LifeCare Pharmacy is a compounding pharmacy that meets the compounding needs of podiatrists and patients throughout Australia. Our compounding pharmacists have the ability to custom compound medications in our state-of-the-art compounding laboratories. We compound medications that improve therapeutic outcomes, reduce side effects, and save patients time and money.

# Foot Fungus Relief Cream (Anti-Fungal Therapy)

Ingredients: Clotrimazole 1%, Urea Cream 40%

<u>Description:</u> Fungal infections of the feet are commonly associated with dry, cracked skin surrounding the plantar surface and heel fissures. Hyperkeratosis can have various etiologies, and chronic conditions are often quite difficult to treat. Moccasin tinea pedis is typically resistant to topical antifungal therapy when used as sole therapy, because the scale on the plantar surface of the foot impedes or limits the absorption of the antifungal agent. However, one study showed a 100% cure rate was achieved in 12 patients with confirmed moccasin tinea pedis who were treated with topical 40% urea cream and antifungal cream concomitantly for 2 to 3 weeks.

#### Reference:

Cutis 2004 May;73(5):355-7

**Ibu-Rub (Topical Ibuprofen Cream)** 

Ingredients: Ibuprofen

# **Keto-Rub (Topical Ketoprofen Cream)**

**Ingredients:** Ketoprofen 10%-20% Cream

<u>Description:</u> To avoid the risks of COX-2 inhibitors, our pharmacy can compound topically applied NSAIDs such as ibuprofen and ketoprofen. Topical NSAIDs have a safety profile which is superior to oral formulations. Topical NSAID administration offers the advantage of local, enhanced delivery to painful sites with a reduced incidence of systemic adverse effects.

Topical non-steroidal anti-inflammatory drugs have a lower incidence of gastrointestinal adverse effects than the same drugs when they are taken orally. The low incidence of systemic adverse effects for topical NSAIDs probably results from the much lower plasma concentration from similar doses applied topically to those administered orally. Topical application of ibuprofen resulted in measurable tissue concentrations in deep tissue compartments, more than enough to inhibit inflammatory enzymes. Topical NSAIDs have not been associated with renal failure.

#### Reference:

BMJ. 1995 Jul 1;311(6996):22-6 Topical non-steroidal anti-inflammatory drugs and admission to hospital for upper gastrointestinal bleeding and perforation: a record linkage case-control study. Evans JM, McMahon AD, McGilchrist MM, White G, Murray FE, McDevitt DG, MacDonald TM. Department of Clinical Pharmacology, Ninewells Hospital and Medical School, Dundee.

Free full text article available at bmj.com:

http://bmj.bmjjournals.com/cgi/content/full/311/6996/22

The following article concludes: Topical non-steroidal anti-inflammatory drugs are effective in relieving pain in acute and chronic conditions.

MJ. 1998 Jan 31;316(7128):333-8

Quantitative systematic review of topically applied non-steroidal anti-inflammatory drugs. Moore RA, Tramer MR, Carroll D, Wiffen PJ, McQuay HJ. University of Oxford, Oxford Radcliffe Hospital, Headington, UK

## **Fung-away Antifungal and Anti-inflammatory Cream**

Ingredients: Flucanazole and Ibuprofen topical

<u>Description:</u> Athlete's foot, jock itch, fungal infections and onychomycosis (fungal nail) are common, particularly in children. Research points to the benefits of using ibuprofen in combination with fluconazole in the treatment of candidosis, particularly when applied topically, taking advantage of the drug's antifungal and anti-inflammatory properties.

#### Reference:

J Med Microbiol 2000 Sep;49(9):831 40 Antifungal activity of ibuprofen alone and in combination with fluconazole against Candida species. Pina-Vaz C, Sansonetty F, Rodrigues AG, Martinez-De-Oliveira J, Fonseca AF Department of Microbiology, Porto School of Medicine, University of Porto, Portugal

### **Diabetic Neuropathy Pain Relief Cream**

Ingredients: Amitriptyline 2%, Baclofen 2%, Lidocaine 2%

<u>Description:</u> Neuropathic pain includes a variety of conditions such as diabetic neuropathy, phantom limb pain, reflex sympathetic dystrophy (RSD or Complex Regional Pain Syndrome), and pain caused by blunt trauma or crushing injuries. Symptoms of neuropathic pain may not be evident for weeks to months after the injury. Optimal treatment may involve not only the use of traditional analgesics such as non-steroidal anti-inflammatory drugs (NSAIDs) and opioids, but may also include medications that possess pain-relieving properties, including some antidepressants, anticonvulsants, antiarrhythmics, anesthetics, antiviral agents, and NMDA antagonists. "Combination therapy is frequently the only effective approach for managing the complex array of chemical mediators and other contributors to the individual pain experience."

"As topical formulations are developed, they provide hope for more effective drug combinations, with fewer systemic adverse drug effects and drug-drug interactions." For example, research has shown that topically applied ketoprofen provides a high local concentration of drug below the site of application but decreases systemic exposure and significantly reduces the risk of gastrointestinal upset or bleeding. When properly compounded into an appropriate base, tissue concentrations of ketoprofen were found to be 100-fold greater below the application site (knee) compared to systemic concentrations. A case report described the use of topical ketoprofen 10% gel as an adjunct to physical therapy to relieve pain and inflammation.

