PR3144 Principles of Research Methods
Library Services & Database Searching

18 Jan 2018
Toh Kim Kee
*Medical Library*
Outline

Library Services
– Loans Services for Honours Year Students

Searching skills
– Information Sources & Evaluation
– Concepts & Search Strategies

Databases Searching
– PubMed
– Embase

Other Resources & Tools
Library Services for Honours Year Students
# Loan Entitlement for Honours Students

## Main Shelves Books

<table>
<thead>
<tr>
<th>Categories</th>
<th>Undergraduate Students</th>
<th>Honours &amp; Graduate Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Entitlement</td>
<td>20 books for 14 days</td>
<td>30 books for 28 days</td>
</tr>
<tr>
<td>Online Renewals</td>
<td>3 times</td>
<td>3 times</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of materials</th>
<th>Reserved Books/Readings (RBR)</th>
<th>Bound Periodicals</th>
<th>Reference Items</th>
<th>AV Items (excluding accompanying CDs with main shelves books)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Period</td>
<td>2 hours / overnight</td>
<td>1 day*</td>
<td>Use in library</td>
<td>View in library</td>
</tr>
</tbody>
</table>

*Not applicable in C J Koh Law & Medical Bound Journals

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**More Information:**
<table>
<thead>
<tr>
<th>Title and Author</th>
<th>Edition/Year</th>
<th>ISBN</th>
<th>Publisher</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designing clinical research</td>
<td>3rd ed. / c2007</td>
<td>9780781782104</td>
<td>Philadelphia, PA: Lippincott Williams &amp; Wilkins</td>
<td>References</td>
</tr>
<tr>
<td>Author: Hulley, Stephen B., Ovid Technologies, Inc.</td>
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<td></td>
<td></td>
<td>Location: MD Books</td>
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<tr>
<td>Author: Drummond, Michael, author., Sculpher, Mark J., author., Claxton, Karl, author., Stoddart, G. L., author., Torrance, George W., author.</td>
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<td></td>
<td>Location: MD RBR (Loans Desk) Call #:RA410.5 Met 2015</td>
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</table>
Document Delivery Service (DDS)

- Request journal articles, book chapters or conference papers that are **not available** in NUS Libraries.
- Max of 5 articles per academic year *(Year 1 to Honours)*
- Cost borne by NUS Libraries *(library reserves the right to reject requests due to budgetary constraints)*

More information:


OR

Search FAQ in NUS Libraries Portal

http://libfaq.nus.edu.sg/
Information Sources & Evaluation
Information Sources

› Primary Sources
   – Original materials/information on which other research is based
     E.g. research articles, conference papers, surveys, dissertations, technical reports etc

› Secondary Sources
   – Analyse, evaluate, interpret, summarize or reorganize primary sources
     E.g. reviews, article indexes/databases (PubMed, Embase etc)

› Tertiary Sources
   – Compiled and distilled information from primary and secondary sources
     E.g. reference book (BNF), directories, encyclopedias, guidebooks etc

Adapted from: https://hsl.lib.umn.edu/biomed/help/primary-secondary-and-tertiary-sources-health-sciences
### Guidelines for Evaluation of Resources

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Currency</strong></td>
<td>When was the Information published? Are their references current?</td>
</tr>
<tr>
<td><strong>Relevance</strong></td>
<td>Does the information relate to my topic? What target audience is it written for?</td>
</tr>
<tr>
<td><strong>Authoritativeness</strong></td>
<td>Author’s Credentials, Subject Expert? Is it edited or peer-reviewed?</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Is the information Valid and Reliable?</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>What is the purpose of the information. Advertising? Scholarly work? Any Bias?</td>
</tr>
</tbody>
</table>

For more Information, watch video on evaluating information sources: [http://youtu.be/tIVGRym3Y40](http://youtu.be/tIVGRym3Y40)
refer to Research Skills Subject Guide: [http://libguides.nus.edu.sg/skills/evaluate](http://libguides.nus.edu.sg/skills/evaluate)
Concepts
&
Search Strategies
Develop & Refine your search strategy

› Identify key concepts of your research topic

› Use appropriate Boolean Operators – **AND, OR, NOT**
  → to combine search terms

› **Use Controlled Vocabulary** - use the Thesaurus in each database to determine the best vocabulary
  E.g. For PubMed, use the MeSH (Medical Subject Headings)

› **Use Truncation** - search variations of a term--singular/plural, spelling variants, etc. The most common truncation symbol is the asterisk (*).

