논문작성과 문헌검색: Author Keywords & MeSH

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문헌검색 과정

가. 핵심질문을 기술한 후 각 요소의 주요 개념어 추출

↓

나. 검색어 선정 (시소러스, 기존의 검색전략 활용)

↓

다. 기존연구검토(PubMed DB): 관련된 문헌의 양을 추정, 관련키워드 검토

↓

라. 검색어 추가, 재선정, 검색어 조합 등의 검색전략 결정, 수정보완

↓

마. 검색대상 데이터베이스 결정 후 본 검색 시행 (COSI 모델의 Core)

↓

바. References, Review, Hand Search등으로 검색확대 (COSI 모델의 Standard, Ideal)

↓

사. 문헌선택 (제목-> 초록 -> 원문)

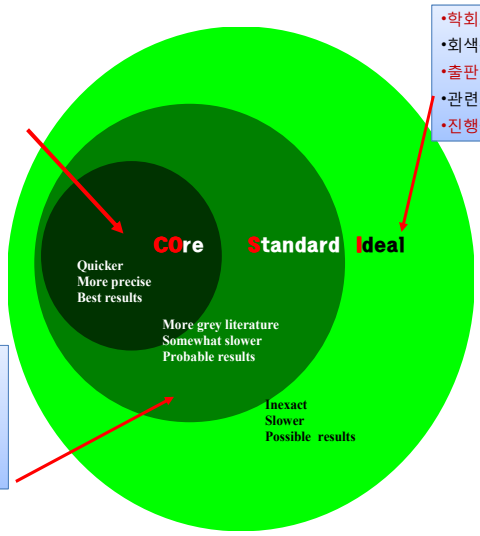
↓

아. 논문작성

NLM COSI model의 검색 대상 정보원

- 국외DB
  - PubMed
  - Embase
  - Cochrane CENTRAL
- 국내DB
  - KoreaMed
  - KMBase
  - RISS
  - KISTI
  - NDSL

- 학회초록집
- 회색문헌(Grey literature)
- 출판되지 않은 논문
- 관련회사접촉
- 진행중인 임상실험



- 전문가접촉
- 주요저널 수기검색
- 과학 전반 databases(WoS/SCOPUS)
- Subject-specific databases (PsychInfo, CINAHL...)

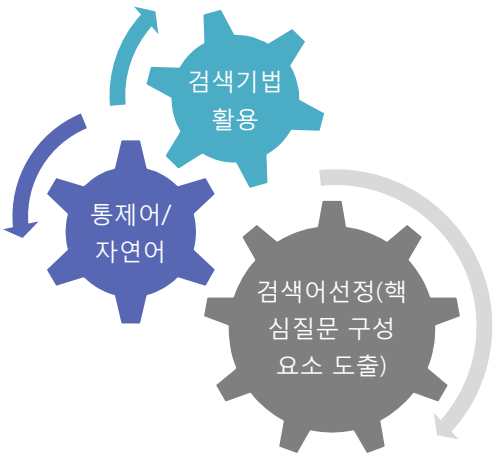
http://www.nlm.nih.gov/archive//2060905/nichsr/ehta/chapter3.html

근거중심의학환경에서의 문헌검색 중요성

체계적 문헌고찰(Systematic Reviews)연구 흐름도

한국보건의료연구원. NECA 체계적 문헌고찰 매뉴얼

문헌검색 전략



체계적 문헌 고찰 검색 전략

- 포괄적으로 검색하면서도 배제되지 않게 검색전략을 수립
- 쉽고 정확하게 검색하기 위한 통제언어가 필요, 대표적으로 MeSH 사용
- 통제어와 단순키워드 조합 검색
- 적절한 수준의 정확율(precision)과 재현율(recall)를 확보 가능

MeSH로 검색하면 관련 유사어, 동의어를 모두 입력하지 않아도 됨

Keywords

- Osteoarthritides
- Osteoarthrosis
- Osteoarthroses
- Arthritis, Degenerative
- Arthritides, Degenerative
- Degenerative Arthritides
- Degenerative Arthritis
- Osteoarthrosis Deformans
- Coxarthrosis
- Coxarthroses
- Spinal Osteoarthritis
- Spine Osteoarthritis
- Lumbar Osteoarthritis

