



## Record Structure and Restricting Search Terms to Fields within a Record

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### Introduction:

Records from bibliographic databases share certain features:

- Each record in bibliographic databases describes a publication.
  - A journal article, book, book chapter, meeting abstract, etc.
- Records are subdivided into fields.
- Fields describe one aspect of the publication.
  - Author, Title, Publication Name, Language, etc.
- Each field is assigned a unique field label.
  - These labels are shown in the sample Medline record below.
  - Labels may be spelled out (“Title”) or abbreviated (“TI”).

Most search systems allow the searcher to restrict a search term to a particular field. In most search systems this is accomplished in one of two ways:

1. In the search term input box a drop-down menu of searchable fields is provided.

Find:  in

2. The searcher may qualify the search term or a group of terms using the field code or label.

Find:  in

*These examples are from the EBSCOHost search system. Other systems will look different but the functionality is the same.*

***On the next page is a sample Medline record showing the field structure.***

## Sample Medline record from EBSCOHost showing the field structure:

**Title:** Effect of early menopause on bone mineral density and fractures.  
**Author(s):** Gallagher JC  
**Author's Address:** Creighton University Medical Center, Omaha, NE, USA.  
jcg@creighton.edu  
**Source:** Menopause (New York, N.Y.) [Menopause] 2007 May-Jun; Vol. 14 (3 Pt 2), pp. 567-71.  
**Publication Type:** Journal Article; Review  
**Language:** English  
**Country of Publication:** United States  
**NLM ID:** 9433353  
**Publication Model:** Print  
**Cited Medium:** Print  
**ISSN:** 1072-3714 (Print)  
**Subsets:** MEDLINE  
**MeSH Terms:** Bone Density/\*physiology; Fractures, Spontaneous/\*physiopathology; Menopause, Premature/\*physiology; Osteoporosis, Postmenopausal/\*physiopathology; Ovariectomy/\*adverse effects  
Female; Humans; Osteoporosis, Postmenopausal/diagnosis; Risk Factors; Time Factors  
**Abstract:** OBJECTIVE: To review the data on the effect of early menopause on bone. Do women undergoing early menopause develop lower bone mineral density at an earlier age and do they have a higher incidence of osteoporotic fractures? Is there a difference on bone between women who undergo early natural menopause compared to women who have early menopause after oophorectomy? RESULTS: The earlier in life that menopause occurs, the lower the bone density will be later in life. Low bone density is associated with a higher fracture rate, and several studies show a relationship between early menopause, oophorectomy, and an increase in osteoporotic fractures. CONCLUSIONS: Early menopause is a risk factor for osteoporosis. Women with an early menopause should have bone density testing performed within 10 years of menopause so that osteopenia or osteoporosis will be diagnosed early and appropriate anti-resorptive therapy initiated.  
**Number of References:** 48  
**Entry Date(s):** Date Created: 20070503 Date Completed: 20070703  
**Update Code:**20071207  
**PMID:**17476146  
**Database:** MEDLINE

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## Default Search

### Q: What happens when you enter a search term but don't specify a field?

#### A: It depends on the search system

- Some search systems restrict your search to the fields with text that describes the subject or topic of the item such as the title, abstract, and descriptor or subject fields.
- Other search systems will include almost any part of the record, although very few include every field.

## Impact of Word Location on Searching



### The location of a term in a record can change:

- the meaning of the term
- the significance of the term



### First Case: the field in which a word occurs affects its meaning.

**Example 1:** In the first record below the word floss occurs in the title field. If the word floss occurs in the author field, as it does in record 2, the word has a completely different meaning:

- **Record 1:**  
Title: Fluoride uptake in situ after the use of dental **floss** with fluoride.  
Authors: Modesto, A.; Souza, I.; Cordeiro, P.; Silva, L.; Primo, L.  
Source: J. Clin. Dent. 1997; 8(5): 142-4
- **Record 2:**  
Title: A role for FGF-6 in skeletal muscle regeneration.  
Authors: **Floss**, T.; Arnold, H.H.; Braun, T.  
Source: Genes Dev. 1997 Aug 15; 11(16): 2040-51

**Example 2:** In example 1, the meaning of the word changed drastically because in one instance it was descriptive term and in the other it was a proper name. In the two records below the word Creighton is a proper name; however, in record 1 it is an institutional name and in record 2 it is a personal name.