› **Use Phrase Search** - search for studies with the exact phrase

› **Limit Search Results** - the most common limits are date, language, or publication type
Search Topic:

Does vancomycin cause kidney failure?
Formulate Search Statement

**Topic**

Does *vancomycin* cause *kidney failure*?

**Keywords**

<table>
<thead>
<tr>
<th>Concept 1</th>
<th>Concept 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>vancomycin</em></td>
<td><em>kidney failure</em></td>
</tr>
<tr>
<td><em>vancocin</em></td>
<td><em>kidney injury</em></td>
</tr>
<tr>
<td><em>vancocine</em></td>
<td><em>renal failure</em></td>
</tr>
</tbody>
</table>

(vancomycin OR vancocin OR vancocine) AND (kidney failure OR kidney injury OR renal failure)
**Boolean**

**AND**
both terms must be present > fewer results
→ vancomycin AND kidney failure

**OR**
either term may be present > more results
→ kidney failure OR kidney injury

**NOT**
→ Use with caution
human NOT animals
Truncation *

Searches spelling variants

* Eg, Vaccinat* searches:
  - vaccinate
  - vaccination
  - vaccinations
  - vaccinator
  - Vaccinating

*Note: PubMed searches only first 600 variants*
“Phrase Searching”

Search for exact phrase:

Eg: “Drug Delivery Systems”
   “Attention Deficit Disorder”
Database Searching

PubMed.gov

Embase®
Learning Objectives

Learn how to:

• search effectively using
  o Keyword
  o MeSH or Emtree
  o Clinical Queries (PubMed)

• access full-text articles

• manage search results (citations)
• **Search interface** developed by the National Center for Biotechnology Information (NCBI) at National Library of Medicine (NLM)

• Provide access to more than 27 million citations for biomedical literature from MEDLINE, life science journals, and online books.

Watch these PubMed tutorials: [https://www.youtube.com/playlist?list=PLBD13A2628C7A9965](https://www.youtube.com/playlist?list=PLBD13A2628C7A9965)
PubMed

Content:
• MEDLINE, largest component of PubMed citations from >5600 journals
• Books from NCBI bookshelf
• 1946 to present

Strengths:
• MEDLINE is the leading source of peer reviewed biomedical literature
• MEDLINE is indexed using MeSH (updated annually)
• Free access (login via NUS Libraries to access full-text of articles from library subscribed resources)
MEDLINE

- **Biomedical literature database** (~24 million citations) covering the fields of medicine, dentistry, nursing, pharmacy, health care system and life sciences
- MEDLINE records contain journal citations indexed with Medical Subject Headings (MeSH)
- Citations are selected from ~5600 reputable biomedical journals published in US and 80 other countries
- Updated daily
Accessing PubMed via NUS Libraries Portal

NUS staff & Students - via NUS Libraries Portal:

1. Go to: http://www.lib.nus.edu.sg

2. Click on “Databases” tab and then click on “PubMed” under Major & Popular Databases

Advantages
Directly access full-text articles via electronic journals subscribed by NUS Libraries
Accessing PubMed (via public domain)

› Google PubMed > Click PubMed Home

› Can only access free articles from PMC or other free open-access journals via this method

› Need to append library proxy bookmarklet to access NUS Libraries subscribed articles
Formulate Search Statement

**Topic**

Does **vancomycin** cause **kidney failure**?

**Keywords**

<table>
<thead>
<tr>
<th>Concept 1</th>
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<tr>
<td>vancomycin</td>
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<td>kidney injury</td>
</tr>
<tr>
<td>vancocine</td>
<td>renal failure</td>
</tr>
</tbody>
</table>

(vancomycin OR vancocin OR vancocine) AND (kidney failure OR kidney injury OR renal failure)
Comparison of Search Results

Search *vancomycin* in All Fields:

Search *vancomycin* in Title/Abstract:
Keyword Search

› Construct and search each concept separately
› **First concept:** (vancomycin OR vancocin OR vancocine)
Second concept: ("kidney failure" OR "kidney injury" OR "renal failure")
Keyword Search

› Combine the two concept searches together

PubMed Advanced Search Builder

(((vancomycin[Title/Abstract] OR vancomycin[Title/Abstract] OR vancomycin[Title/Abstract])) AND ((kidney failure[Title/Abstract] OR kidney injury[Title/Abstract] OR renal failure[Title/Abstract])))