MeSH

→ **Osteoarthritis [MeSH]**

Appendix 1. MEDLINE search strategy

1. exp OSTEOARTHRITIS/
2. osteoarthr$.tw.
3. (degenerative adj2 arthritis).tw.
4. or/1-3
5. exp CHONDROITIN/
6. chondroitin.sh,rn,tw.
7. 5 or 6
8. 4 and 7
9. randomized controlled trial.pt.
10. controlled clinical trial.pt.
11. randomized controlled trials.sh.
12. random allocation.sh.
13. double blind method.sh.
14. single-blind method.sh.
15. clinical trial.pt.
16. clinical trials.sh.
17. clinical trial.tw.
18. ((singl$ or doubl$ or trebl$ or tripl$) and (mask$ or blind$)).tw.
19. placebos.sh.
20. placebo$.tw.
21. random$.tw.
22. Research Design/
23. comparative study.sh.
24. evaluation studies.sh.
25. follow-up studies.sh.
26. prospective studies.sh.
27. control$.tw.
28. prospectiv$.tw.
29. volunteer$.tw.
30. or/9-29
31. (animal not human).mp.
32. 30 not 31

SR 문헌의 Search strategy

MeSH 검색 절대적임 (빨간색 밑줄) : DB구축시 주제색인 필요함
통제어휘집에 의해 주제색인이 되지 않은 DB의 경우 다양한 Textwords를 조합하여 검색

AUTHOR KEYWORDS 분석

MeSH 용어와 Author Keywords 일치도 관련 연구

- 1992-1997년도 가정의학회지
- Author Keywords : 897종류
  - MeSH 일치 : 161개 (17.9%)
  - 단, 복수 등 부분일치: 34개(3.8%)
  - MeSH 불일치 : 702개(78.2%)
- 결론
  - MeSH와 부합하지 않음
  - 주제어 자체가 논문의 내용을 정확히 반영하지 못하는 경우가 있음

김병성, 김수영. 가정의학회지 논문의 영어 주제어 선택에 있어서 MeSH 용어 사용여부와 선택 정확도. 가정의학회지 1998. 19(7) 531-537

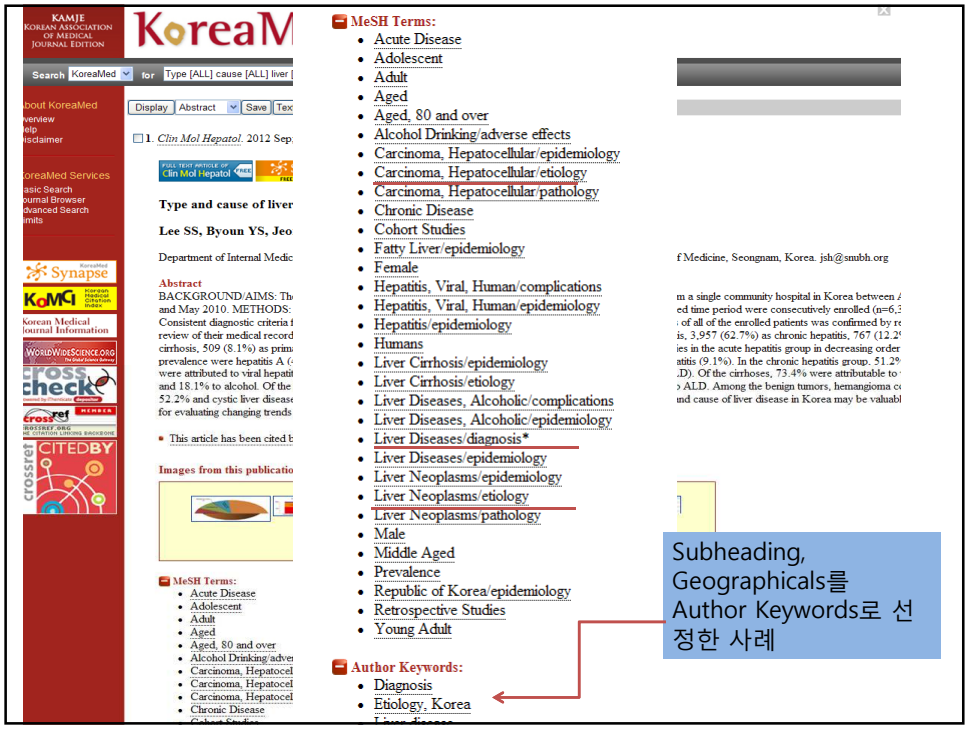
MeSH 용어와 Author Keywords 일치도 관련 연구

- 1993년-2010년
- 대한작업치료학회지 논문 346편
- Author Keywords : 1,225개
  - MeSH 일치 : 225개 (20.8%)
  - 단, 복수 등 부분일치: 377개(30.8%)
  - MeSH 불일치 : 593개(48.4%)

