DeCS Health Terminology
Description, uses and services

BIREME/PAHO/WHO
Latin-American and Caribbean Center on Health Sciences Information
Pan American Health Organization
World Health Organization

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DeCS Description

• controlled vocabulary created by BIREME in 1982, fully compatible with MeSH (*)

DeCS – the Portuguese acronym for Descritores em Ciências da Saúde (Health Sciences Descriptors)

Concepts are arranged in both an alphabetical and a hierarchical structure

Yearly updated (idem MeSH)

Currently available in Portuguese, Spanish and English

Composed of 16 MeSH categories plus 4 extra categories

• an integrating component of the VHL and GHL
  - meta-searching by descriptor, ie, searches multiple IS
  - multilingual searching
Uses

- as a standard controlled vocabulary for indexing scientific and technical health-related documents
  
  It groups synonymous terms into concept units

- allows searching by subject (concepts), independently of the language

- hierarchical codes allow exploding (searching) all the terms of a conceptual hierarchy (branch)
## DeCS 2012 Categories

<table>
<thead>
<tr>
<th>Category name [category code]</th>
<th>Concepts</th>
<th>Synonyms (occurs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy [A]</td>
<td>1677</td>
<td>2668</td>
</tr>
<tr>
<td>Organisms [B]</td>
<td>3656</td>
<td>8466</td>
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<td>Diseases [C]</td>
<td>4578</td>
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<td>Chemicals and Drugs [D]</td>
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<tr>
<td>Analytical, Diagnostic and Therapeutic Techniques and Equipment [E]</td>
<td>2633</td>
<td>4628</td>
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<tr>
<td>Psychiatry and Psychology [F]</td>
<td>940</td>
<td>1469</td>
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<tr>
<td>Phenomena and Processes [G]</td>
<td>1912</td>
<td>3032</td>
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<tr>
<td>Disciplines and Occupations [H]</td>
<td>368</td>
<td>367</td>
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<tr>
<td>Anthropology, Education, Sociology and Social Phenomena [I]</td>
<td>528</td>
<td>1109</td>
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<tr>
<td>Technology, Industry, Agriculture [J]</td>
<td>486</td>
<td>920</td>
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<tr>
<td>Humanities [K]</td>
<td>187</td>
<td>151</td>
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<td>Information Science [L]</td>
<td>398</td>
<td>720</td>
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<tr>
<td>Named Groups [M]</td>
<td>211</td>
<td>362</td>
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<tr>
<td>Health Care [N]</td>
<td>1521</td>
<td>2801</td>
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<tr>
<td>Publication Characteristics [V]</td>
<td>150</td>
<td>124</td>
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<tr>
<td>Geographicals [Z]</td>
<td>384</td>
<td>323</td>
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<tr>
<td><strong>Subtotal MeSH</strong></td>
<td>26664</td>
<td>45930</td>
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<tr>
<td>Homeopathy [HP]</td>
<td>1944</td>
<td>1504</td>
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<tr>
<td>Science and Health [SH]</td>
<td>219</td>
<td>3868</td>
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<tr>
<td>Public Health [SP]</td>
<td>3491</td>
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<tr>
<td>Health Surveillance [VS]</td>
<td>828</td>
<td>4089</td>
</tr>
<tr>
<td><strong>Subtotal DeCS only</strong></td>
<td>4658</td>
<td>6162</td>
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<tr>
<td><strong>Total</strong></td>
<td>31322</td>
<td>51804</td>
</tr>
</tbody>
</table>
Vocabulary Features

TRILINGUAL

POLYHIERARCHICAL

POSTCOORDINATION

PRECOORDINATION
Language versions

DeCS’ Spanish and Portuguese terms are exported to the UMLS metathesaurus (Unified Medical Language System) and distributed as Spanish MeSH and Portuguese MeSH.

To date, there are 12 MeSH translations incorporated into the UMLS Metathesaurus.
Polyhierarchtical

A descriptor may belong to more than one category or to several branches of the same category due to the multidisciplinary nature of many concepts.

Example: Ethics belongs to the F, K and N categories

F = Psychiatry and Psychology; K = Humanities; N = Health Care
Postcoordination

The act of coordinating two or more concepts at the moment of searching for literature to narrow the scope of a subject. DeCS/MeSH vocabulary permits four types of terminological postcoordination.