Builder

All Fields ▼ (vancomycin[Title/Abstract] OR vancomycin[Title/Abstract] OR vancomycin[Title/Abstract])

AND ▼ All Fields ▼ (kidney failure[Title/Abstract] OR kidney injury[Title/Abstract] OR renal failure[Title/Abstract])

Search or Add to history

History

<table>
<thead>
<tr>
<th>Search</th>
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<th>Query</th>
<th>Items found</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
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<td>03:08:24</td>
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<tr>
<td>#46</td>
<td>Add</td>
<td>Search (vancomycin[Title/Abstract] OR vancomycin[Title/Abstract] OR vancomycin[Title/Abstract])</td>
<td>23284</td>
<td>02:54:13</td>
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</table>
Keyword Search Results

Search results

Items: 1 to 20 of 515

   PMID: 29227201

2. Piperacillin-Tazobactam Plus Vancomycin Equals Acute Kidney Injury: Does It Add Up?
   Beckman EJ.
   No abstract available.
   PMID: 29268737

   PMID: 29189343

Search details

Find related data

Find items

Recent Activity

Systematic review and meta-analysis of vancomycin-induced...
Keyword Search

› Results are broad and not really precise, but contains very recent articles.

– Major concept of the articles in the results *may not* focus on the topic: “Does vancomycin cause kidney failure?”

› May leave out articles that use “renal toxicity”, “renal toxicology”, nephrotoxicity etc.

› To get more relevant articles which may include other keywords, use MeSH terms
Systematic review and meta-analysis of vancomycin-induced nephrotoxicity associated with dosing schedules that maintain troughs between 15 and 20 milligrams per liter.

van Hal SJ, Paterson DL, Lodise TF.

Abstract
In an effort to maximize outcomes, recent expert guidelines recommend more-intensive vancomycin dosing schedules to maintain vancomycin troughs between 15 and 20 mg/liter. The widespread use of these more-intensive regimens has been associated with an increase in vancomycin-induced nephrotoxicity reports. The purpose of this systematic literature review is to determine the nephrotoxicity potential of maintaining higher troughs in clinical practice. All studies pertaining to vancomycin-induced nephrotoxicity between 1996 and April 2012 were identified from PubMed, Embase, Cochrane Controlled Trial Registry, and Medline databases and analyzed according to Cochrane guidelines. Of the initial 240 (≥ 15 mg/liter) were associated with increased relative to lower troughs of <15 mg/liter. This was restricted to studies that examined a confirmed diagnosis of ≥ 15 mg/liter and nephrotoxicity persisting up to two days after the event. An incremental increase in nephrotoxicity was reversible in the majority of cases. The literature indicates that an exposure-nephrotoxicity relationship exists, where the trough concentration and higher dosing schedules increased the risk of nephrotoxicity following administration. Vancomycin-induced nephrotoxic episodes. The collective evidence suggests that a nephrotoxic event increased as a function of the trough concentration and higher dosing schedules increased the risk of nephrotoxicity following administration.
Now let’s try constructing a MeSH search for the topic: “Does vancomycin cause kidney failure?”
Search MeSH term for vancomycin

› Use drop down menu to change option from PubMed to MeSH
› Search “vancomycin” in the MeSH search bar
› Click on the first result

Results: 10

1. Vancomycin
   Antibacterial obtained from Streptomyces orientalis. It is a glycopeptide related to RISTOCETIN that inhibits bacterial cell wall assembly and is toxic to kidneys and the inner ear.

2. Vancomycin Resistance
   Nonsusceptibility of bacteria to the action of VANCOMYCIN, an inhibitor of cell wall synthesis.
   Year introduced: 2000

3. VraR protein, Staphylococcus aureus [Supplementary Concept]
   GenBank AB035448
   Date introduced: October 24, 2003

4. VraS protein, Staphylococcus aureus [Supplementary Concept]
   GenBank AB035448
   Date introduced: October 24, 2003
Search MeSH term for vancomycin

Vancomycin
Antibacterial obtained from Streptomyces orientalis. It is a glycopeptide related to RISTOCETIN that inhibits bacterial cell wall assembly and is toxic to kidneys and the inner ear.