박수현, 박경영. 대한작업치료학회지 논문의 영문 주제어와 MeSH 용어의 비교분석. 대한작업치료학회지 2011. 19(4) 131-145

Author Keywords 분석결과

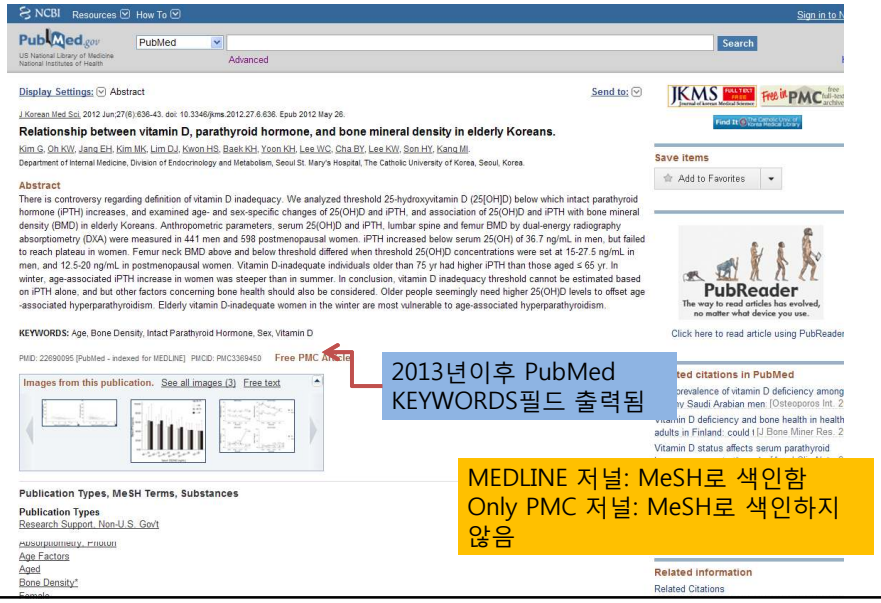
- MeSH 용어에 대한 이해부족
- Author Keywords 선정시 임의적인 용어 사용
- 연구의 내용을 나타내는 주제어이외의 형태
  - Check tags : 연령, 성별, 연구재료 ex) child
  - Publication Types : systematic reviews
  - Study Design 관련 용어: cohort studies
  - 지리표목 ex) Korea
  - 약어사용



제목, 초록, 저자키워드를 핵심단어로 작성 해야하는 이유

- 독자
  - 전문(full text)을 읽기보다는 초록을 읽음
  - 초록보다는 논문의 제목만 읽는 독자가 더 많음
- 서지데이터베이스
  - 제목, 초록, 저자키워드를 대상으로 색인어 추출
  - 검색어와 매칭되는 색인어를 검색결과로 추출
- 저자
  - 제목, 초록, 저자키워드를 핵심단어로 작성?

PubMed Author Keywords & MeSH



서지 DB에서 논문이 검색되게 하려면 ?

- ***"DB에서 쉽게 검색될 수 있도록 핵심단어를 사용해 제목, 초록, 저자키워드 작성"***
- ***"MeSH, 관련분야 용어집을 참고하여 통제된 어휘로 저자키워드를 작성"***

KoreaMed MeSH Terms & Author Keywords

MeSH Terms:

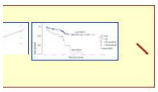
- Adult
- Aged
- Carcinoma, Hepatocellular/metabolism*
- Carcinoma, Hepatocellular/mortality
- Carcinoma, Hepatocellular/pathology
- Cyclooxygenase 2/metabolism*
- Female
- Hepatitis, Chronic/metabolism*
- Hepatitis, Chronic/mortality
- Hepatitis, Chronic/pathology
- Humans
- Immunohistochemistry
- Kaplan-Meier Estimate
- Liver Cirrhosis/metabolism*
- Liver Cirrhosis/mortality
- Liver Cirrhosis/pathology
- Liver Neoplasms/metabolism*
- Liver Neoplasms/mortality
- Liver Neoplasms/pathology
- Male
- Middle Aged
- Vascular Endothelial Growth Factor A/metabolism*