- Descriptor + Descriptor
- Descriptor + Qualifier
- Descriptor + Check tag
- Descriptor + Publication Type

Examples:

- *Arthritis, Rheumatoid* + *Immunity, Innate*
- *Bacitracin/ther use*
- *Arthritis, Rheumatoid* + *Female*
- *Bacitracin* + *Clinical Trial*
Precoordination

There are two types of precoordination:

1) Descriptor1/qualifier use Descriptor2

   Example 1: **PREGNANCY**
   PREGNANCY/complications *use* “PREGNANCY COMPLICATIONS”

   Example 2: **KIDNEY**
   KIDNEY/transplantation use “KIDNEY TRANSPLANTATION”

2) Descriptor1 AND Descriptor2 *use* Descriptor3

   Example: **HEART**
   TRANSPLANTATION and HEART *use* “HEART TRANSPLANTATION”
DeCS Services

• **DeCS Server** (DeCS Search)

  http://decs.bvs.br/I/homepagei.htm
  http://decs.bvsalud.org/I/homepagei.htm

- for users
  
  • Search by Words
  • Search by Index
    - Alphabetic
    - Keywords in Context (KWIC)
    - Tree (hierarchical navigation or tree code)
DeCS Server
DeCS Server
Search by Word

Word or Term

Results for “Osteoporosis”
<table>
<thead>
<tr>
<th>Search by Word</th>
<th>Exact Descriptor</th>
<th>Result for</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Osteoporosis</strong></td>
<td></td>
</tr>
</tbody>
</table>
The descriptor **osteoporosis** belongs to the following categories:

**DISEASES**

**DISEASES [C]**
- Musculoskeletal Diseases [C05]
- Bone Diseases [C05.116]
  - Bone Diseases, Metabolic [C05.116.198]
    - Bone Demineralization, Pathologic [C05.116.198.247] +
    - Mucolipidoses [C05.116.198.371]
- Osteomalacia [C05.116.198.495]
- Osteoporosis [C05.116.198.579]
  - Female Athlete Triad Syndrome [C05.116.198.579.304]
  - Osteoporosis, Postmenopausal [C05.116.198.579.610]
- Pseudohypoparathyroidism [C05.116.198.709] +
- Renal Osteodystrophy [C05.116.198.762]
- Rickets [C05.116.198.816] +
<table>
<thead>
<tr>
<th>Descriptor English:</th>
<th>Osteoporosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptor Spanish:</td>
<td>Osteoporosis</td>
</tr>
<tr>
<td>Descriptor Portuguese:</td>
<td>Osteoporose</td>
</tr>
</tbody>
</table>
| Synonyms English: | Age-Related Osteoporosis  
Bone Loss, Age-Related 
Osteoporosis, Age-Related 
Osteoporosis, Post-Traumatic 
Osteoporosis, Senile 
Senile Osteoporosis |
| Tree Number: | C05.116.198.579 |
| Definition English: | Reduction of bone mass without alteration in the composition of bone, leading to fractures. Primary osteoporosis can be of two major types: postmenopausal osteoporosis (OSTEOPOROSIS, POSTMENOPAUSAL) and age-related or senile osteoporosis. |
| Indexing Annotation English: | related to aging; note X refs; age-related osteoporosis in men goes here; age-related osteoporosis in women is probably OSTEOPOROSIS, POSTMENOPAUSAL |
| Allowable Qualifiers English: | BL blood  
CI chemically induced  
CO complications  
DI diagnosis  
DT drug therapy  
EM embryology  
EP epidemiology  
ET etiology  
HI history  
ME metabolism  
MO mortality  
PS parasitology  
PP physiopathology  
PX psychology  
RI radionuclide imagining  
RH rehabilitation  
TH therapy  
UR urine  
VI virology |
| CF cerebrospinal fluid  
CL classification  
CN congenital  
DH diet therapy  
EC economics  
EN enzymology  
EH ethnology  
GE genetics  
IM immunology  
MI microbiology  
NU nursing  
PA pathology  
PC prevention & control  
RA radiography  
RT radiotherapy  
SU surgery  
US ultrasonography  
VE veterinary |
## Occurrences in VHL

<table>
<thead>
<tr>
<th>Categoria hierárquica</th>
<th>Conceito</th>
<th>LILACS</th>
<th>MEDLINE</th>
<th>ADOLEC</th>
<th>BBO</th>
</tr>
</thead>
<tbody>
<tr>
<td>C05.116.198.579</td>
<td>Osteoporose</td>
<td>1003</td>
<td>30155</td>
<td>179</td>
<td>75</td>
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<tr>
<td>C05.116.198.579.304</td>
<td>Síndrome da Tríade da Mulher Atleta</td>
<td>0</td>
<td>50</td>
<td>5</td>
<td>0</td>
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<tr>
<td>C05.116.198.579.610</td>
<td>Osteoporose Pós-Menopausa</td>
<td>241</td>
<td>9782</td>
<td>8</td>
<td>6</td>
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</tbody>
</table>