#### **Record 1:**

Title: Aid for preventing aspiration/ingestion of single crowns.  
Authors: Wilcox-CW; Wilwerding-TM  
Address: **Creighton** University, School of Dentistry, Omaha, NE 68178, USA.  
Source: J. Prosthet. Dent. 1999 Mar; 81(3): 370-1



#### **Record 2:**

Title: Common pediatric dental problems.  
Author: **Creighton**, P.R.  
Address: Department of Pediatric Dentistry, School of Dental Medicine, State University of New York at Buffalo, USA.  
Source: Pediatr. Clin. North Am. 1998 Dec; 45(6): 1579-60



## **Second Case: The field in which a word occurs effects its significance or importance.**

**Example 1:** In the first record below the word ibuprofen occurs in the title field (as well as the abstract field). In the second record the word ibuprofen only occurs in the abstract.

- Ibuprofen is the focus of the first paper (record 1). This is reflected by the occurrence of the word in the article title.
- In the second paper (record 2) ibuprofen received only passing mention. It was not a significant aspect of the paper.

### **Record 1:**

**TI:** The pharmacokinetics of **ibuprofen** suspension, chewable tablets, and tablets in children with cystic fibrosis.

**AU:** Scott, C.S.; Retsch-Bogart, G.Z.; Kustra, R.P.; Graham, K.M.; Glasscock, B.J.

**SO:** J-Pediatr. 1999 Jan; 134(1): 58-63

**AB:** OBJECTIVES: The objectives of this study were to compare the pharmacokinetic parameters of ibuprofen administered as a suspension, chewable tablet, or tablet in children with cystic fibrosis and to determine the optimal blood sampling times for measuring ibuprofen peak concentrations. STUDY DESIGN: A single oral 20 mg/kg dose of ibuprofen was administered, and blood samples were obtained at 15, 30, 45, 60, 120, 240, and 360 minutes after the dose was administered. Peak plasma concentration ( $C_{max}$ ), time to peak concentration ( $T_{max}$ ), and other pharmacokinetic parameters were determined and compared (analysis of variance and analysis of covariance). RESULTS: Thirty-eight children were included (22, 4, and 12 in the suspension, chewable tablet, and tablet groups, respectively).  $T_{max}$  was the only parameter for which statistical differences were noted (suspension vs tablet,  $P \leq .02$ ). After age and sex were removed as potential confounding variables,  $T_{max}$  remained statistically different ( $P \leq .001$ ). CONCLUSIONS: A 20 mg/kg dose of ibuprofen suspension is recommended, with blood samples for pharmacokinetic analysis obtained 30, 45, and 60 minutes after the dose is administered. Obtaining the first blood sample 1 hour after dose administration will miss approximately 90% of peak concentrations, increasing the likelihood of overdosing.