Author Keywords:

- Chronic hepatitis
- Cyclooxygenase-2
- Hepatocellular carcinoma
- Liver cirrhosis
- Vascular endothelial growth factor

- Chronic hepatitis

vs. HG-HCC, P=0.004), and the corresponding VEGF expression
-I vs. LG-HCC, P=0.011; LG-HCC vs. HG-HCC, P=0.075). Both
01; VEGF: r=0.491, P<0.001). There was a significant correletion
igh COX-2 and VEGF expression scores and survival (COX-2:
F are significantly higher in cirrhosis and LG-HCC than in CH. High



- KoreaMed의 경우 저자키워드가 주제어 검색을 대신해옴
- Author keywords 5개가 모두 KoreaMed MeSH Terms나 entry terms와 일치된 사례임
- MEDLINE 학술지 15종 대상 일치율 조사 결과 평균 54% 완전일치율을 보임

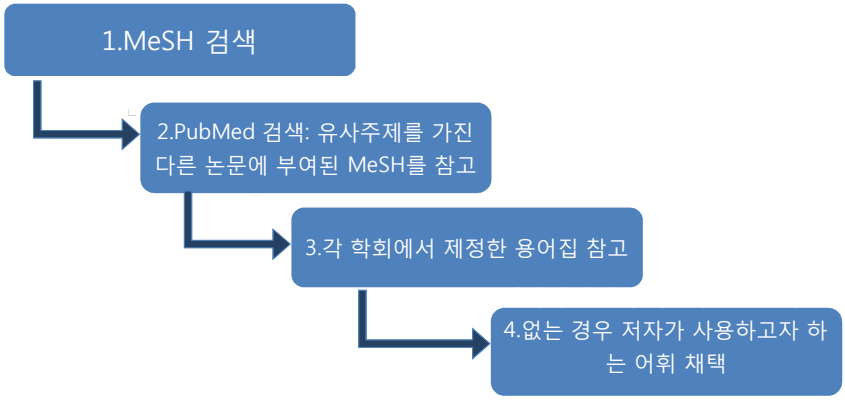
검색에 유용한 AUTHOR KEYWORDS 작성

Author Keywords

- 3-10개의 주제어 작성
- 연구의 내용을 가장 잘 표현할 수 있는 단어 선정
- 모두 제목에 나타나는 수준의 단어로 선정
- MeSH 사용 (학술지의 투고규정에 정함)

홍성태. 의학논문 매력있게 쓰자. 서울 : 서울대학교출판문화원, 2012.

Author Keywords 어휘선정



MeSH

Medical Subject Headings (MeSH)

- 미국 국립의학도서관 (National Library of Medicine, NLM) 구축
- 통제어휘집, 주제명 사전 혹은 시소러스
- MeSH의 주표목 23,000여개
- 매년 갱신
- www.ncbi.nlm.nih.gov/mesh
- MeSH 추천: https://www.nlm.nih.gov/mesh/meshsugg.html

MeSH, 2013

- There are 26,853 descriptors in 2013 MeSH. There are also over 213,000 entry terms that assist in finding the most appropriate MeSH Heading
- MeSH files are updated every week on Sunday (Supplementary Concepts)

MeSH 유형

- Descriptors
  - Main Headings
  - Publication Types
  - Geographicals
  - Check Tags
- Subheading (=Qualifiers)
- Supplementary Concepts

MeSH Categories

1. Anatomy [A]
2. Organisms [B]
3. Diseases [C]
4. Chemicals and Drugs [D]
5. Analytical, Diagnostic and Therapeutic Techniques and Equipment [E]
6. Psychiatry and Psychology [F]
7. Phenomena and Processes [G]
8. Disciplines and Occupations [H]
9. Anthropology, Education, Sociology and Social Phenomena [I]
10. Technology, Industry, Agriculture [J]
11. Humanities [K]
12. Information Science [L]
13. Named Groups [M]
14. Health Care [N]
15. Publication Characteristics [V]
16. Geographicals [Z]