#### Reference:

1 Advanced Studies in Medicine 2003 July;3(7A):S639

2 Pharmaceutical Research (1996) 13: 1; 168-172

3 Phys Ther. 2006 Mar;86(3):424-33



### **Diabetes Foot Cream**

Ingredients: L-Arginine

<u>Description:</u> Topical L-arginine cream improves blood flow and temperature in the feet of diabetics, according to the results of a preliminary trial published as a letter in the January issue of *Diabetes Care*. This study showed that arginine does increase blood flow and this may translate into fewer foot ulcers or better healing of ulcers.

#### **Reference:**

Diabetes Care, January 2004; 27(1):284-5

Improvement of Temperature and Flow in Feet of Subjects with Diabetes With Use of a Transdermal Preparation of L-Arginine – A pilot stud Eric T. Fossel, PHD

Strategic Science and Technologies, Wellesley, Massachusetts

PubMed PMID: 14694013

### **Neuropathic Pain Relief**

**Ingredients:** Doxepin 5%

<u>Description</u>: Topical doxepin could be an alternative and relatively safe treatment in alleviating neuropathic pain in the diabetic patient, especially when the use of systemic treatment is contraindicated. In the following case study, the soles of the patient's feet were treated with topical doxepin 5% twice daily for four weeks. The patient responded dramatically with loss of the severe burning sensation and no side effects reported.

### **Reference:**

Wounds 15(8):272-276, 2003. © 2003 Health Management Publications, Inc. Burning Feet Due to Diabetic Neuropath. Amna Al-Muhairi, MD, Tania J. Phillips, MD, FRCPC

# Molluscum Contagiosum (MC) Relief Solution

**Ingredients:** Potassium Hydroxide 10%

<u>Description:</u> Resistant warts and molluscum contagiosum have been treated successfully with compounded topical medications, avoiding discomfort associated with freezing, scraping, electrocautery and laser therapy. The following study emphasizes the effectiveness of topical KOH in the treatment of molluscum contagiosum, sparing affected children from more aggressive physical modalities of treatment.

#### Reference:

Pediatr Dermatol 2000 Nov-Dec;17(6):495

Evaluation of the effectiveness of 5% potassium hydroxide for the treatment of molluscum contagiosum. Romiti R, Ribeiro AP, Romiti N.

Department of Dermatology, University of Sao Paulo, Sao Paulo, Brazil.

### **Easy Nail Removal**

Ingredients: Urea 40-60% or Salicylic Acid 60%

<u>Description:</u> Although surgical excision is the most popular method for removing nails, the use of concentrated urea plasters applied under occlusion may be superior. The use of urea plasters has inherent advantages – they are inexpensive, several nails can be treated in one session, and the procedure is essentially painless.

#### Reference:

Cutis. 1980 Jun; 25(6):609-12

Urea ointment in the nonsurgical avulsion of nail dystrophies—a reappraisal. South DA, Farber EM.

Cutis. 1980 Apr;25(4):397, 405

Combination urea and salicydic acid ointment nail avulsion in nondystrophic nails: a follow-up observation.

Buselmeier TJ.

JAMA 1979 Apr 13;241(15):1559, 1563

Urea plasters alternative to surgery for nail removal. Montgomery BJ. PMID: 43070

### Fungal Nail Relief (Onychomycosis Cream)

Ingredients: Ketoconazole, Itricanazole, Terbinafine

<u>Description:</u> Topical prescription antifungal preparations, containing the active ingredient of your choice, may be less likely to cause the serious systemic side effects that can occur with oral antifungal therapy and can provide a more economical alternative, as lower doses are needed when the medication is applied topically at the site.

#### Reference:

Trop Med Int Health 1999 Apr;4(4):284-7

Treatment of toenail onychomycosis with 2% butenafine and 5% Melaleuca alternifolia (tea tree) oil in cream. Syed TA, Qureshi ZA, Ali SM, Ahmad S, Ahmad S. Department of Dermatology, University of California, San Francisco, USA.



## **Enhanced Blood Flow Creams (Wound Care Healing Creams)**

Ingredients: Nifedipine 4-16% Cream; Pentoxifylline 5% Cream; Ibuprofen 20%/Piroxicam 1% Cream; Phenytoin 2%

**<u>Description:</u>** Wounds and pressure sores may heal more quickly if treated with topical phenytoin. Medications which improve capillary blood flow can be added to a compounded medication to enhance circulation at the wound margins and promote healing of the injured area.

#### Reference:

Ann Pharmacother 2001 Jun; 35(6): 675-81 Biochem Pharmacol 1999 May 15;57(10):1085-94 Ann Pharmacother 1996 Jul-Aug; 30(7-8):768-75 Int J Dermatol 1993 Mar;32(3):214-7 Chung Hua I Hsueh Tsa Chih 1997 Jan;77(1):54-7 Burns 1993 Aug;19(4):306-10 Diabetes Care 1991 Oct; 14(10):909-11

