

Pain in Patients with Polytrauma

APPENDIX A. SEARCH STRATEGY

Two librarians (AH and RC) independently designed search strategies based on the key questions. The results of both searches were combined into a single reference library.

Below is the search strategy designed by AH:

Database: Ovid MEDLINE(R) <1950 to January Week 5 2008>

Search Strategy:

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- 1 polytraum\$.mp. (2115)
 - 2 exp Multiple Trauma/ (7404)
 - 3 (multiple adj3 (wound\$ or injur\$ or traum\$ or casualt\$)).mp. (12171)
 - 4 1 or 2 or 3 (13048)
 - 5 exp Blast Injuries/ (1862)
 - 6 exp Brain Injuries/ (34104)
 - 7 ((head or crani\$ or cereb\$ or brain\$ or explosi\$ or explod\$ or blast\$) adj3 (traum\$ or wound\$ or injur\$ or damag\$)).mp. (88531)
 - 8 5 or 6 or 7 (90818)
 - 9 exp pain/ (218224)
 - 10 exp pain measurement/ (33373)
 - 11 exp nociceptors/ (8377)
 - 12 (pain\$ or agony or agoniz\$ or nocicept\$).mp. [mp=title, original title, abstract, name of substance word, subject heading word] (334241)
 - 13 9 or 10 or 11 or 12 (392032)
 - 14 9 or 10 (230078)
 - 15 4 and 14 (175)
 - 16 5 and 14 (12)
 - 17 exp War/ (25443)
 - 18 exp Military Personnel/ (15657)
 - 19 exp Military Medicine/ (21662)
 - 20 exp Veterans/ (5122)
 - 21 exp Veterans Disability Claims/ (209)
 - 22 Hospitals, Veterans/ (4480)
 - 23 exp "United States Department of Veterans Affairs"/ (3021)
 - 24 (desert storm or gulf war or enduring freedom or iraqi freedom).mp. (1606)
 - 25 exp Iraq War, 2003 -/ or exp Iraq/ (2569)
 - 26 (iraq or soldier\$ or veteran\$ or combat\$ or militar\$ or battle\$).mp. (77729)
 - 27 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 (94873)
 - 28 exp "wounds and injuries"/ or in.fs. (580168)
 - 29 27 and 28 (9834)
 - 30 8 and 13 (1988)
 - 31 limit 30 to humans (1836)
 - 32 limit 31 to english language (1402)
 - 33 limit 31 to abstracts (1447)
 - 34 32 or 33 (1681)
 - 35 4 and 13 (500)
 - 36 limit 35 to humans (491)
 - 37 limit 36 to english language (359)
 - 38 limit 36 to abstracts (465)
 - 39 37 or 38 (483)
 - 40 13 and 29 (449)

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- 41 limit 40 to humans (441)
- 42 limit 41 to english language (383)
- 43 limit 41 to abstracts (375)
- 44 42 or 43 (424)
- 45 34 or 39 or 44 (2480)
- 46 limit 45 to yr="2000 - 2008" (1163)
- 47 limit 45 to yr="1902 - 1999" (1317)
- 48 from 47 keep 1 (1)

Below is the search strategy designed by RC. This search was saved in PubMed to provide automatic weekly updates:

```
"Brain Injuries"(142)
OR "Multiple Trauma"(142)
OR "Blast Injuries"(142)
OR TBI[All Fields]
OR "traumatic brain injury"[All Fields]
OR "traumatic brain injuries"[All Fields]
OR polytrauma[All Fields]
OR multitrauma[All Fields]
OR "multi trauma"[All Fields]
OR "poly trauma"[All Fields]
OR (("Wounds and Injuries"(142) OR "injuries "[Subheading]) AND ("War"(142) OR "Iraq War, 2003 -"(142)
OR "Gulf War"(142)))
AND ("pain"[MeSH Terms] OR pain[Text Word])
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APPENDIX C. USPSTF QUALITY RATING CRITERIA

Randomized Controlled Trials (RCTs) and Cohort Studies

Criteria

- Initial assembly of comparable groups: RCTs—adequate randomization, including concealment and whether potential confounders were distributed equally among groups; cohort studies—consideration of potential confounders with either restriction or measurement for adjustment in the analysis; consideration of inception cohorts
- Maintenance of comparable groups (includes attrition, cross-overs, adherence, contamination)
- Important differential loss to follow-up or overall high loss to follow-up
- Measurements: equal, reliable, and valid (includes masking of outcome assessment)
- Clear definition of interventions
- Important outcomes considered
- Analysis: adjustment for potential confounders for cohort studies, or intention-to-treat analysis for RCTs (i.e. analysis in which all participants in a trial are analyzed according to the intervention to which they were allocated, regardless of whether or not they completed the intervention)

Definition of ratings based on above criteria

- Good:** Meets all criteria: Comparable groups are assembled initially and maintained throughout the study (follow-up at least 80 percent); reliable and valid measurement instruments are used and applied equally to the groups; interventions are spelled out clearly; important outcomes are considered; and appropriate attention to confounders in analysis.
- Fair:** Studies will be graded “fair” if any or all of the following problems occur, without the important limitations noted in the “poor” category below: Generally comparable groups are assembled initially but some question remains whether some (although not major) differences occurred in follow-up; measurement instruments are acceptable (although not the best) and generally applied equally; some but not all important outcomes are considered; and some but not all potential confounders are accounted for.
- Poor:** Studies will be graded “poor” if any of the following major limitations exists: Groups assembled initially are not close to being comparable or maintained throughout the study; unreliable or invalid measurement instruments are used or not applied at all equally among groups (including not masking outcome assessment); and key confounders are given little or no attention.