MeSH Tree Structures

- Neoplasms [C04]
  - Neoplasms by Site [C04.588]
    - Abdominal Neoplasms [C04.588.033] +
    - Anal Gland Neoplasms [C04.588.083]
    - Bone Neoplasms [C04.588.149] +
    - Breast Neoplasms [C04.588.180]
      - Breast Neoplasms, Male [C04.588.180.260]
      - Carcinoma, Ductal, Breast [C04.588.180.390]
      - Hereditary Breast and Ovarian Cancer Syndrome [C04.588.180.483]
      - Inflammatory Breast Neoplasms [C04.588.180.576]
    - Digestive System Neoplasms [C04.588.274] +

MeSH Browser

- The **MeSH browser** is an online vocabulary look-up aid available for use with MeSH®. The browser does not link directly to any MEDLINE or other database retrieval system and thus is not a substitute for the PUBMED system
- (http://www.nlm.nih.gov/mesh/MBrowser.html)

NATIONAL LIBRARY OF MEDICINE | MEDICAL SUBJECT HEADINGS

MeSH Home | Contact NLM | Site Index | Search Our Web Site | NLM Home

Health Information | Library Services | Research Programs | New & Noteworthy | General Information

Navigate from tree top

MeSH Browser (2013 MeSH):
The files are updated every week on Sunday.
Go to 2012 MeSH

Search: diabetes mellitus, type 2

Find Exact Term | Find Terms with ALL Fragments | Find Terms with ANY Fragment

Search Options:
- All
- Main Headings
- Qualifiers
- Supplementary Concepts
- MeSH Unique ID
- Text words in Annotation & Scope Note
- Search in these fields of chemicals:
  - Heading Mapped To (HM) (Supplementary List)
  - Indexing Information (II) (Supplementary List)
  - Pharmacological Action (PA)
  - CAS Registry/EC Number/UNII Code (RN)
  - Related Registry Number (RR)

MeSH

About MeSH Browser | MeSH Home Page | Questions or Comments

Main Heading

Return to Entry Page

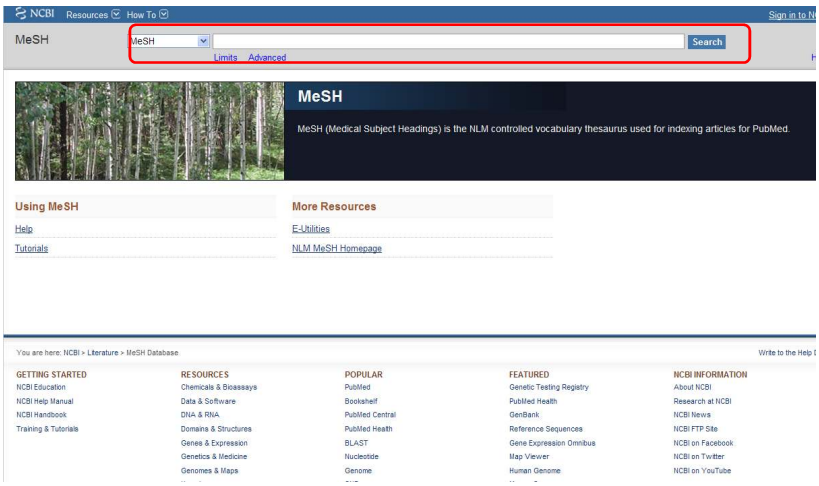
Go to Concept View; Go to Expanded Concept View

