



**Akademie für hausärztliche  
Fortbildung Bremen**



# Pubmed-Recherche für HausärztInnen

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24.10.2012, Hausarzt in Bremen

# Ziel des Tutorials:

HausärztInnen, die damit bislang keine Erfahrungen haben, die Scheu vor der Benutzung der Pubmed-Datenbank nehmen

# Wie Sie es am besten machen:

1. eine Tasse Kaffee oder Tee und ein wenig Zeit
2. ein Internet-fähiger Rechner
3. Powerpoint oder das entsprechende Programm von Open office (Impress)
4. Öffnen Sie nacheinander diese Powerpoint-Datei und Ihren Internet-Browser
5. Springen Sie mit dem „Klammergriff“ alt-Tab zwischen den beiden Anwendungen hin und her und testen Sie, was Sie in der Präsentation gesehen haben, gleich „life“ im Internet

# Pubmed

- eine riesige von der US-amerikanischen Regierung unterstützte Datenbank. Pubmed ist verbunden mit Medline, worin international medizinische Zeitschriften nach der Häufigkeit ihrer Zitierung gelistet sind.
- freier Zugang
- englische Sprache
- Eingespeiste Artikel sind „verschlagwortet“ in MeSH (Medical Subject-Headings).
- Viele deutsche allgemeinmedizinische Zeitschriften sind nicht berücksichtigt.

# 1. Aufgabe: der richtige englische Begriff

- Voraussetzung: das englische Wort ist bekannt.
- Beispiel-Frage: kann Metformin in der Schwangerschaft eingesetzt werden?
- Unter leo (learning English online) kann der richtige englische Begriff gesucht werden:  
<http://dict.leo.org/ende?lang=de&lp=ende>
- Schwangerschaft = gravidity od. pregnancy
- Intrauterine Missbildung = malformation

## 2. Aufgabe: Formulieren der Such- Frage

Bewährt ist das PICO-Schema:

**P**atient (Schwangere Frauen)

**I**ntervention (Metformin)

**C**ontrol (Placebo)

**O**utcome (Missbildungen)

Beispiel also: ist Metformin in der Schwangerschaft  
kontraindiziert?

# Und los geht's

<http://www.ncbi.nlm.nih.gov/pubmed/>

Wir fragen: ist Metformin in der Schwangerschaft kontraindiziert?

# http://www.ncbi.nlm.nih.gov/pubmed/

www.ncbi.nlm.nih.gov/pubmed/

NCBI Resources How To Sign in to NCBI

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

PubMed

Advanced

Search

Help

## PubMed

PubMed comprises more than 22 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

### Using PubMed

- [PubMed Quick Start Guide](#)
- [Full Text Articles](#)
- [PubMed FAQs](#)
- [PubMed Tutorials](#)
- [New and Noteworthy](#)

### PubMed Tools

- [PubMed Mobile](#)
- [Single Citation Matcher](#)
- [Batch Citation Matcher](#)
- [Clinical Queries](#)
- [Topic-Specific Queries](#)

### More Resources

- [MeSH Database](#)
- [Journals in NCBI Databases](#)
- [Clinical Trials](#)
- [E-Utilities](#)
- [LinkOut](#)

1. Die Schlagwort-Datenbank MeSH anwählen



# Jetzt erst mal das 1. Schlagwort (MeSH)

The screenshot shows the MeSH search page. The search bar contains the text 'metformin'. A red arrow points from the text '2. Ersten Suchbegriff eingeben' to the search bar. Another red arrow points from the text '3. Die erste Suche starten' to the 'Search' button. The page includes a navigation bar with 'NCBI Resources' and 'How To' links, and a main content area with a forest image and a description of MeSH.

www.ncbi.nlm.nih.gov/mesh?term=metformin

NCBI Resources How To Sign in to NCBI

MeSH MeSH metformin Search

Limits Advanced

2. Ersten Suchbegriff eingeben

MeSH (Medical Subject Headings) is the NLM controlled vocabulary thesaurus used for indexing articles for PubMed.

Using MeSH

Help

Tutorials

More Resources

E-Utilities

NLM MeSH Homepage

3. Die erste Suche starten

www.ncbi.nlm.nih.gov gelesen

NCBI Resources How To Sign in to NCBI

MeSH  Search

4. „Metformin“ anwählen

Display Settings Summary Send to: PubMed search builder

Results: 4 Selected: 1

- Metformin**
  - A biguanide hypoglycemic agent used in the treatment of non-insulin-dependent diabetes mellitus not responding to dietary modification. **Metformin** improves glycemic control by improving insulin sensitivity and decreasing intestinal absorption of glucose. (From Martindale, The Extra Pharmacopoeia, 30th ed, p289)
- [tetrachloro\(metformin\)platinum\(IV\) \[Supplementary Concept\]](#)
  - structure in first source
  - Date introduced: November 3, 1997
- [rosiglitazone-metformin combination \[Supplementary Concept\]](#)
  - a combination of **metformin** and rosiglitazone used for treating type 2 diabetes
  - Date introduced: February 12, 2003
- [Glucovance \[Supplementary Concept\]](#)

