

Literature Review

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- **What is a review of the literature?**

- A literature review is an account of what has been published on a topic by accredited scholars and researchers.

- **Why do we review literature?**

- To increase our knowledge.
- To write a paper.
- To review a paper.
- To keep patients informed.

- **Why is the literature review necessary?**

- To find what is known about your topic
- To examine research design used to investigate topics similar to yours; their feasibility, strengths, and weaknesses
- To identify confounding variables
- To identify risk factors
- To find out disease rates or other rates in your population
- To indicate the suitable statistical techniques
- To provide suitable instruments
- To identify research working on similar problems
- To compare your results with similar results

- **strategy for your search:**

- A method for your search
- A strategy of how to read and on what to focus
- A strategy for your writing

- **A method for your search:**

- key words
- Determine data bases to be searched
- Years
- inclusion criteria
- exclusion criteria

- **When you read an article focus on the following:**
 - Clarity of study objectives.
 - Study design.
 - Methods of data collection.
 - Instruments.
 - Analysis.
 - Clinical relevance of significant results.
 - Reliability and validity of conclusion.
 - Other things to be considered when you read an article.

- **How to write your literature review:**
 - Objectives
 - Method of search:
 - » (Be specific about any database search you performed. Include the key words you used, the ways you refined your search if necessary, years, and inclusion and exclusion criteria. List how many of each kind of publication you summarized (for example, 31 original investigations, 3 case reports).
 - Findings:
 - » This section is the most important part of your review. Do not give a summary paper-by-paper; instead, deal with themes and draw together results from several papers for each theme.
 - Critiques and comments
 - » Look critically at any published work. The fact that something has been published does not mean the findings are automatically trustworthy. Look at conflict between studies and possible biases and confounding
 - Conclusion
 - **Where do you review literature?..**
 - University libraries
 - Postgraduate medical centers
 - Hospital libraries
 - Public libraries
 - **Approaches to conduct a literature review**
 - Hand search
 - Computer search
 - Personal contact
 - **Article reference**
 - Find a recent article related to your topic
 - Look at references
 - Select appropriate ones

- **Causes of findings few or no references**
 - Topic is not important
 - Looking in the wrong database
 - New topic
- **Locating articles and books**
 - Recheck list of reference for relevancy
 - Check book shelves
 - Check the periodical room
 - Check journals list in your library
 - Old and new periodicals
 - Make copies or checkouts
- **Organizing the materials**
 - Information should be manageable and retrievable
 - Arrange in groups or headings
- **How long should the literature review be?**
 - Depends on the document
 - Thesis or dissertation
 - Journal articles
- **Computer-aided search**
 - Computerized catalogue
 - Medline
- **Consult an expert**
 - Save time
 - Help with references
 - Unpublished or on going, or in print research
- **The card catalogue**
 - Three cards for every item except journal articles
 - Cards filed by author's last name, by title and by subject

- **Examples:**

- **Example 1:**

Table 1. Validation studies of the ¹³C-urea breath test in children

1st author/ location	Year	Age	N	Mean	HP+ %	spec	sens
Vandenplas ⁸² / Belgium	1992	2-15	95	9	25	93	96
Rowland ⁸³ /Ireland	1997	2-18	88	11	36	92	100
Cadranel ⁸⁴ /Belgium	1998	0-16	144	9	59	95	96
Kalach ⁸⁵ /France	1998	0-18	100	11	43	98	100
Oderda ⁸⁶ /Italy	1998	4-15	72	11	31	100	91
Delvin ⁸⁷ /Canada	1999	NA	79	12	15	100	100
Eltumi ⁸⁸ /UK	1999	4-16	50	11	38	90	89
Bazzoli ⁸⁹ /Italy	2000	2-16	115	10	55	98	98
Kindermann ⁵⁸ /Germany	2000	0-14	53	9	21	88	100
		6-18	94	11.7	52	98	100

- In adults, validation studies, using biopsy-based methods as a gold standard, have estimated the sensitivity and specificity of ¹³C Urea Breath Test to be greater than 95%. A summary of sensitivities and specificities across a series of validation studies in children are presented in table 1. The mean ages of subjects in these studies range from 9-12 years. The reported sensitivities and specificities across these studies are in the range of 89-100% and 90-100%, respectively. This procedure has not been validated adequately among infants and very young children, although a recent study evaluated 14 children (6 to 28 months old) with biopsy-based diagnoses of *H. pylori* infection. The study showed that the 7 who were biopsy-positive for *H. pylori* were also positive by the ¹³C urea breath test. Of the 7 who were biopsy-negative, 6 were confirmed negative by the urea breath test.