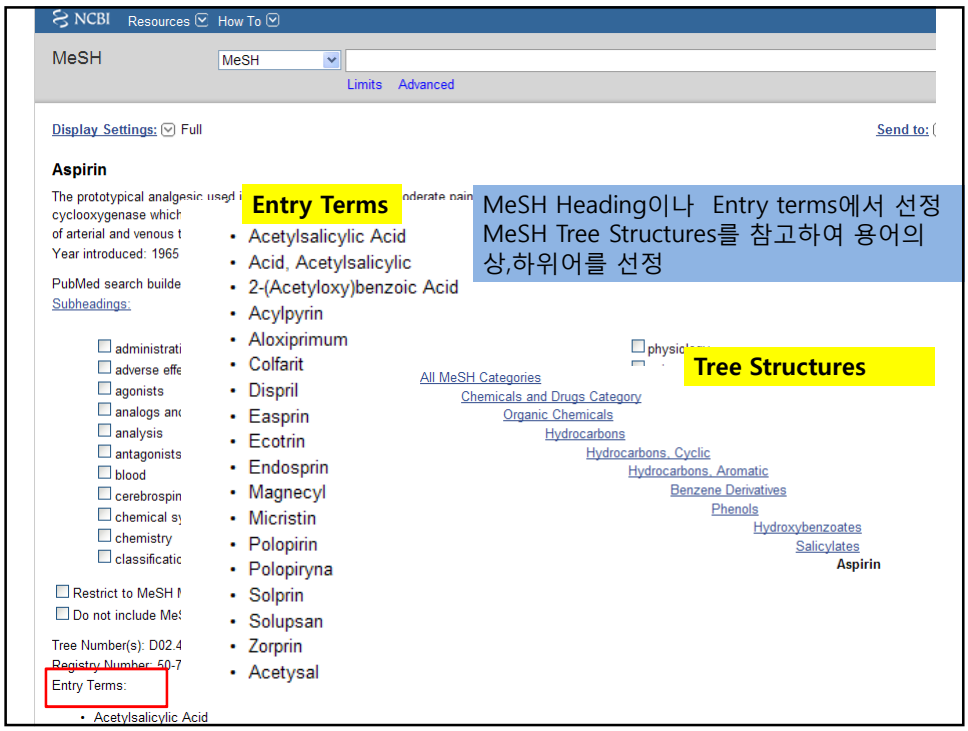
MeSH Heading	Diabetes Mellitus, Type 2 표목
Tree Number	C18.452.394.750.149 계층번호
Tree Number	C19.246.300
Scope Note	A subclass of DIABETES MELLITUS that is not INSULIN-responsive or dependent (NIDDM). It is characterized initially by INSULIN RES and eventually by GLUCOSE INTOLERANCE; HYPERGLYCEMIA; and overt diabetes. Type II diabetes mellitus is no longer considered a seldom develop KETOSIS but often exhibit OBESITY. 주석
Entry Term	Diabetes Mellitus, Adult-Onset
Entry Term	Diabetes Mellitus, Ketosis-Resistant
Entry Term	Diabetes Mellitus, Maturity-Onset
Entry Term	Diabetes Mellitus, Non Insulin Dependent
Entry Term	Diabetes Mellitus, Non-Insulin-Dependent 기입어: 동의어, 유의어,
Entry Term	Diabetes Mellitus, Noninsulin Dependent
Entry Term	Diabetes Mellitus, Noninsulin-Dependent
Entry Term	Diabetes Mellitus, Slow-Onset
Entry Term	Diabetes Mellitus, Stable
Entry Term	Diabetes Mellitus, Type II
Entry Term	Maturity-Onset Diabetes
Entry Term	Maturity-Onset Diabetes Mellitus
Entry Term	MODY
Entry Term	NIDDM
Entry Term	Noninsulin-Dependent Diabetes Mellitus
Entry Term	Type 2 Diabetes Mellitus
See Also	Metabolic Syndrome X 관련어
See Also	Rats, Inbred OLETF
Allowable	BL CF CI CL CN CO DH DI DT EC EH EM EN EP ET GE HI IM ME MI MO NU PA PC PP PS PX RA RH RI RT SU TH UR US VE 허용부표목

MeSH Database

- Use the **MeSH database** to find MeSH terms, including Subheadings, Publication Types, Supplementary Concepts and Pharmacological Actions, and then build a PubMed search
- http://www.ncbi.nlm.nih.gov/mesh

MeSH Database





Related citations in PubMed

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed | Search | Advanced

Display Settings: Abstract | Send to:

J Am Geriatr Soc. 2013 May;61(5):843-4. doi: 10.1111/jgs.12236.

Aspirin use after diagnosis improves survival in older adults with colon cancer.

Lai SW, Liao KF.

Comment on

Aspirin use after diagnosis improves survival in older adults with colon cancer: a retrospective cohort study. [J Am Geriatr Soc. 2012]

PMID: 23672562 [PubMed - indexed for MEDLINE]

Publication Types, MeSH Terms, Substances

Publication Types
Comment
Letter

PubMed 간략 서지정보의 MeSH 참고

MeSH Terms
Anti-Inflammatory Agents, Non-Steroidal/therapeutic use*
Aspirin/therapeutic use*
Colonic Neoplasms/drug therapy*
Colonic Neoplasms/mortality*
Female
Humans
Male

Substances
Anti-Inflammatory Agents, Non-Steroidal
Aspirin

LinkOut - more resources

Save items
Add to Favorites

Related citations in PubMed
Aspirin use after diagnosis improves survival older adults with colon [J Am Geriatr Soc. 2
Aspirin as colon cancer treatment? [Harv Health Lett. 2
Study finds possible role for aspirin as treatment for colon cancer. [BMJ. 2
Review [Aspirin, non-steroidal anti-inflammatory age [Gastroenterol Clin Biol. 1
Review Aspirin and related nonsteroidal ant inflammatory drugs as chemop [Prev Med. 1
See revie
See

Related citations in PubMed의 유사논문에 부여된 MeSH 참고

Aspirin after heart attack or stroke.

