OTHERS FOR PAIN RELIEF

AMINO ACIDS

HERBS
D-PHENYLALANINE

- Inhibits Carboxypeptidase A
- Carboxypeptidase A is involved in Enkephalin degradation in the brain

250 - 500mg (TID) 15-30 minutes before meals – Use for 3 weeks to 3 months – Take for no longer - safety issue
STUDIES HAVE SHOWN INCREASED PAIN THRESHOLD AND PAIN RELIEF
GOOD FOR CHRONIC PAIN

SOME QUESTIONABLE RESULTS – BUT DOES APPEAR USEFUL IN REDUCING PAIN
2 STUDIES

STUDY - OSTEOARTHRITIS PAIN
43 PATIENTS - 5 WEEK STUDY
MOST HAD SIGNIFICANT PAIN RELIEF

STUDY - CHRONIC PAIN
7/21 PATIENTS
50% PAIN RELIEF
L-TRYPTOPHAN

**TRYPTOPHAN** ---&gt; **SEROTONIN**

**SEROTONIN MODULATES PAIN PERCEPTION**

**INCREASES PAIN TOLERANCE THRESHOLD AND DECREASES PAIN PERCEPTION**
STUDY

30 CHRONIC PAIN PATIENTS
3 grams/day
GIVEN FOR 4 WEEKS
PATIENTS HAD LESS DEPRESSION
LESS ANXIETY
AND INCREASED PAIN TOLERANCE THERESHOLDS
DENTAL STUDY

- 30 SUBJECTS
- 2 grams/day
- GIVEN FOR 8 DAYS
- PATIENTS HAD AN INCREASE OF PAIN TOLERANCE THRESHOLDS
DENTAL STUDY

3 GRAMS GIVEN OVER 24 HOURS FOLLOWING A ROOT CANAL

PATIENTS HAD A LOWER LEVEL OF PAIN COMPARED TO THE PLACEBO GROUP
TRYPTOPHAN - DOSE

- 2-4 grams/day
- BANNED SINCE 1989 BY FDA
- PRODUCED EOSINOPHILIA-MYALGIA SYNDROME
- 15,000 CASES - 27 PEOPLE DIED
- DUE TO A PROCEDURE CHANGE IN MANUFACTURING
- NEVER SEEN AGAIN
5-HTP

- 5 HYDROXYTRYPTOPHAN
- HERBAL EXTRACT
- DIRECT PRECUSSOR OF SEROTONIN
- BENEFICIAL RESULTS
- 100MG (TID)
SULFHYDRYL AMINO ACIDS

- S-ADENOSYLMETHIONINE (SAM)
- BOTH ANIMAL AND HUMAN STUDIES
- ANALGESIC
- ANTI-INFLAMMATORY
- EQUALLY EFFECTIVE TO NSAIDS

DOSE - 500 mg TID
L-CARNITINE

- REDUCES PAIN AND TENDERNESS OF MUSCLE FOLLOWING EXERCISE

- VASODILATION PROPERTIES - IMPROVES METABOLISM OF HYPOXIC OR DAMAGED TISSUE

- 750mg (BID)
HERBS

- CLOVE OIL
- GERMAN CHAMOMILE (Matricaria chamomilla)
- WINTERGREEN OIL
- DEVILS CLAW
- CAPSICUM FRUTESCENS (Red or hot pepper)
- WHITE WILLOW BARK
WINTERGREEN OIL

- Composed of mostly methyl salicylate
- Analgesic
- Anti-inflammatory
- Topical use only
- Rub on sore muscles to reduce pain
DEVILS CLAW

AFRICA

ANTI-INFLAMMATORY

ANALGESIC

NOT EFFECTIVE FOR ARTHRITIS

ALSO HELPS WITH DIGESTION
(INCREASES STOMACH ACID)
NOT TO BE TAKEN BY PATIENTS WITH ULCERS

SAFETY IN PREGNANCY - UNKNOWN

1.5-2 grams/DAY
Cayenne, Jalapenos, Chili peppers

CAPSAICIN - MAJOR THERAPEUTIC INGREDIENT

Chemical structure similar to eugenol - used for stump pain and herpes zoster
DEPLETES SUBSTANCE P FROM TYPE C NEURONS

When neurons are repeatedly exposed, Substance P stops being synthesized, stored, and/or released.

Without neurotransmitters, pain signals cannot be sent.
TEMPORARY PHYSIOLOGICAL EFFECTS

LONG LASTING CLINICAL EFFECTS
SUBSTANCE P (INVOLVED IN PAIN) AND PROSTAGLANDIN 2 LEVELS (INVOLVED IN INFLAMMATION) IN SYNOVIAL TISSUE ARE DECREASED WITH REGULAR JOINT APPLICATION OF CAPSAICIN CREAM
DOSE

- 2 STRENGTHS OF CREAM
  - 0.025% and 0.075%

- APPLY SMALL AMOUNTS TO SKIN
  - INITIALLY 3-4x/day
  - THEN DECREASE TO MAINTENANCE DOSE OF 2x/day
SIDE EFFECTS

- RELIEF WITHIN A FEW DAYS
- BURNING AND STINGING ARE COMMON
- ALLERGIC SKIN REACTION MAY OCCUR (keep first dose small)

- Wash hands – Do not touch face
- Not to be used over broken skin
HAS BEEN USED AS PAIN RELIEF FOR

DIABETIC NEUROPATHY
FIBROMYALGIA
RHEUMATOID ARTHRITIS
OSTEOARTHRITIS
1994 STUDY

113 OSTEOARTHRITIC PATIENTS
0.025% CREAM
12 WEEKS
81% IMPROVED
BY DOCTOR EVALUATION AND PATIENT EVALUATIONS
SIDE EFFECTS: BURNING/STINGING
1994 STUDY

- 59 PATIENTS
- HAND OSTEOARTHRITIS
- O.025% CREAM
- BETTER THAN CONTROL GROUPS AT RELIEVING PAIN
1994 STUDY

- 45 PATIENTS - FIBROMYALGIA
- 0.025% CREAM OR CONTROL
- LESS TENDERNESS IN TENDER POINTS
- INCREASE IN GRIP STRENGTH AT WEEK 2 (4 week study)
1996 STUDY

- 0.075% CREAM
- 103 PATIENTS - 8 WEEKS
- CHRONIC PAIN AT WOUND SITE AFTER CANCER SURGERY
- 53% USING CREAM HAD DECREASED PAIN - 17% IN PLACEBO GROUP
- 11 PATIENTS HAD COMPLETE RELIEF
WHITE WILLOW BARK

- EUROPE AND NORTH AMERICA
- NATURAL ASPIRIN
- SLOWER ACTING - BUT LONGER LASTING COMPARED TO ASPIRIN
- ACTIVE COMPONENT - GLYCOSIDE SALICIN
- ANTI-INFLAMMATORY
- ANALGESIC
SIDE EFFECTS

- STOMACH ULCERS
- GI BLEEDING
- NOT FOR LONG TERM USE
- NOT FOR CHILDREN
- IF ALLERGIC TO ASPIRIN DON'T TAKE
- IN GENERAL - MUCH SAFER THAN ASPIRIN
DOSE

60-120 mg/ DAY (SALICIN)