Add to search builder AND Search PubMed

5. Im Dropdown-Menü anklicken: „Add to Search builder“. Eingestellt ist eine Verknüpfung mit „And“

Find related data

# Jetzt gleich der nächste Suchbegriff

The screenshot shows the MeSH search interface. At the top, there are navigation links for "NCBI", "Resources", and "How To". The search bar contains the text "metformin" and has a "Search" button. Below the search bar, there are links for "Save search", "Limits", and "Advanced". A red arrow points from the search bar to a callout box that says "6. Querybox leeren". The main content area shows search results for "metformin", including a definition and links to related concepts like "tetrachloro(metformin)platinum(IV)" and "rosiglitazone-metformin combination". On the right side, there is a "PubMed search builder" section with a search box and buttons for "Add to search builder" and "Search PubMed". Below that is a "Find related data" section with a "Database" dropdown menu and a "Find items" button.

# Jetzt das 2. MeSH-Schlagwort

NCBI Resources How To Sign in to

MeSH MeSH pregnancy Search

Save search Limits Advanced

Display Settings: Summary Send to:

Results: 4

**Metformin**

1. A biguanide hypoglycemic agent used in the treatment of non-insulin-dependent diabetes mellitus not responding to dietary modification. **Metformin** improves glycemic control by improving insulin sensitivity and decreasing intestinal absorption of glucose. (From Martindale, The Extra Pharmacopoeia, 30th ed, p289)

**tetrachloro(metformin)platinum(IV)** [Supplementary Concept]

2. structure in first source  
Date introduced: November 3, 1997

**rosiglitazone-metformin combination** [Supplementary Concept]

3. a combination of **metformin** and rosiglitazone used for treating type 2 diabetes  
Date introduced: February 12, 2003

**Glucovance** [Supplementary Concept]

PubMed search builder

"Metformin" [Mesh]

Add to search builder AND

Search PubMed

Find related data

Database: Select

Find items

7. Zweiten Suchbegriff eingeben

8. Den zweite Suche starten

NCBI Resources Sign in to NCBI

MeSH Save search Limits Advanced

9. Jetzt das Häkchen bei Pregnancy setzen

Display Settings: Summary, 20 per page Send to: ▾

Results: 1 to 20 of 99 Selected: 1 << First < Prev Page 1 of 5 Next > Last >>

- [Pregnancy](#)  
 1. The status during which female mammals carry their developing young (EMBRYOS or FETUSES) in utero before birth, beginning from FERTILIZATION to BIRTH.  
 Year introduced: 1963
- [Pregnancy-Specific beta 1-Glycoproteins](#)  
 2. Glycoproteins with the electrophoretic mobility of BETA-GLOBULINS, secreted by the placental TROPHOBLASTS into the maternal bloodstream during **PREGNANCY**. They can be detected 18 days after OVULATION and r  
 Year introduced: 200
- [Pregnancy Comp](#)  
 3. The co-occurrence of **PREGNANCY** and **CELLS** or **COAGULATION FACTORS**. The hematologic disease may precede or follow FERTILIZATION and it

10. Wieder im Dropdown-Menü anklicken: „Add to Search builder“  
 Wieder ist die Verknüpfung mit „And“ eingestellt “

**PubMed search builder**

"Metformin"[Mesh]

Add to search builder AND ▾

Search PubMed

---

**Find related data**

Database: Select ▾

Find items

# 3. MeSH-Term: „Malformation“

11. Querybox wieder leer machen

NCBI Resources How To MeSH malformation Save search Limits Advanced Search Sign in to NCBI

Display Settings: Summary, 20 per page

Results: 1 to 20 of 46 Selected: 1

<< First < Prev Page 1 of 3 Next > Last >>

**Congenital Abnormalities**

1. Malformations of organs or body parts during development in utero. Year introduced: 2008 (1963)

**Arnold-Chiari** 13. Häkchen bei „Congenital Abnormalities“

2. A group of malformations of the cerebellum, upper spinal cord, and surrounding bony structures. Type I is characterized by a downward displacement of the medulla and cerebellum, tonsils into the upper cervical spinal canal and an associated MENINGOCELE. Type II is characterized by severe malformations and is without an associated meningocele. Type III is characterized by an additional herniation of the entire cerebellum through the bony defect, forming an ENCEPHALOCELE. Type IV is a form of a cerebellar hypoplasia. Other features include TORTICOLLIS; opisthotonus; HEADACHE; VERTIGO; VOICEDYSPLASIA; NYSTAGMUS, CONGENITAL; swallowing difficulties; and ATAXIA. (From Menkes, Textbook of Child Neurology, 5th ed, p261; Davis, Textbook of Neuropathology, 2nd ed, pp236-46)

Send to:

PubMed search builder

("Metformin"[Mesh]) AND "Pregnancy"[Mesh]

Add to search builder

AND

Search PubMed

14. Wieder im Dropdown-Menü anklicken: „Add to Search builder“. Wieder Verknüpfung mit „And“ als Grundeinstellung

Auf die Suche des 4. Suchbegriffs  
„Placebo“ verzichten wir –  
„Placebo“ wird häufig nicht als  
MeSH-Begriff gelistet. Die Suche  
würde unter Einbezug des  
Begriffes „Placebo“ keine  
Ergebnisse bringen.

