**Supplemental Appendix 1: CENTRAL, MEDLINE, and EMBASE search strategy.**

**CENTRAL search strategy**

1 chronic pain.mp. or Chronic Pain/ (5585)

2 exp Pain/ (42947)

3 peripheral neuropathy.mp. or exp Peripheral Nervous System Diseases/ (6724)

4 neuropathic pain.mp. (1990)

5 Fibromyalgia/ (1048)

6 myofascial pain syndromes/ or temporomandibular joint dysfunction syndrome/ (831)

7 rheumatic polymyalgia.mp. (61)

8 (chronic adj4 pain).mp. [mp=title, original title, abstract, mesh headings, heading words, keyword] (10980)

9 ((pain\* or discomfort\*) adj10 (central or complex or rheumat\* or muscl\* or muscul\* or myofasci\* or nerv\* or neuralg\* or neuropath\*)).mp. [mp=title, original title, abstract, mesh headings, heading words, keyword] (21181)

10 exp Somatosensory Disorders/ (982)

11 (fibromyalgi\* or fibrosti\* or FM or FMS).mp. [mp=title, original title, abstract, mesh headings, heading words, keyword] (3324)

12 ((neur\* or nerv\*) adj6 (compress\* or damag\*)).mp. [mp=title, original title, abstract, mesh headings, heading words, keyword] (1660)

13 exp Migraine Disorders/ (2201)

14 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 (70208)

15 MAGNESIUM/ or magnesium.mp. (5492)

16 magnesium sulfate.mp. or Magnesium Sulfate/ (1625)

17 magnesium chloride.mp. or Magnesium Chloride/ (140)

18 15 or 16 or 17 (5492)

19 14 and 18 (348)

20 limit 19 to randomized controlled trial (205)

**MEDLINE search strategy**

1 chronic pain.mp. or Chronic Pain/ (36031)

2 exp Pain/ (360589)

3 peripheral neuropathy.mp. or exp Peripheral Nervous System Diseases/ (144442)

4 neuropathic pain.mp. (17230)

5 Fibromyalgia/ (7699)

6 myofascial pain syndromes/ or temporomandibular joint dysfunction syndrome/ (6265)

7 rheumatic polymyalgia.mp. (71)

8 (chronic adj4 pain).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (58478)

9 ((pain\* or discomfort\*) adj10 (central or complex or rheumat\* or muscl\* or muscul\* or myofasci\* or nerv\* or neuralg\* or neuropath\*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (92071)

10 exp Somatosensory Disorders/ (19931)

11 (fibromyalgi\* or fibrosti\* or FM or FMS).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (30138)

12 ((neur\* or nerv\*) adj6 (compress\* or damag\*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (63883)

13 exp Migraine Disorders/ (25023)

14 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 (630590)

15 MAGNESIUM/ or magnesium.mp. (101935)

16 magnesium sulfate.mp. or Magnesium Sulfate/ (6345)

17 magnesium chloride.mp. or Magnesium Chloride/ (3608)

18 15 or 16 or 17 (101935)

19 14 and 18 (1212)

20 limit 19 to randomized controlled trial (195)

**EMBASE search strategy**

1 chronic pain.mp. or chronic pain/ (68290)

2 exp pain/ (1217735)

3 peripheral neuropathy.mp. or exp peripheral neuropathy/ (73316)

4 neuropathic pain.mp. or exp neuropathic pain/ (35834)

5 fibromyalgia/ (18030)

6 myofascial pain/ (7510)

7 temporomandibular joint disorder/ (12544)

8 rheumatic polymyalgia/ (5098)

9 (chronic adj4 pain).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] (97894)

10 ((pain\* or discomfort\*) adj10 (central or complex or rheumat\* or muscl\* or muscul\* or myofasci\* or nerv\* or neuralg\* or neuropath\*)).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] (169686)

11 somatosensory disorder/ (860)

12 (fibromyalgi\* or fibrosti\* or FM or FMS).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] (43084)

13 ((neur\* or nerv\*) adj6 (compress\* or damag\*)).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] (92355)

14 exp migraine/ (58818)

15 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 (1407558)

16 magnesium.mp. or magnesium/ (161171)

17 magnesium sulfate.mp. or magnesium sulfate/ (16769)

18 magnesium chloride.mp. or magnesium chloride/ (6649)

19 16 or 17 or 18 (161171)

20 15 and 19 (7726)

21 randomized controlled trial/ (511022)

22 20 and 21 (662)

## Supplemental Appendix 2: Characteristic of excluded studies.

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| **Study** | **Reason for exclusion** |
| Ali 200939 | No magnesium-only treatment arm. |
| Bigal, Bordini, Speciali 200238 | Single blind. |
| Bigal, Bordini, Tepper, Speciali 200237 | Acute migraines. |
| Collins 200940 | Placebo data not presented or analyzed. |
| Delage 201741 | Study not completed. |
| Farvid 20144 | No magnesium-only treatment arm. |
| Frestedt 200845 | No magnesium-only treatment arm. |
| Gaul 201546 | No magnesium-only treatment arm. |
| Hochberg 201147 | No magnesium-only treatment arm.  |
| Lee 201248 | Chronic pain inclusion criteria not fulfilled. |
| Maizels 200449 | No magnesium-only treatment arm. |
| Russell 199550 | No magnesium-only treatment arm. |
| Tarighat 201242 | Single blind. |
| Taubert 199451 | Study not in English . |
| Tramer 200243 | No magnesium-only treatment arm. |
| Yosry 201652 | No placebo-control. |