PubMed search builder options
Subheadings:
- administration and dosage
- adverse effects
- agonists
- analogs and derivatives
- analysis
- antagonists and inhibitors
- biosynthesis
- blood
- cerebrospinal fluid
- chemical synthesis
- chemistry
- classification
- contraindications
- economics
- etiology
- history
- immunology
- isolation and purification
- metabolism
- organization and administration
- pharmacokinetics
- pharmacology
- physiology
- poisoning
- radiation effects
- standards
- therapeutic use
- toxicity
- urine

Restrict to MeSH Major Topic.
Search MeSH term for kidney failure

Results: 4

1. Renal Insufficiency
   Conditions in which the KIDNEYS perform below the normal level in the ability to remove wastes, concentrate URINE, and maintain ELECTROLYTE BALANCE; BLOOD PRESSURE; and CALCIUM metabolism. Renal insufficiency can be classified by the degree of kidney damage (as measured by the level of PROTEINURIA) and reduction in GLOMERULAR FILTRATION RATE.
   Year introduced: 2005

2. Kidney Failure, Chronic
   The end-stage of CHRONIC RENAL INSUFFICIENCY. It is characterized by the severe irreversible kidney damage (as measured by the level of PROTEINURIA) and the reduction in GLOMERULAR FILTRATION RATE to less than 15 ml per min (Kidney Foundation: Kidney Disease Outcome Quality Initiative, 2002). These patients generally require HEMODIALYSIS or KIDNEY TRANSPLANTATION.
   Year introduced: 1967 (1965)

3. Acute Kidney Injury
  Abrupt reduction in kidney function. Acute kidney injury encompasses the entire spectrum of the syndrome including acute kidney failure; ACUTE KIDNEY TUBULAR NECROSIS; and other less severe conditions.
   Year introduced: 2011

4. Hyperuricemic Nephropathy, Familial Juvenile 2 [Supplementary Concept] 
   Date introduced: August 24, 2012
Acute Kidney Injury
Abrupt reduction in kidney function. Acute kidney injury encompasses the entire spectrum of the syndrome including acute kidney failure; ACUTE KIDNEY TUBULAR NECROSIS; and other less severe conditions.
Year introduced: 2011

PubMed search builder options

- analysis
- anatomy and histology
- blood
- cerebrospinal fluid
- chemically induced
- classification
- complications
- congenital
- cytology
- diagnosis
- diagnostic imaging
- diet therapy
- drug effects
- drug therapy
- economics
- embryology
- enzymology
- epidemiology
- ethnology
- etiology
- genetics
- history
- immunology
- isolation and purification
- metabolism
- microbiology
- mortality
- nursing
- organization and administration
- parasitology
- pathology
- pharmacology
- physiology
- physiopathology
- prevention and control
- psychology
- radiation effects
- radiotherapy
- rehabilitation
- statistics and numerical data
- surgery
- therapeutic use
- therapy
- transplantation
- urine
- veterinary
- virology
MeSH Qualifiers with Scope Notes

Listed below are MeSH Topical Qualifiers listed by Name, Abbreviation, and Short Form. Each Qualifier is defined by a Scope Note that provides guidance on how it should be used.

**abnormalities** - AB, - ABNORM

Used with organs for congenital defects producing changes in the morphology of the organ. It is used also for abnormalities in animals.

**chemical synthesis** - CS, - CHEM SYN

Used for the chemical preparation of molecules in vitro. For the formation of chemical substances in organisms, living cells, or subcellular fractions, "biosynthesis" is used.

**chemically induced** - CI, - CHEM IND

Used for biological phenomena, diseases, syndromes, congenital abnormalities, or symptoms caused by endogenous or exogenous substances.

**chemistry** - CH, - CHEM

Used with chemicals, biological, and non-biological substances for their composition, structure, characterization, and properties; also used for the chemical composition or content of organs, tissue, tumors, body fluids, organisms, and plants. Excludes chemical analysis and determination of substances for which "analysis" is used; excludes synthesis for which "chemical synthesis" is used; excludes isolation and purification of substances for which "isolation & purification" is used.
Search MeSH term for kidney failure

Acute Kidney Injury
Abrupt reduction in kidney function. Acute kidney injury encompasses the entire spectrum of the syndrome including acute kidney failure; ACUTE KIDNEY TUBULAR NECROSIS; and other less severe conditions.
Year introduced: 2011

PubMed search builder options
Subheadings:
- analysis
- anatomy and histology
- blood
- cerebrospinal fluid
- chemically induced
- classification
- complications
- congenital
- cytology
- diagnosis
- diagnostic imaging
- diet therapy
- drug effects
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- embryology
- enzymology
- epidemiology
- ethology
- etiology
- genetics
- history
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- metabolism
- microbiology
- mortality
- nursing
- organization and administration
- parasitology
- pathology
- pharmacology
- physiology
- physiopathology
- prevention and control
- psychology
- radiation effects
- radiotherapy
- rehabilitation
- statistics and numerical data
- surgery
- therapeutic use
- therapy
- transplantation
- urine
- veterinary
- virology

Restrict to MeSH Major Topic.