# Jetzt endlich kommt die eigentliche Pubmed-Suche:

MeSH

Hier werden die 3 jeweils mit „and“ kombinierten MeSH-Begriffe angezeigt

Search

Display Settings:  Summary, 20 per page

Send to:

PubMed search builder

```
(( "Metformin"[Mesh] ) AND "Pregnancy"[Mesh] ) AND "Congenital Abnormalities"[Mesh]
```

Add to search builder AND

Search PubMed

Find related data

Database: Select

Find items

Results: 1 to 20 of 46 Selected: 1

<< First < Prev Page 1 of 3 Next > Last >>

**Congenital Abnormalities**

1. Malformations of organs or body parts during development in utero.  
Year introduced: 2008 (1963)

**Arnold-Chiari Malformation**

2. A group of congenital malformations involving the brainstem, cerebellum, upper spinal cord, and surrounding bony structures. Type II is the most common, and features compression of the medulla and cerebellar tonsils into the upper cervical spinal canal and an associated MENINGOMYELOCELE. Type I features similar, but less severe features of type II with a small posterior fossa, a small posterior arch of the atlas, and a small posterior arch of the axis. Type III features a large posterior fossa, a large posterior arch of the atlas, and a large posterior arch of the axis. Type IV is a form of cerebellar hypoplasia. Clinical manifestations of types I-III include TORTICOLLIS; opisthotonus; HEADACHE; VERTIGO; VOCAL CORD PARALYSIS; APNEA; NYSTAGMUS, CONGENITAL; swallowing difficulties; and ATAXIA. (From Menkes, Textbook of Child Neurology, 5th ed. p261; Davis, Textbook of Neuropathology, 2nd ed. pp236-46)

15. Hier die kombinierte Pubmed-Suche starten



# Herzlichen Glückwunsch!

## Ihre Pubmed-Suche brachte 24 Treffer!

NCBI Resources How To Sign in to

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

PubMed ((("Metformin"[Mesh]) AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities"[Me...]) Search

RSS Save search Advanced

Show additional filters

Text availability  
Abstract available  
Free full text available  
Full text available

Publication dates  
5 years  
10 years  
Custom range...

Species  
Humans  
Other Animals

Article types  
Clinical Trial

Display Settings:  Summary, 20 per page, Sorted by Recently Added

Send to:  Filters: [Manage Filters](#)

Results: 1 to 20 of 24

<< First < Prev Page 1 of 2 Next > Last >>

[Pregnancy outcomes and the effect of metformin treatment in women with polycystic ovary syndrome: an overview.](#)  
Ghazeeri GS, Nassar AH, Younes Z, Awwad JT.  
Acta Obstet Gynecol Scand. 2012 Jun;91(6):658-78. doi: 10.1111/j.1600-0412.2012.01385.x. Epub 2012 May 1. Review.  
PMID: 22375613 [PubMed - indexed for MEDLINE]  
[Related citations](#)

[Pregnancy management of women with pregestational diabetes.](#)  
Mathiesen ER, Ringholm L, Damm P.  
Endocrinol Metab Clin North Am. 2011 Dec;40(4):727-38. doi: 10.1016/j.ecl.2011.08.005. Epub 2011 Sep 23.  
PMID: 22108277 [PubMed - indexed for MEDLINE]  
[Related citations](#)

1 free full-text article in PubMed Central  
Safety of metformin use during the first trimester. [Can Fam Physician.

Find related data  
Database: Select  
Find items

Search details  
("Metformin"[Mesh] AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities"[Mesh]

# Jetzt erst mal in Ruhe durchatmen!

- Als erstes überlegen: wie viele Treffer schaffen Sie als viel beschäftigte Hausärztin überhaupt anzusehen?
- Wie wollen Sie jetzt die Suchfilter einstellen?

Es ist wie mit jeder Diagnostik:

- je sensitiver Sie suchen, um so mehr Schrott ist dabei
- je mehr sich Ihre Suche auf sicher Brauchbares beschränkt, um so mehr vielleicht doch lohnende Arbeiten übersehen Sie.

# Vielleicht sind Ihnen 24 Arbeiten zu viel

NCBI Resources How To Sign in to

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

PubMed ((("Metformin"[Mesh]) AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities"[Me... Search

RSS Save search Advanced

Show additional filters Display Settings: Summary, 20 per page, Sorted by Recently Added Send to: Filters: Manage Filters

Text availability  
Abstract available  
Free full text available  
Full text available

Publication dates  
5 years  
10 years  
Custom range...

