GRANIONS® MUSCLE RELAXANT

CRAMPS AND MUSCLE TENSIONS
INADVERTENT MUSCLE CONTRACTIONS

A FEW FIGURES:

- Overall population concerned: 37%\(^{(1)}\)
- Elderly (> 65 years old): 50\(^{(2)}\)
  (56% of women and 44% of men).
- Pregnant women: up to 30\(^{(3)}\)

DRIVING FACTORS:

- Unbalanced level of trace elements, minerals and vitamins
- Pregnancy
- Elderly persons
- Exercise with no physical preparation

WHAT IS A CRAMP?

- **Painful, intense** and **unintentional** contraction
- Comes from one **muscle** or a group of muscles (legs generally)
- Duration: 30 sec to 10mn – followed by unpleasant sensation
- Self-resolving
- Often occurs at night (sleep trouble)

**CONTRIBUTING FACTORS:**

- **Physical activity** (especially in case of bad or insufficient preparation)
- Some **metabolic disorders:** dehydration, dyskaliemia...
- Pregnancy
- Elderly persons
- **Excessive sweating:** loss of minerals
- **Muscular overload:** keeping the same position for a long period
- Cold temperatures

**Targets:**
- Sportsmen and women
- Pregnant women
- Elderly persons
- Manual workers
- Teenagers, others...
SOLUTIONS TO RELIEVE CRAMPS

• **Physical treatment:**
  • Stretchings, massages, ...
  • Moderate effectiveness and no side effects

• **Medical treatment:**
  • Muscle relaxants – listed medicines (prescription):
    • Myolastan® (tetrazepam) → painful cramps, rhumatology

→ *Myolastan + other tetrazepam drugs have been withdrawn from the market in 2013 !!!*

  • Muscle relaxants with no prescription:
    • Decontractyl® (mephenesin) : for painful cramps
    • Hexaquine® (quinine) : any types of cramps

→ *Side effects*

→ *Not recommended for pregnant women*

• **Health supplements**
  • Decramp® : anyone
  • Cramp Control® and Myocramp® : sportsmen and women

Related Advice
Massages + stretchings
Magnesium supplementation
Drink plenty of water
THE GRANIONS® SOLUTION

→ A formula combining minerals and vitamins in glass drinkable ampoules (content 2ml)

→ A unique manufacturing process, created in 1945: the colloid
The mineral element is trapped inside an amylose-based colloidal solution

• Better absorption: protection of mineral elements against gastric acid -> no need of sublingual use
• Improved bioavailability (absorption in the duodenum) -> improved efficiency
• Taste of minerals masked by amylose (sweet taste)

→ The guarantee and expertise of Laboratoire des Granions, a pharmaceutical company existing since 1949

• 51 million ampoules produced every year
• 1.7 million boxes sold yearly

→ A health supplement following a medicinal manufacturing process, same as our pharmaceutical products like Zinc, Copper, Selenium, Magnesium, Manganese
POTASSIUM $K^+$

- Acts in neuromuscular function: contraction/relaxation
- $98\%$ of $K^+$: inside the cells
- **Muscles** = main potassium storage area in the body ($40\%$)
- $K^+$ deficiency $\rightarrow$ leads to bad muscle relaxation
  $\rightarrow$ Leads to cramps

According to EFSA\(^{(1)}\), there is a well-established *causal connection* between potassium nutritional intake and a good muscle + neurological function.

(1) EFSA (European Food Safety Authority) Journal 2010; 8(2):1469
MAGNESIUM Mg$^{2+}$

- Intervenes in **+300 enzymatic reactions**: transmission of nerve impulses, 
muscle relaxation, ...
- Location: 27% in the muscles
- Deficiency $\rightarrow$ leads to symptoms such as:
  - Cramps
  - Tremor
  - Overall fatigue

**Study**
- Randomized, double-blind, placebo-controlled
- 73 pregnant women
- Results:
  - *Decrease of cramps frequency*: from 1 daily to 1-2 per week
  - *Significant pain decrease*

GROUP B VITAMINS

- **Vitamin B1 (thiamine)**
  - Intervenes in carbohydrates metabolism → provides energy
  - Essential to *good muscle function*

- **Vitamin B6 (pyridoxine)**
  - Essential to *sodium / potassium balance*
  → Helps good muscle function

- **Vitamin B12 (cobalamin)**
  - Participates to energy synthesis
  - Deficiency → *muscle pains*

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**Study**
- Randomized, double-blind, placebo-controlled
- 28 patients, 3-month treatment
- Results:
  - *Cramps intensity: -86%*
  - *Significant decrease: frequency + intensity + duration of night cramps*

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**ADDITIONAL MINERALS**

**Copper**
- **Antioxidant**
- 1/3 of copper content in the body is in the muscles
- Deficiency → leads to weakness and muscle fatigue

**Selenium**
- **Antioxidant**
- Selenoprotein W: essential for muscle function
- Deficiency → muscle weakness

→ *Copper is an essential mineral for good muscle function*


Cuivre et Chrome, 2 oligoéléments méconnus, Jean LEDERER, Ed. Louvain Paris
VITAMINS & MINERALS TO RELIEVE CRAMPS

- Magnesium
- Vitamins B
- Potassium
- Selenium
- Copper

[Image of legs with cramp]
### ACTIVE INGREDIENTS

### THE MOST COMPLETE FORMULA ON THE MARKET

Daily composition (qualitative and quantitative)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Value</th>
<th>DRV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium</td>
<td>80 mg</td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td>56,25 mg</td>
<td>15%</td>
</tr>
<tr>
<td>Copper</td>
<td>1 mg</td>
<td>100%</td>
</tr>
<tr>
<td>Vitamin B1</td>
<td>1,1 mg</td>
<td>100%</td>
</tr>
<tr>
<td>Vitamin B6</td>
<td>1,4 mg</td>
<td>100%</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>2,5 µg</td>
<td>100%</td>
</tr>
<tr>
<td>Selenium</td>
<td>50 µg</td>
<td>91%</td>
</tr>
</tbody>
</table>

*DRV = Dietary Reference Value (EU).*
GRANIONS® MUSCLE RELAXANT

Keep in mind:

• The cramps relief solution for the whole family, including:
  • Pregnant women
  • Elderly persons
  • Adults doing sport or not

• Directions for use: 2 ampoules daily
  • As soon as muscle contraction appears, take 2 ampoules daily in a single take, until it ends.
  • In prevision of any sustained or long-lasting muscular effort, take 2 ampoules daily in a single take, during 15 days.

• Box of 30 ampoules of 2 ml
GRANIONS® OLIGOTHERAPY
5 products with status of health supplement

**MUSCLE RELAXANT**
Helps relieve cramps and muscle tensions

**IRON**
Helps reduce fatigue
Contributes to woman’s vitality

**IODINE**
Helps stimulate thyroid function

**CHROMIUM**
Metabolism of fats and carbohydrates. Dosage at 200mcg/day

**POTASSIUM**
Contributes to good neuromuscular function

**+10 medicines**
Zinc, Selenium, Copper, Magnesium, Bismuth, Gold, Silver, Lithium, Manganese, Sulfur
INADVERTENT MUSCLE CONTRACTIONS?

Your solution:
GRANIONS® MUSCLE RELAXANT

Box of 30 ampoules
Food supplement