Do not include MeSH terms found below this term in the MeSH hierarchy.
MeSH Hierarchy

All MeSH Categories
Diseases Category
Male Urogenital Diseases
Urologic Diseases
Kidney Diseases
Renal Insufficiency
Acute Kidney Injury
Kidney Tubular Necrosis, Acute

All MeSH Categories
Diseases Category
Female Urogenital Diseases and Pregnancy Complications
Female Urogenital Diseases
Urologic Diseases
Kidney Diseases
Renal Insufficiency
Acute Kidney Injury
Kidney Tubular Necrosis, Acute
Entry Terms

To expand your search, consider these synonyms in keyword search

Other ways to find Synonyms

- Thesaurus
- Subject terms in Library catalogue
- Key concepts or Descriptors (author supplied)
- Find a review article and look for “keywords”
MeSH Search – combining MeSH terms

PubMed Advanced Search Builder

("Vancomycin"[Mesh]) AND "Acute Kidney Injury/chemically induced"[Majr]

Search or Add to history

History

<table>
<thead>
<tr>
<th>Search</th>
<th>Add to builder</th>
<th>Query</th>
<th>Items found</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>#8</td>
<td>Add</td>
<td>Search &quot;Vancomycin&quot;[Mesh]</td>
<td>12169</td>
<td>22:15:29</td>
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<tr>
<td>#3</td>
<td>Add</td>
<td>Search vancomycin[Title/Abstract]</td>
<td>23285</td>
<td>21:35:12</td>
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<tr>
<td>#1</td>
<td>Add</td>
<td>Search vancomycin</td>
<td>26095</td>
<td>21:11:53</td>
</tr>
</tbody>
</table>
MeSH Search Results

Search results
- Items: 1 to 20 of 83

1. The Nephrotoxicity of Vancomycin.
   Filippone EJ, Kraft WK, Farber JL.
   Review
   PMID: 28474732
   Free PMC Article
   Similar articles

   Pan K, Ma L, Xiang Q, Li X, Li H, Zhou Y, Yang L, Cui Y.
   PMID: 28426688
   Free PMC Article
   Similar articles

## Keyword vs MeSH Search

<table>
<thead>
<tr>
<th><strong>Keyword</strong></th>
<th><strong>MeSH</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad, less precise</td>
<td>More Specific</td>
</tr>
<tr>
<td>Retrieves all types of citations including latest (as supplied by publisher)</td>
<td>Retrieves only citations indexed with MeSH terms (indexing: time lag, older)</td>
</tr>
<tr>
<td>Useful if there is no MeSH term available to represent the concept</td>
<td>Consistent way to retrieve information that may use different terminology for the same concept</td>
</tr>
</tbody>
</table>
Using MeSH terms and keywords

To get the best of both worlds, construct a search statement that includes both keywords and MeSH.

For example:

Refining Search Results

Search results
Items: 1 to 20 of 245


Complete Search

Keyword

MeSH

Major MeSH

broadest, least precise, current

narrower, more precise, slightly dated

most precise
Searching Clinical Queries on PubMed

- What can be searched under Clinical Queries?
  - Case studies, Cohort studies, randomised-control trials, systematic reviews and meta-analysis
Let’s try searching Clinical Queries based on this clinical question...

Mrs Tan has a 5 year old son with asthma. With the upcoming flu season, she is considering to let her son receive the influenza vaccine. However, she is worried that the vaccine could trigger her son’s asthma. What does the current available evidence suggest?
Searching Clinical Queries...

› Translate the clinical question into a simple search statement: *asthma AND influenza vaccine*

› After obtaining the initial search result, select “Etiology” for a more appropriate category
Searching Clinical Queries...

PubMed Clinical Queries

Results of searches on this page are limited to specific clinical research areas. For comprehensive searches, use PubMed directly.

Search: asthma AND influenza vaccine

Clinical Study Categories

- Category: Etiology
- Scope: Broad

Systematic Reviews

- Results: 5 of 23
  - Effectiveness of Influenza Vaccines in Asthma: A Systematic Review and Meta-Analysis

Medical Genetics

- Results: 5 of 13
  - Plant-based vaccines against respiratory diseases: current status and future prospects
  - Marquez-Edoba VA, Rosales-Mendoza S, Baltrân-López JL, González-Cortega O.
  - Expert Rev Vaccines. 2017 Feb; 16(2):137-149. Epub 2016 Sep 16

This column displays citations filtered to a specific clinical study category and scope. These search filters were developed by

See all (312)
How to download full-text articles after searching?