Species  
Humans  
Other Animals

Article types  
Clinical Trial

Results: 1 to 20 of 24 << First < Prev Page 1 of 2 Next > Last >>

1.  [Pregnancy outcomes and the effect of metformin treatment in women with polycystic ovary syndrome: an ov...](#)  
Ghazeeri GS, Nassar AH, Younes  
Acta Obstet Gynecol Scand. 2012 Jun; 2012 May 1. Review.  
PMID: 22375613 [PubMed - indexed for MEDLINE]  
[Related citations](#)

2.  [Pregnancy management of women with pregestational diabetes.](#)  
Mathiesen ER, Ringholm L, Damm P.  
Endocrinol Metab Clin North Am. 2011 Dec;40(4):727-38. doi: 10.1016/j.ecl.2011.08.005. Epub 2011 Sep 23.  
PMID: 22108277 [PubMed - indexed for MEDLINE]  
[Related citations](#)

16. Wir verschärfen die Suchfilter mit "Limits"

1 free full-text article in PubMed Central  
Safety of metformin use during the f trimester. [Can Fam Physician.

Find related data  
Database: Select  
Find items

Search details  
("Metformin"[Mesh] AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities [Mesh]

# Die schärfste Einschränkung

www.ncbi.nlm.nih.gov/pubmed?term=(("Metformin"[Mesh]) AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities"[Mesh]

18. Tierversuche interessieren uns nicht

17. Wir nehmen nur Metaanalysen => Häkchen in das entspr. Kästchen

19. Ruisch können wir vielleicht nicht

Publication dates: 5 years, 10 years, Custom range...

Species: Humans, Other Animals

Article types: Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Review, Systematic Reviews, more ...

Languages: English, more ...

Clear all

Show additional filters

Acta Obstet Gynecol Scand. 2012 May 1;141(5):500-0412.2012.01385.x. Epub 2012 May 1. PMID: 22371111 [PubMed - indexed for MEDLINE] [Related citations](#)

[Pregnancy management of women with pregestational diabetes.](#)

2. Mathiesen ER, Ringholm L, Damm P. Endocrinol Metab Clin North Am. 2011 Dec;18(4):737-39. doi:10.1016/j.ecl.2011.08.005. Epub 2011 Sep 22. PMID: 22088206 [PubMed - indexed for MEDLINE] [Related citations](#)

[Improvement in glycemic control during pregnancy in women with polycystic ovary syndrome: possible effect in the ovarian follicular mass of their daughters.](#)

3. Crisosto N, Echiburú B, Maliqueo M, Pérez V, Ladrón de Guevara A, Preisler J, Sánchez F, Sir-Petermann MA. Fertil Steril. 2012 Jan;97(1):10-15. doi:10.1016/j.fertnstert.2011.09.016. Epub 2011 Oct 11. PMID: 22088206 [PubMed - indexed for MEDLINE] [Related citations](#)

[Use of metformin in the management of polycystic ovary syndrome.](#)

4. Genazzani AD, Ricchieri F, Lanzoni C. Womens Health (Lond Engl). 2010 Jul;6(4):577-93. Review. PMID: 20597621 [PubMed - indexed for MEDLINE]

Find related data

Database:

Find items

Search details

("Metformin"[Mesh] AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities"[Mesh]

Search  See

Recent activity [Turn Off](#)

Q ("Metformin"[Mesh]) AND "Pregnancy"[Mesh] AND "Congenital Abnormalities"[Mesh]

Q malformation (46)

Q pregnancy (99)

# Weitere mögliche Einschränkungen

The screenshot shows a PubMed search results page for the query: ("Metformin"[Mesh]) AND "Pregnancy"[Mesh] AND "Congenital Abnormalities"[Mesh]. The left sidebar contains filter categories: Publication dates (5 years, 10 years, Custom range...), Species (Humans, Other Animals), Article types (Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Review, Systematic Reviews, more...), and Languages (English, more...). The main results list shows four items, with the first being a review from 2012. Two callout boxes are present: one pointing to the 'Review' article type filter and another pointing to the first search result.

**Callout 1 (top):** Hier könnten wir uns beispielsweise auf Arbeiten aus den letzten 10 Jahren beschränken

**Callout 2 (bottom):** Hier können wir uns Reviews anzeigen lassen – aber CAVE!  
Review ist nicht gleich Review!  
Es gibt Reviews aus systematischer Recherche und so genannte narrative Reviews. Die müssen nicht schlecht sein, man kann sich nur nicht unbedingt auf ihre Wissenschaftlichkeit verlassen.

# 2 Metaanalysen zum Thema Metformin und Schwangerschaft – eine sehr gute Zahl!

www.ncbi.nlm.nih.gov/pubmed

US National Library of Medicine  
National Institutes of Health

RSS Save search Advanced

Show additional filters Display Settings:  Summary, Sorted by Recently Added Send to:  Filters: Manage Filters

Clear all

Text availability  
Abstract available  
Full text available

Publication dates  
5 years  
10 years  
Custom range...

Species  
clear  
 Humans

Article types  
clear  
 Meta-Analysis  
Review  
Systematic Reviews  
more ...