### **Record 2:**

**TI:** Does propofol reduce vomiting after strabismus surgery in children?

**AU:** Hamunen, K.; Vaalamo, M.O.; Maunuksela, E.L.

**SO:** Acta-Anaesthesiol-Scand. 1997 Sep; 41(8): 973-7

**AB:** BACKGROUND: Previous studies have indicated that propofol anaesthesia may reduce the incidence of postoperative nausea and vomiting after strabismus surgery in children. This study was designed to investigate the incidence of vomiting after strabismus surgery at two different levels of propofol anaesthesia compared to thiopental/isoflurane anaesthesia. METHODS: Ninety ASA class I or II children, aged 5-14 yrs were randomly assigned to one of three groups: Group T/I (n = 30) induction with 5 mg kg<sup>-1</sup> of thiopental and maintenance with isoflurane, group P5 (n = 31) induction with propofol 2 mg kg<sup>-1</sup>, maintenance with propofol infusion 5 mg kg<sup>-1</sup> h<sup>-1</sup> or group P10 (n = 29) induction with propofol 2 mg kg<sup>-1</sup>, maintenance with propofol 10 mg kg<sup>-1</sup> h<sup>-1</sup>. All received glycopyrrolate, vecuronium, fentanyl and controlled ventilation with O<sub>2</sub>/N<sub>2</sub>O 30/70. Ketorolac i.v. was given to prevent

postoperative pain. If additional analgesia was needed, **ibuprofen**/acetaminophen or buprenorphine was given according to clinical need. RESULTS: There were no differences between study groups with respect to age, weight, history of previous anaesthesia or emesis after previous anaesthesia, duration of anaesthesia, surgery or sleep after anaesthesia, or number of muscles operated. The incidence of vomiting was 37%, 29% and 28% in groups T/I, P5 and P10, respectively. There were no statistically significant differences between the three groups in the incidence of vomiting. The median age of patients who vomited was 7.5 (range 5.0-13.7) yrs while the median age of the patients who did not vomit was 9.1 (range 5.0-14.0) yrs ( $P < 0.01$ ). CONCLUSION: In the present study, propofol anaesthesia compared to thiopental/isoflurane anaesthesia did not reduce the incidence of vomiting following strabismus surgery in children.



**Example 2:** Some databases designers try to indicate the relative importance of the various topics discussed in a paper. This is accomplished by designating descriptors (controlled vocabulary terms) as major and minor topics.

In *record 1* the indexer believed that the diagnosis of bacterial pneumonia was a primary focus of the paper; therefore the heading "Pneumonia, Bacterial / diagnosis" was designated as major MeSH heading. In *record 2*, the the diagnosis of pneumonia was a secondary aspect of the paper so the heading "Pneumonia, Bacterial / diagnosis" was designated minor.

Read the titles. Do you agree with the indexer's decisions?

**Record 1:**

**Title:** A comparison of mini-bronchoalveolar lavage and blind-protected specimen brush sampling in ventilated patients with suspected pneumonia.

**Source:** J Crit Care. 1998 Jun; 13(2): 67-72

**MeSH: (major):** Bronchoalveolar Lavage Fluid / microbiology; Cross Infection / diagnosis; **Pneumonia, Bacterial / diagnosis**; Respiration, Artificial; Specimen Handling / instrumentation

**MeSH: (minor):** Adult ; Aged ; Aged, 80 and over; APACHE ; Bacteriological Techniques / instrumentation; Critical Care; Cross Infection / microbiology; Middle Age; Patient Care Team; Pneumonia, Bacterial / microbiology; Respiratory Therapy; Sensitivity and Specificity



**Record 2:**

**Title:** Pulmonary disposition of vancomycin in critically ill patients.

**Source:** Eur J Clin Microbiol Infect Dis. 1997 May; 16(5): 385-8

**MeSH: (major):** Antibiotics, Glycopeptide / pharmacokinetics; Bronchoalveolar Lavage Fluid / chemistry; Methicillin Resistance; Pneumonia, Bacterial / drug therapy; Staphylococcal Infections / drug therapy; Vancomycin / pharmacokinetics

**MeSH: (minor):** Aged ; Antibiotics, Glycopeptide / therapeutic use; Bronchoscopy ; Critical Illness; Injections, Intravenous; Middle Age; **Pneumonia, Bacterial / diagnosis**; Pneumonia, Bacterial / physiopathology; Prospective Studies; Respiration, Artificial; Staphylococcal Infections / diagnosis; Staphylococcal Infections / physiopathology; Treatment Outcome; Vancomycin / therapeutic use