Influenza vaccination for patients with chronic obstructive pulmonary disease: Implications for pharmacists.

Arabyat RM, Raisch DW, Bakhireva L.

Abstract

BACKGROUND: Influenza virus is responsible for substantial morbidity and mortality. Specific populations are at higher risk for exacerbations from influenza virus, such as patients with chronic obstructive pulmonary disease (COPD). Influenza vaccination coverage among COPD patients is low. Pharmacists can improve influenza vaccination among COPD patients by recognizing factors that influence vaccination and addressing these factors.

OBJECTIVES: To (1) determine the recent influenza vaccination coverage among patients with COPD, (2) identify factors that were associated with immunization, and (3) interpret the results based upon Andersen's healthcare utilization model.
What happens if the article’s full-text is not available upon click on “FindIt!@NUS Libraries”?

› Double check for subscription of the journal in LINC
› Print copies might be available
› In Books & Media tab, search for the journal’s name, select for “Title” and “Journals Collection”
There may be more than one aggregator providing access to the article; check for the subscription period.

Click on the aggregator/publisher links to access the journal.

Check for the status of print copies, if available, under “Lib. Has.”

<table>
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<table>
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<th>STACK#</th>
<th>STATUS</th>
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<td>RM1 D</td>
<td>v0049 n1-3 95</td>
<td>M12244</td>
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<tr>
<td>MD Closed Stacks</td>
<td>RM1 D</td>
<td>v0049 n4-6 95</td>
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</tbody>
</table>
How to Save Searches and set Email Alerts

Save Searches and Set E-mail Alerts

A component of My NCBI

https://youtu.be/WbFjV91YNNY
Embase®
Subject coverage (>30 million records)

- Biomedical science and clinical research, pharmacology and pharmaceutical science
- Medical devices
- Life Sciences & Allied health

Content:
- Published and peer-reviewed literature, In-press publications.
- Over 300,000 Conference abstracts from about 1000 important biomedical, drug and medical device conferences from 2009 onwards
- Since 1974

Strengths:
- Deep full-text indexing with Emtree Thesaurus (71,000+ terms), includes all MESH terms, particularly strong in drug, disease and medical device terms
- About 20% of the records are unique to Embase, i.e. are not available from MEDLINE esp. from countries outside North America
How to get to Embase

› Search for Embase under the “Database” tab on the library portal main page
Embase – Drug search

› Search for specific sub-topics on a particular drug
› Try searching for ‘adverse drug reaction’ of Vancomycin
Embase – Find Emtree term

› Lookup Emtree term and search

Find Term: Browse by Facet

Type word or phrase (without quotes)

[Input: acute kidney failure]

For term: 'acute kidney failure'
Extend your search: □ Explode □ As major focus

[Buttons: Take this query to Disease Search; Add to Query Builder]

Emtree
- diseases
  - physical disease
    - physical disease by anatomical structure
      - urogenital tract disease
      - urinary tract disease
    - kidney disease
      - kidney failure

History
This term was added to Emtree in 1974

Synonyms
acute kidney injury; acute kidney insufficiency; acute renal failure; acute renal insufficiency; kidney acute failure; kidney failure, acute; kidney failure, acute; kidney insufficiency. acute; renal insufficiency, acute
Combining different searches

› Combine different search results using search history
Drug-induced acute kidney injury in the critically ill adult: Recognition and prevention strategies

Bentley M.L., Corwin H.L., Dasta J.

Critical Care Medicine 2010 38:6 SUPPL.(S169-S174) Cited by: 56

Drug Terms
- adeovir
- aminoglycoside derivative
- amphotericin B
- angiotensin receptor antagonist
- cephalosporin derivative
- cidovir
- ciprofloxacin
- cisplatin
- cocaine
- contrast medium
- cyclooxygenase 2 inhibitor
- cyclosporin
- dipeptidyl carboxypeptidase inhibitor
- diuretic agent
- foscarnet
- interleukin 2
- lanosprazole
- macrolide
- nonsteroid antiinflammatory agent
- omeprazole
- penicilln derivative
- phenytoin
- rifampin
- sulfonamide
- tacrolimus
- tenofovir
- tetracycline derivative
- unindexed drug
- valproic acid
- vancomycin