**Results: 2**

Filters activated: Humans, Meta-Analysis, English, German [Clear all](#)

[Metformin treatment before and during IVF or ICSI in women with polycystic ovary syndrome.](#)  
1. Tso LO, Costello MF, Albuquerque LE, Andriolo RB, Freitas V.  
Cochrane Database Syst Rev. 2009 Apr 15;(2):CD006105. Review.  
PMID: 19370625 [PubMed - indexed for MEDLINE]  
[Related citations](#)

[Pregnancy outcome after first-trimester exposure to metformin: a meta-analysis.](#)  
2. Gilbert C, Valois M, Koren G.  
Fertil Steril. 2006 Sep;86(3):658-63. Epub 2006 Jul 31. Review.  
PMID: 16879826 [PubMed - indexed for MEDLINE]  
[Related citations](#)

1 free full-text article in PubMed Central  
Safety of metformin use during the first trimester. [Can Fam Physician.]

Find related data  
Database:

Search details  
("Metformin"[Mesh] AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities"[Mesh] AND ("humans"[MeSH Terms] AND Meta-Analysis[ptyp] AND

# Jetzt sehe ich nur Überschriften – wie kann ich mir die Abstracts ansehen?

www.ncbi.nlm.nih.gov/pubmed

US National Library of Medicine  
National Institutes of Health

RSS Save search Advanced

Show additional filters **Display Settings:**  Summary, Sorted by Recently Added **Send to:**  **Filters:** [Manage Filters](#)

[Clear all](#)

**Text availability**  
Abstract available  
Full text available

**Publication dates**  
5 years  
10 years  
Custom range...

**Species**   
 **Humans**

**Article types**   
 **Meta-Analysis**  
Review  
Systematic Reviews  
more ...

**Results: 2**  
Filters activated: Humans, Meta-Analysis, English, German [Clear all](#)

**Metformin treatment before and during IVF or ICSI in women with polycystic ovary syndrome.**  
1. Tso LO, Costello MF, Albuquerque LE, Andriolo RB, Freitas V. Cochrane Database Syst Rev. 2009 Apr 15;(2):CD006105. Review. PMID: 19370625 [PubMed - indexed for MEDLINE] [Related citations](#)

**Pregnancy outcome after first-trimester exposure to metformin: a meta-analysis.**  
2. Gilbert C, Valois M, Koren G. Fertil Steril. 2006 Sep;86(3):658-63. Epub 2006 Jul 31. Review. PMID: 16879826 [PubMed - indexed for MEDLINE] [Related citations](#)

**Find related data**  
Database:

**Search details**  
("Metformin"[Mesh] AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities [Mesh] AND ("humans"[MeSH Terms] AND Meta-Analysis[ptyp] AND

**20. Display-Einstellungen verändern**

# Abstracts anzeigen lassen

www.ncbi.nlm.nih.gov/pubmed

US National Library of Medicine  
National Institutes of Health

RSS Save search Advanced

Show additional filters

Clear all

Text availability  
Abstract available  
Full text available

Publication dates  
5 years  
10 years  
Custom range...

Species  
clear  
✓ Humans

Article types  
clear  
✓ Meta-Analysis  
Review  
Systematic Reviews  
more ...

Display Settings: [v] Summary, Sorted by Recently Added

Format	Sort by
<input checked="" type="radio"/> Summary	<input checked="" type="radio"/> Recently Added
<input type="radio"/> Summary (text)	<input type="radio"/> Pub Date
<input checked="" type="radio"/> Abstract	<input type="radio"/> First Author
<input type="radio"/> Abstract (text)	<input type="radio"/> Last Author
<input type="radio"/> MEDLINE	<input type="radio"/> Journal
<input type="radio"/> XML	<input type="radio"/> Title
<input type="radio"/> PMID List	

Send to: [v] Filters: Manage Filters

1 free full-text article in PubMed Central

Safety of metformin use during the first trimester. [Can Fam Physician. 2006 Sep;52(9):1253-6. PMID: 16879826]

polycystic ovary

21. Abstracts anwählen – ggfs. noch mehr Abstracts anzeigen lassen oder die Sortierung verändern

1. [Pregnancy outcome after first-trimester exposure to metformin: a meta-analysis.](#)

2. Gilbert C, Valois M, Koren G. Fertil Steril. 2006 Sep;86(3):658-63. Epub 2006 Jul 31. Review. PMID: 16879826 [PubMed - indexed for MEDLINE]

Search details

```
("Metformin"[Mesh] AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities"[Mesh] AND ("humans"[MeSH Terms] AND Meta-Analysis[ptyp] AND
```

Search



# Die Treffer

- eine Metaanalysen befasste sich nur mit der Induktion einer Schwangerschaft bei polyzystischem Ovar – das interessiert uns hier nicht.
- Die 2. Metaanalyse beantwortet unsere Frage: „Kann Metformin in der Schwangerschaft eingesetzt werden?“

# Das Ergebnis

Fertil Steril. 2006 Sep;86(3):658-63. Epub 2006 Jul 31.

[Pregnancy outcome after first-trimester exposure to metformin: a meta-analysis.](#)

[Gilbert C](#), [Valois M](#), [Koren G](#).

Motherisk Program, Division of Clinical Pharmacology and Toxicology, The Hospital for Sick Children, The University of Toronto, Toronto, Ontario, Canada.

## Abstract

**OBJECTIVE:** To conduct a systematic review and meta-analysis of pregnancy outcome after metformin use for polycystic ovary syndrome (PCOS), because the efficacy of metformin has been demonstrated in the treatment of infertility caused by PCOS, whereas the fetal safety of metformin has received very little attention, and the few studies addressing this issue are limited by small sample sizes.