**Fonte de informação**
- LILACS
- MEDLINE
- EQUIDAD
- ADOLEC
## Lexical Similarity

### Child Welfare

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Similarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Welfare</td>
<td>Organized efforts by communities or organizations to improve the health and well-being of the child.</td>
<td>1.00</td>
</tr>
<tr>
<td>Child</td>
<td>A person 6 to 12 years of age. An individual 2 to 5 years old is CHILD, PRESCHOOL.</td>
<td>0.61</td>
</tr>
<tr>
<td>Animal Welfare</td>
<td>The protection of animals in laboratories or other specific environments by promoting their health through better nutrition, housing, and care.</td>
<td>0.58</td>
</tr>
<tr>
<td>Infant Welfare</td>
<td>Organized efforts by communities or organizations to improve the health and well-being of the infant.</td>
<td>0.57</td>
</tr>
<tr>
<td>Social Welfare</td>
<td>Organized institutions which provide services to ameliorate conditions of need or social pathology in the community.</td>
<td>0.56</td>
</tr>
<tr>
<td>Maternal Welfare</td>
<td>Organized efforts by communities or organizations to improve the health and well-being of the mother.</td>
<td>0.56</td>
</tr>
<tr>
<td>Child Care</td>
<td>Care of children in the home or institution.</td>
<td>0.52</td>
</tr>
<tr>
<td>Chile</td>
<td>The sudden sensation of being cold. It may be accompanied by SHIVERING.</td>
<td>0.47</td>
</tr>
</tbody>
</table>

### Categories DeCS

- C23 Pathological Conditions, Signs and Symptoms
  - 23.888 Signs and Symptoms
  - 23.888.208 Child
  - I01 Social Sciences
  - I01.880 Sociology
  - I01.880.604 Social Control, Formal
  - I01.880.604.100 Animal Welfare
  - I01.880.787 Social Welfare
  - I01.880.787.293 Child Welfare
  - I01.880.787.539 Infant Welfare
  - I01.880.787.678 Maternal Welfare
  - M01 Persons
  - M01.060 Age Groups
  - M01.060.406 Child
  - N02 Health Care Facilities, Manpower, and Services
  - N02.421 Health Services
  - N02.421.088 Child Care
  - SP4 Environmental Health
  - SP4.011 Science
  - SP4.011.127 Social Sciences
  - SP4.011.127.413 Demography
  - SP4.011.127.413.654 Child
  - SP4.021 Water Supply
  - SP4.021.197 Water Collection
  - SP4.021.197.118 Groundwater Collection
  - SP4.021.197.118.509 Wells
  - SP9 Health Law
  - SP9.160 Social Welfare
  - Z01 Geographic Locations
  - Z01.107 Americas
  - Z01.107.757 South America

### Termos Similares e Históricos

- Child Welfare: 1273
- Child Health: 15472
- Child: 45501
- 1183554
- Animal Welfare: 478457
- Infant Welfare: 831912
- Infant Health: 3204572
- Social Welfare: 4726713
- Maternal Welfare: 7974105
- Child Care: 83948015
- Chile: 340
- Wells: 47
- Drilled Wells: 16115
- Chills: 0.47
- The sudden sensation of being cold. It may be accompanied by SHIVERING: 0.47
Alphabetical ruler
### DeCS 2012 - February 02, 2012 version

**Alphabetic Index of Descriptors and Qualifiers in English**

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | 0 | a | 9 | Qualifiers |
DeCS Services

- **DeCS XML Server** (XML format)
  
  [http://decs.bvs.br/vmxi.htm](http://decs.bvs.br/vmxi.htm)
  
  - for computer applications

  - Search by descriptor tree code
    [http://decs.bvs.br/cgi-bin/mx/cgi=@vmx/decs?lang=i&tree_id=B01.050.150.900.649.801.400.112.199.120.510.550](http://decs.bvs.br/cgi-bin/mx/cgi=@vmx/decs?lang=i&tree_id=B01.050.150.900.649.801.400.112.199.120.510.550)

  - Search by word or term
    [http://decs.bvs.br/cgi-bin/mx/cgi=@vmx/decs?lang=e&words=Macaca mulatta](http://decs.bvs.br/cgi-bin/mx/cgi=@vmx/decs?lang=e&words=Macaca mulatta)

  - Search by lexical similarity (via trigrams)
    [http://trigramas.bireme.br/cgi-bin/mx/cgi=@1?collection=DeCSi&text=cardiovascula&maxrel=10&minsim=0.30&xml](http://trigramas.bireme.br/cgi-bin/mx/cgi=@1?collection=DeCSi&text=cardiovascula&maxrel=10&minsim=0.30&xml)

  - Ocorrences of the DeCS concept in VHL information sources
    [http://bases.bireme.br/cgi-bin/mxlindG4.exe/cgi=@iah/decs?db=LILACS&db=MEDLINE&db=EQUIDAD&db=WHOLIS&k1=SP1&k2=SP1&count=10](http://bases.bireme.br/cgi-bin/mxlindG4.exe/cgi=@iah/decs?db=LILACS&db=MEDLINE&db=EQUIDAD&db=WHOLIS&k1=SP1&k2=SP1&count=10)