Disease Terms
- acute kidney tubule necrosis
- chronic kidney failure
- electrolyte disturbance
- glomerulonephritis
- Gram negative infection
- hyperkalemia
- hypertension
- interstitial nephritis
- kidney disease
- kidney dysfunction
- kidney injury
- kidney papilla necrosis
- kidney tubule acidosis
- mycosis
- nephrosis
- nephrotic syndrome
- nephrotoxicity
- oliguria
- side effect
Filter by Drug Trade Names & Drug Manufacturers
Example: Does vancomycin cause kidney failure?
Getting Full-text articles from Embase

› Use the “Find it! @NUS Libraries” button or “View Full Text” link to get full-text articles

1,746 results for search #1

Select number of items: Selected: 0 (clear) Show all abstracts Sort by: Relevance Publication Year Entry Date

1. Association of acute kidney injury with concomitant vancomycin and piperacillin/tazobactam treatment among hospitalized children
   JAMA Pediatrics 2017 171:12 Article Number e173219 Cited by: 0
   Embase MEDLINE Abstract Index Terms View Full Text Find it! @ NUS Libraries

2. Vancomycin Plus Piperacillin-Tazobactam and Acute Kidney Injury in Adults: A Systematic Review and Meta-Analysis
   Critical Care Medicine 2018 46:1 (12-20) Cited by: 0
   Embase MEDLINE Abstract Index Terms View Full Text Find it! @ NUS Libraries

3. Increased Risk of Acute Kidney Injury in Critically Ill Children Treated with Vancomycin and Piperacillin/Tazobactam
   Holsen M.R., Meaney C.J., Hassinger A.B., Fusco N.M.
   Pediatric Critical Care Medicine 2017 18:12 (e585-e591) Cited by: 1
   Embase Abstract Index Terms View Full Text Find it! @ NUS Libraries
Save Searches and Setting Email Alerts

› Select the search statement to be saved and click on “Save”

› Create an Elsevier account (same as Scopus, Science Direct)
<table>
<thead>
<tr>
<th>Access</th>
<th>PubMed</th>
<th>EMBASE</th>
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<td>Free database</td>
<td>Subscribed database</td>
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<td></td>
<td>• Via public domain</td>
<td>• Via library portal</td>
</tr>
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<td></td>
<td>• Via library portal (directly access full-text articles via electronic journals subscribed by NUS Libraries)</td>
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<table>
<thead>
<tr>
<th>Searching</th>
<th>PubMed</th>
<th>EMBASE</th>
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<tr>
<td></td>
<td>• Conduct basic searches with keywords.</td>
<td>• Conduct quick searches with keywords</td>
</tr>
<tr>
<td></td>
<td>o Keywords are automatically mapped to Medical Subject Headings (MeSH terms)</td>
<td>• Conduct advanced searches using Emtree Subject Headings</td>
</tr>
<tr>
<td></td>
<td>• Conduct advanced searches using MeSH terms and subheadings accessible via the MESH database</td>
<td>• Search for detailed pharmacological information using the specialized &quot;Drug Search“</td>
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<td>• Use filters to limit results</td>
<td>• Use filters to limit results.</td>
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<td></td>
<td></td>
<td>- Can limit results to include non-MEDLINE citations</td>
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OTHER relevant Databases for your FYP

Access via [NUS Libraries portal](http://libguides.nus.edu.sg/pharmacy) or [LINC](http://libguides.nus.edu.sg/pharmacy). For more info, please check LibGuides (http://libguides.nus.edu.sg/pharmacy)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Database</th>
<th>Description</th>
<th>Remarks</th>
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</table>
| All   | International Pharmaceutical Abstracts (IPA) | • Coverage of pharmaceutical science and health related drug literature from 1970 onwards with over 501,000 A&I records from over 800 global journals  
• Updated monthly | Includes some conference proceedings/abstracts |
| Pharmacokinetics / Pharmacodynamics / Drug Metabolism / Toxicology / Biomedical Sciences | MICROMEDEX® | • Referenced information about drugs, toxicology, diseases, acute care, and alternative medicine | Includes overview, dosing information, pharmacokinetics, caution, clinical applications, references |
Download Micromedex App on Mobile Device

› Login to Micromedex via library portal to obtain password and instructions for download