○ **Example 2:**

Table 2. Evidence for *H. pylori* transmission pathways

Person-to-person transmission

- Clustering in families and group residences.
- Association with residential crowding.
- Association with high birth order and narrow birth spacing.
- Isolation from human feces and dental plaque.
- Detection in human feces, saliva and dental plaque by polymerase chain reaction.

Waterborne transmission

- Survival in laboratory aquatic environments.
- Detection by polymerase chain reaction in water samples from Colombia, Peru And Sweden.
- Association with drinking water source in Andean countries.
- Association with raw vegetable consumption in Andean countries.
- Association with swimming in rivers and swimming pools in Andean countries.

Zoonotic transmission

- Successful experimental infection of monkeys, mice, cats, germ-free pigs, germ-free dogs, Observation of natural infection in research monkeys and cats.
- Observation of human infection by animal *Helicobacter* species.
- Increased prevalence linked to contact with sheep.

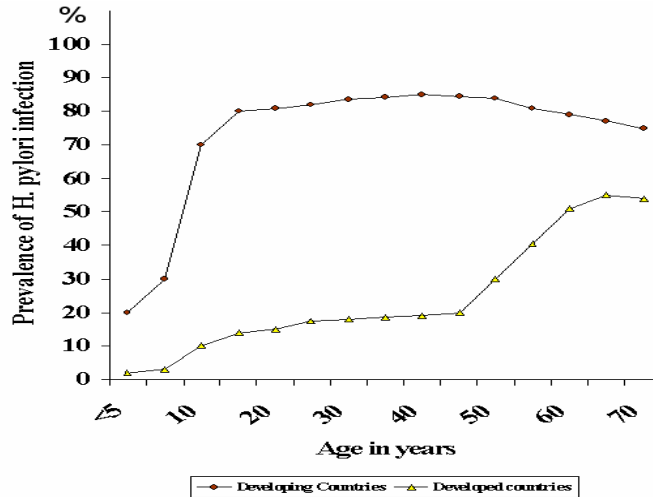
Iatrogenic transmission

- Signs and symptoms of acute infection observed among gastroscopy patients.
- Epidemic achlorhydria among research subjects exposed to gastric pH electrodes.
- Detection of viable *H. pylori* in manually disinfected gastrofiberscopes.
- Risk of reinfection increased by endoscopy following antibiotic therapy for *H. pylori*.

- Despite the large volume of research on *H. pylori*, the mode of transmission is still not well understood. Although this infection appears to be transmitted directly from person-to-person, the precise pathway from one person to another is controversial and it is not known if other modes of transmission are involved. Varying degrees of evidence suggesting oral-oral, fecal-oral, gastro-oral, waterborne and zoonotic transmission have been reported. Evidence for various transmission pathways is presented in table 1.

○ **Example 3:**

Figure 1. Prevalence of *Helicobacter pylori* infection according to data from developing countries and developed countries.



- The general trend of *H. pylori* prevalence in developed countries is slow increases during childhood, which continue through adolescence and early adulthood; in many developed countries there is an abrupt increase around 50-60 years of age. In developing countries, *H. pylori* prevalence increases more rapidly during childhood and most adolescents and adults are infected. Thus, differences in *H. pylori* prevalence between developed and developing countries are greater at younger ages and get smaller at older ages.^{3;5} Figure 1 shows *H. pylori* prevalence in developed and developing countries across different age groups.⁷ Although the overall prevalence is generally lower in developed countries, high prevalences, approaching that of developing countries, have been observed within some subgroups in developed countries.

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- **What are you going to review?**
 - All the data and information related to your topic such as:
 - » Articles
 - » Books
 - » Materials
 - The breath reading = the depth of reading

- **Hand search**
 - The card catalogue
 - » Three cards for every item except journal articles
 - » Cards filed by author's last name, by title and by subject
 - Journal Indexes and abstracts
 - » Index Medicus
 - » Excerpta Medica
 - » Saudi Medical Bibliography
 - » Current Contents
 - Article reference article reference