**DESIGN:** Meta-analytic review.

**SETTING:** All pertinent studies in MEDLINE and EMBASE from 1966 to September 2004.

**PATIENT(S):** Women with PCOS or diabetes.

**INTERVENTION(S):** Exposure to metformin in the first trimester of pregnancy.

**MAIN OUTCOME MEASURE(S):** Major malformations.

**RESULT(S):** Eight studies were included in the meta-analysis, with an odds ratio of 0.50 (95% confidence interval, 0.15, 1.60). After adjustment for publication bias, **metformin treatment in the first trimester was associated with a statistically significant 57% protective effect.** After pooling the studies, the malformation rate in the disease-matched control group was approximately 7.2%, statistically significantly higher than the rate found in the metformin group (1.7%).

**CONCLUSION(S):** On the basis of the limited data available today, there is no evidence of an increased risk for major malformations when metformin is taken during the first trimester of pregnancy. Large studies are needed to corroborate these preliminary results.

PMID: 16879826 [PubMed - indexed for MEDLINE]

# Ist Metformin wirklich unschädlich in der Frühschwangerschaft?

Die entscheidende Limitation dieser Metaanalyse können wir aus dem Abstract nicht sehen: es wurden nur Daten von 172 Frühschwangeren unter Metformin und 235 Kontrollpatientinnen analysiert.

Vorsichtige Aussage also: erste Daten aus einer Metaanalyse aus 8 kleinen Studien weisen darauf hin, dass Metformin in der Frühschwangerschaft nicht schadet. Dies muss durch größere Untersuchungen bestätigt werden.

# Wie kann ich an Volltexte heran kommen?

- Werden Sie Lehrarzt/Lehrärztin einer allgemeinmedizinischen Abteilung!
- Sie tun damit etwas für den hausärztlichen Nachwuchs.
- Sie merken, wie viel Spaß es macht, das eigene hausärztliche Handeln weiter zu vermitteln.
- Sie bekommen zu den meisten wichtigen Journals einen Volltext-Zugang.

# Kurz vor Schluss noch ein wenig Logik

Kombinierte Suchen sind mit den Verknüpfungen

- „and“,
- „or“ oder
- „not“ möglich.

Wenn eine „and“- und eine „or“-Suche miteinander verbunden werden sollen, muss zuerst die „or“-Suche durchgeführt werden und danach der in der History gefundene kombinierte Suchbegriff mit dem nächsten in der „and“-Suche verknüpft werden

# Wie kann ich meine Suche sichern?

The screenshot shows the NCBI PubMed search results page. At the top, there are navigation links for 'NCBI Resources' and 'How To'. The search bar contains the text 'PubMed' and a search query. A red arrow points from a text box '22. Zu speichernde Arbeiten markieren' to the 'Send to' dropdown menu. Another red arrow points from a text box '23. Und an die virtuelle Pinnwand heften' to the 'Send to' dropdown menu. The search results are displayed in a list format, with the first result highlighted. The result title is 'Metformin treatment before and during IVF or ICSI in women with polycystic ovary syndrome.' The abstract text is visible below the title. On the right side, there is a 'Send to' dropdown menu and a 'Find related data' section. A search bar is also visible at the bottom right of the results section.

22. Zu speichernde Arbeiten markieren

23. Und an die virtuelle Pinnwand heften

www.ncbi.nlm.nih.gov/pubmed

NCBI Resources How To Sign in to

PubMed ((("Metformin"[Mesh]) AND "Pregnancy"[Mesh]) AND "Co

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Text availability

Abstract available

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Publication dates

5 years

10 years

Custom range...

Species

clear

✓ Humans

Article types

clear

✓ Meta-Analysis

1. **Metformin treatment before and during IVF or ICSI in women with polycystic ovary syndrome.**

Tso LO, Costello MF, Albuquerque LE, Andriolo RB, Freitas V.

Gynecology, Federal University of São Paulo (UNIFESP), Av. Dr. Altino Arantes, 865 - ap. 124, São Paulo, Vila Clementino, Brazil, 04042-034. leotso@uol.com.br

**Abstract**

**BACKGROUND:** The use of insulin-sensitising agents, such as metformin, in women with polycystic ovary syndrome (PCOS) who are undergoing ovulation induction or in vitro fertilisation (IVF) cycles has been widely studied. Suppression of insulin levels with metformin might reduce the hyperinsulinaemia and hyperandrogenism suppression of the ovarian response. As a consequence, metformin could improve both pregnancy and live birth

Search details

("Metformin"[Mesh] AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities [Mesh] AND ("humans"[MeSH Terms] AND Meta-Analysis[ptyp] AND

Search

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✓ Cochrane Database Syst Rev. 2009 Apr 15;(2):CD006105.