› Password is updated yearly

Resources

- Black Box Warnings
- Comparative Tables
- Do Not Confuse Drug List
- Drug Classes
- Drug Consults
- REMS

Drug Reference App

Drug Interactions App
<table>
<thead>
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<tbody>
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<td>Pharmacy Practice / Drug Use &amp; Outcome Study / Pharmacoeconomics/ Clinical Pharmacy</td>
<td>UptoDate®</td>
<td>• Covers over 10,500 clinical topics in 24 medical specialties.</td>
<td>Contains evidence based, peer reviewed information resource that covers current clinical findings and patient care.</td>
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<td>• More than 440,000 references/citations (integrate with Medline abstracts)</td>
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<td>• More than 32,000 graphics</td>
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<td>• More than 5,800 unique drug entries</td>
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<td>• Integrates with Lexicomp® Drug Interactions</td>
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<td>Medicinal Chemistry / Pharmaceutical Chemistry / Pharmaceutical Analysis / Natural Products</td>
<td>Reaxys</td>
<td>A chemistry database from Elsevier that allows you to plan your reaction synthesis; perform structure, substructure, reaction, reference, and common name search; and provides you with experimentally validated data</td>
<td>Can search by molecular structure/formula</td>
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<td>Topic</td>
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| Healthcare interventions and their effectiveness/Evidence-based medicine | Cochrane Library | • A collection of 6 databases that contain different types of high-quality, independent evidence to inform healthcare decision making.  
• Full-text Systematic Reviews of the Cochrane Collaboration accessible via Wiley Online Library | International coverage        |
| General – Medicine, science, engineering, arts and social sciences | Scopus     | Content includes:  
> 21,950 Peer-reviewed journals (including 3,600 full open access journals)  
> Over 8 million conference papers from 100,000 worldwide events  
> More than 150,000 books  
> Over 70 million records  
> Over 39 million patent records from 5 patent offices | Worldwide coverage  
> 50% of the content originating from European, Latin American and the Asia-Pacific region  
update daily               |
### OTHER relevant Guides for your FYP

<table>
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<tr>
<th>Topic</th>
<th>Library Guides</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Systematic Reviews/All</strong></td>
<td>Systematic review libguide: <a href="http://libguides.nus.edu.sg/sysreviews">http://libguides.nus.edu.sg/sysreviews</a></td>
<td>A summary of systematic review methodology and a list of systematic review related databases (including databases on clinical trials)</td>
</tr>
</tbody>
</table>
Other Useful Library Tools
Accessing full-text from ...

http://scholar.google.com
Install Find It! @NUS Libraries in Google Scholar

Installation instructions: [http://libguides.nus.edu.sg/googlescholarlinks](http://libguides.nus.edu.sg/googlescholarlinks)

Animated screenshots to guide you through: [https://youtu.be/L7gFD08B7vQ](https://youtu.be/L7gFD08B7vQ)
After turning on Find It! @NUS Libraries

Click on “Find It! @NUS Libraries” to view full text
Getting to full-text from: email alerts/Google Search

Use the Library **Proxy bookmarklet** to access full-text of links obtained from email alerts

[http://libguides.nus.edu.sg/proxybookmarklet](http://libguides.nus.edu.sg/proxybookmarklet)
relevant in Singapore. One recent study in Singapore revealed that despite prescribing appropriate granulocyte colony stimulating factors (G-CSF) prophylaxis support, up to 16% of cancer patients would experience at least one FN episode during their chemotherapy [6]. FN can lead to life-threatening complications, and the overall 30-day mortality among solid tumors and lymphomas patients with FN was reported as 6.6% by an audit study in Singapore [7]. Aside from the clinical burden, FN can also lead to significant economic burden on patients, payers, and general society. In Singapore, one
At the End of Your Write-Up

References

1. Freifeld AG, Bow EJ, Sepkowitz KA, et al. Clinical practice guideline


Source: http://scholarbank.nus.edu.sg/handle/10635/136063
Introduction to Endnote

A software that:
• stores and organizes citations
• inserts citations into a Word document
• format references in a predefined citation style

For more info: http://libguides.nus.edu.sg/endnote

Technical queries (e.g. installation):
call NUS IT Care at 6516 2080 or email itcare@nus.edu.sg

Please install Endnote X8 in your laptop before 11 Apr 2018 if you are using your laptop for the EndNote session.
THANK YOU

Best Wishes from

NUS Medical Library
Email: mdlib@nus.edu.sg
Telephone: 65162046

We value your feedback
https://tinyurl.com/parm18Jan