PubMed 상세 서지정보의 MeSH와 초록 참고

Abstract

PURPOSE: This research compares the predictive value of the abdominal obesity indicator, waist circumference (WC), and the overall obesity indicator, body mass index (BMI), among men and women with regard to type 2 diabetes.

MATERIALS AND METHODS: This study used data collected from 4,400 households selected by a stratified multistage probability sampling method during the 2001 Korea National Health and Nutrition Examination Survey (KNHANES). The final study sample included 4,684 subjects over 30 years of age who had completed the health examination required for the analysis of the health interview and health behavior surveys.

RESULTS: Both men and women showed significant differences in fasting blood glucose (FBG) or HbA1c levels based on abdominal obesity irrespective of BMI. However, the presence of overall obesity among men with abdominal obesity was not significantly correlated with FBG or HbA1c levels, while the presence of overall obesity among women with abdominal obesity was significantly different in regard to FBG or HbA1c levels.

CONCLUSION: Both WC and BMI emerged as a measures of risk factors for type 2 diabetes among women while only WC emerged as a risk factor for diabetes among men.

PMID: 20879050 [PubMed - indexed for MEDLINE] PMCID: PMC2995986 Free PMC Article

Related citations

YMJ Yonsei Medical Journal Free Full Text | FREE full text article in PubMed Central

MeSH Terms, Substances

MeSH Terms
Adult
Blood Glucose/analysis*
Body Mass Index
Diabetes Mellitus, Type 2/drug therapy*
Female
Health Behavior
Hemoglobin A, Glycosylated/metabolism
Humans
Insulin/administration & dosage*
Insulin/therapeutic use*
Male
Middle Aged
Nutrition Surveys

검색에 유용한 Abstracts 작성

함축된 초록 작성

- 저자키워드로 채택되지 않은 중심개념은 초록에 기술
- 저자가 기술하는 단어, 어구, 문장의 종류, 단어의 출현위치 등에 의해 검색여부가 결정됨
- 연구재료의 성별, 종별, 연령, 동물명등은 초록의<연구 재료와 방법>에 함축적으로 요약

Age Groups

- Newborn: birth-1 mo
- Infant: 1-23 mo
- Preschool Child: 2-5 yr
- Child: 6-12 yr
- Adolescent: 13-18 yr
- Young Adult: 19-24 yr
- Adult: 19-44 years
- Middle Aged: 45-64 yr
- Aged: 65+ yr
- 80 and over: 80+ yr

예) "10 patients (7 males and 3 females; 68 years and 48 to 78 years, respectively)"

-> 색인: Humans, Male, Female, Middle Aged, Aged

예) "58-yr old man", "14-yr old girl"과 같이 정형화된 어구 사용

Animals

- 동물실험의 경우 연구대상이 되는 동물명을 정확하게 초록에 기술할 필요가 있음

Sprague-Dawley rats, Hamsters, Dogs

예) hepatic damage induced by carbon tetrachloride in **Sprague-Dawley rats**

Geographicals

- 지리명 (Geographicals)
  Korea, Seoul 등

  예)
  The study subjects were 30~80years old, 513 women living in **Seoul** and **Kyunggi area** who participated in 2011 KNHANES

Study Designs

- RandomRandomized Controlled Trial
- Retrospective Studies
- Cohort Studies
- Case Control Studies
- Multicenter Study

- 예) Combined treatment with headgear and the Frog appliance for maxillary molar distalization: a randomized controlled trial

맺음말

- 학술지 편집인
  - 약어, 도치어, 단수/복수의 차이 등에 대하여 저자와 협의하여 MeSH로 작성하는 노력이 필요함
  - 학술지 투고 저자들을 대상으로 하는 MeSH 교육이 필요함
  - 저자키워드 작성에 대한 자세한 지침을 작성하여 안내

맺음말

- 저자
  - 매력있는 제목
  - 함축된 초록
  - 핵심단어로 저자키워드 작성

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