the oral and throat region, furunculosis, inflammation caused by insect bites, and superficial phlebitis.

##### Contraindications

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## ARNICA ENDİKASYONLAR

### AT KESTANESİ (ESCIN)

- Ödem, ekimoz ve kas sertleşmeleri,\*
- Rhinoplasti,
- Estetik operasyonlar,
- Çocuklarda düşme, ani çarpma sonrası kullanılır.

\*German Commission-E



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## ARNICA ENDİKASYONLAR

- Botox ve dolgu,
- Liposuction,
- Lazer ile varis tedavisi,
- Saç ekimi operasyonu,
- Estetik uygulamalar sonrası kullanılır.

# ARNICA

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## ARNICA KONTRENDİKASYONLAR

- Göz, mukoza zarına ve açık yaralara temas etmemelidir.
- Hamilelik ve emzirme döneminde doktor kontrolünde kullanılmalıdır.





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## ARNICA KULLANIM ŞEKLİ

- Günde 3 kez masaj yaparak kullanılmalıdır.
- Dermatolojik olarak test edilmiştir\*

\*İÜ. Cerrahpaşa Tıp Fakültesi Dermatoloji Anabilim dalı



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## ARNICA KONTRENDİKASYONLAR

- Ekimoz tedavisi ile birlikte,
  - antienflamatuar,
  - analjezik ve
  - antioksidan etki gösterir.
- Yan etki insidansı son derece düşüktür, emniyetlidir.



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## ARNICA KLİNİK ÇALIŞMALAR

Widrig ve arkadaşları tarafından yapılan klinik çalışmada, eldeki osteoartiritte Arnica'nın etkinliği %5 ibuprofen ile aynı oranda çıkmıştır.



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## ARNICA KLİNİK ÇALIŞMALAR

Arnica jelin diz OA çalışması;  
Otto Kneusel ve arkadaşları tarafından  
İsviçre Valens Romatizma Kliniğinde yapılmıştır.  
Advances In Therapy 2002



### Arnica montana Gel in Osteoarthritis of the Knee: An Open, Multicenter Clinical Trial

Otto Kneusel, M.D.  
Chief, Department of Rheumatology  
Valens Clinic for Rheumatism  
Valens, Switzerland  
Michel Weber, Dr.Sc.Nat.  
Andy Suter, M.Sc.  
Biokore AG  
Roggwil, Switzerland

#### ABSTRACT

This open multicenter trial investigated the safety and efficacy of an Arnica montana fresh plant gel, applied twice daily, in 26 men and 53 women with mild to moderate osteoarthritis (OA) of the knee. After 3 and 6 weeks, significant decreases in median total scores on the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) were evident in the intention-to-treat and per-protocol populations (both  $P < 0.0001$ ). Scores on the pain, stiffness, and function subscales also showed significant reductions at these timepoints. The overall local adverse-event rate of 7.6% included only one allergic reaction. Sixty-nine patients (67%) rated the tolerability of the gel as "good" or "fairly good," and 76% would use it again. Typical application of Arnica montana gel for 6 weeks was a safe, well-tolerated, and effective treatment of mild to moderate OA of the knee.

**Keywords:** Arnica; clinical trial; osteoarthritis; WOMAC

#### INTRODUCTION

Osteoarthritis (OA) is one of the most common diseases affecting humans and a frequent cause of disability. By age 40, discrete malformations of the weight-bearing joints are evident, and by age 75, OA is virtually universal.<sup>1</sup> Women are generally more affected than

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## ARNICA MONTANA REFERANSLAR

- Lyss G, Schmidt TJ, Merfort I, Pahl HL. Helenalin, an anti-inflammatory sesquiterpene lactone from Arnica, selectively inhibits transcription factor NF-kB, Biol Chem 1997; 378: 951-961.
- Klaas CA, Wagner G, Laufer S et al. Studies on the anti-inflammatory activity of phytopharmaceuticals prepared from Arnica flowers . Planta Med 2002 May; 68 [5]: 385-391
- Knuesel O, Weber M, Suter A. Arnica montana gel in osteoarthritis of the knee: an open, multicenter clinical trial. Adv Ther 2002 Sep-Oct ; 19 [5]: 209-218
- Widrig R1, Suter A, Saller R, Melzer J. Choosing between NSAID and arnica for topical treatment of hand osteoarthritis in a randomised, double-blind study Rheumatol Int. 2007 Apr;27(6):585-91. Epub 2007 Feb 22.