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PubMed ((("Metformin"[Mesh]) AND "Pregnancy"[Mesh]) AND "Congenital Abnormalities"[Me...]) Search

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Database: Select

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Abstract available  
Full text available

Publication dates  
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Species  
clear  
✓ Humans

Article types  
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26. Hier kann man sich das Clipboard ansehen

# Die gespeicherten Abstracts mit der Maus markieren und in Word kopieren oder direkt

The screenshot shows a web browser window displaying a PubMed search result. The address bar shows the URL [www.ncbi.nlm.nih.gov/pubmed/clipboard](http://www.ncbi.nlm.nih.gov/pubmed/clipboard). The page header includes the NCBI logo and navigation links for 'Resources' and 'How To'. The main content area features a search bar with 'PubMed' selected and a 'Search' button. Below the search bar, there are links for 'Limits' and 'Advanced'. The article title is 'Pregnancy outcome after first-trimester exposure to metformin: a meta-analysis.' by Gilbert C, Valois M, and Koren G. The abstract is highlighted in blue, and the text is as follows:

**Abstract**  
**OBJECTIVE:** To conduct a systematic review and meta-analysis of pregnancy outcome after metformin use for polycystic ovary syndrome (PCOS), because the efficacy of metformin has been demonstrated in the treatment of infertility caused by PCOS, whereas the fetal safety of metformin has received very little attention, and the few studies addressing this issue are limited by small sample sizes.  
**DESIGN:** Meta-analytic review.  
**SETTING:** All pertinent studies in MEDLINE and EMBASE from 1966 to September 2004.  
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On the right side of the page, there is a 'Clipboard: 1 item' section with an 'ELSEVIER FULL-TEXT ARTICLE' logo. Below this is a 'Save items' section with an 'Add to Favorites' button. A 'Related citations in PubMed' section lists several related articles, including 'Effect of preconceptional metformin on abortion', 'Comparison of clomiphene citrate, metformin, or the combination', 'Continuing metformin throughout pregnancy in women with PCOS', and 'Continuation of metformin reduces the risk of miscarriage in pregnancy'.

# Alternativ können Sie sich das Ergebnis der Suche als e-mail selbst zusenden

The screenshot shows the PubMed website interface. At the top, there is a navigation bar with 'NCBI Resources' and 'How To' menus. Below that is the 'PubMed.gov' logo and a search bar. The search results for 'Pregnancy outcome after first-trimester exposure to metformin: a meta-analysis' are displayed. A 'Send to' dropdown menu is open, showing options: File, E-mail, My Bibliography, Collections, Order, and Citation manager. A red arrow points to the 'E-mail' option. The article abstract is visible, including the objective, design, setting, and patient information. On the right, there are 'Related citations in PubMed' with a 'Review' button and a list of related articles.

www.ncbi.nlm.nih.gov/pubmed/clipboard

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US National Library of Medicine  
National Institutes of Health

PubMed [Limits] [Advanced]

Search

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- Citation manager

Fertil Steril. 2006 Sep;86(3):658-63. Epub 2006 Jul 31.

**Pregnancy outcome after first-trimester exposure to metformin: a meta-analysis.**

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Motherisk Program, Division of Clinical Pharmacology and Toxicology, The Hospital for Sick Children, The University of Toronto, Toronto, Ontario, Canada.

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Continuation of metformin reduces e pregnancy | [Gynecol Obstet Invest.

# Per e-mail...

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Clipboard

Format

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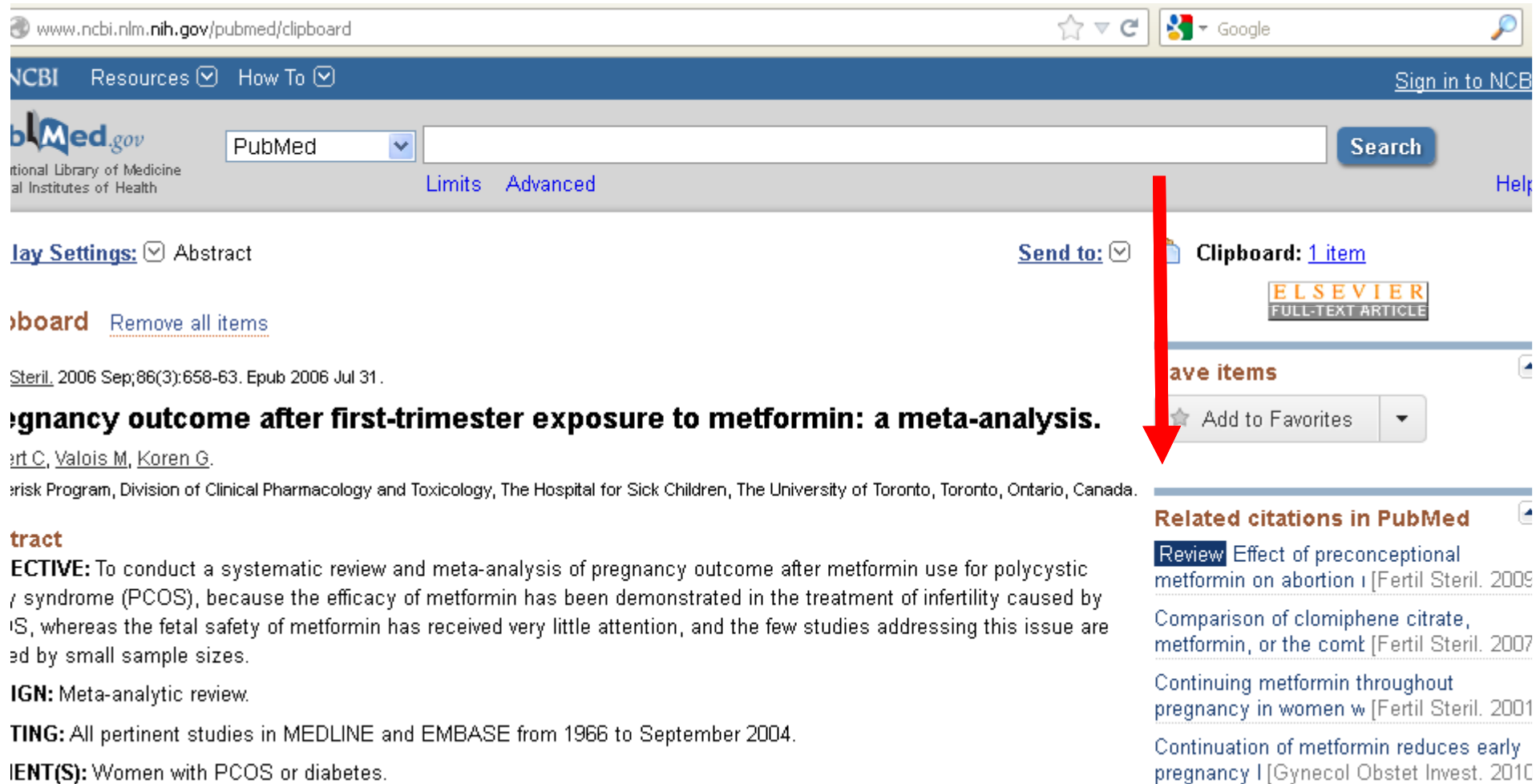
E-mail

Subject

Clipboard - PubMed

Additional text

# Manchmal finden sich in der rechten Sidebar noch interessante weitere Artikel



The screenshot shows a web browser window displaying a PubMed article. The address bar shows the URL [www.ncbi.nlm.nih.gov/pubmed/clipboard](http://www.ncbi.nlm.nih.gov/pubmed/clipboard). The page header includes the NCBI logo, navigation links for 'Resources' and 'How To', and a search bar. The article title is 'Pregnancy outcome after first-trimester exposure to metformin: a meta-analysis.' The authors listed are 'Mart C, Valois M, Koren G.' The abstract text begins with 'OBJECTIVE: To conduct a systematic review and meta-analysis of pregnancy outcome after metformin use for polycystic ovary syndrome (PCOS)'. The 'Related citations in PubMed' sidebar on the right contains several links to related articles, such as 'Review Effect of preconceptional metformin on abortion' and 'Comparison of clomiphene citrate, metformin, or the combination'. A red arrow points from the top of the sidebar down to the 'Add to Favorites' button.

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NCBI Resources How To Sign in to NCBI

PubMed Search

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Continuing metformin throughout pregnancy in women with PCOS | [Fertil Steril. 2001]

Continuation of metformin reduces early pregnancy loss | [Gynecol Obstet Invest. 2010]

# Ein wenig Selbstkritik...

Das in Folie 6 vorgestellte PICO-Schema wurde hier nicht ganz eingehalten.

Nach diesem Schema hätte es heißen müssen

**P**atient (Pregnant women)

**I**ntervention (Metformin)


**C**ontrol (Placebo)

**O**utcome (major malformations)

Wie oben beschrieben wurde der Begriff Placebo fallen gelassen.

# Zugegeben: 26 Arbeitsschritte sind sehr viel, aber...

- Anfangs dauert es lange, aber mit ein wenig Übung dauert diese ganze Suche keine 10 Minuten.
- Nehmen Sie sich bei den ersten Malen die Zeit, Schritt für Schritt aus dieser Präsentation identisch in Pubmed nachzuvollziehen.
- Es sind auch deshalb so viele Einzelschritte, weil jeder Schritt ganz genau in seine Einzelteile zerlegt dargestellt wurde.



Man/frau kann sich auch ein paar Schritte sparen und in diesem Fall einfach „Metformin AND pregnancy“ in die Pubmed-Suchmaske schreiben.

Das kann Zeit sparen.

Wir empfehlen aber den etwas umständlicheren Weg über MeSH-Begriffe allein deshalb, weil die nicht immer bekannt sind.



# Sie werden feststellen

- Zu vielen Themen gibt es keine gute Evidenz.
- Das muss nicht an Ihrer Suche liegen, sondern kann Fakt sein.
- Als DEGAM-Mitglied können Sie zusätzlich in der Cochrane-Library nachsehen.

In jedem Fall: viel Spaß bei der  
Pubmed-Recherche wünscht

Günther Egidi

...in der Hoffnung, dass Pubmed nicht allzu  
schnell wieder seine Oberfläche ändert und  
diese Präsentation wieder neu erstellt werden  
muss ):-