What’s your impact? Calculating your h-index

The h-index\(^1\), like a cited reference count, is a measure of scholarly significance. It combines an assessment of both quantity (number of publications) and quality (references to those publications) by counting a researcher’s most cited works, and the number of citations those works have received in other publications.

Calculating your h-index

Your h-index is based on a list of your publications ranked in descending order by the Times Cited count. The value of \( h \) is equal to the number of papers (\( N \)) in the list that have \( N \) or more citations.

In the example below, the researcher would have an h-index of 8, as 8 articles have been cited at least 8 or more times, and the remaining articles have each been cited 8 times or less.

\[
\begin{array}{|l|c|}
\hline
\text{Times Cited} & \text{Publication} \\
\hline
87 & 1 \\
70 & 2 \\
46 & 3 \\
32 & 4 \\
19 & 5 \\
15 & 6 \\
10 & 7 \\
9 & 8 \\
8 & 9 \\
6 & 10 \\
4 & 11 \\
1 & 12 \\
\hline
\end{array}
\]

Obviously, a researcher cannot have a high h-index without a substantial number of publications -- but prolific output is not enough. Work must be cited by other researchers to be counted for the h-index.

The h-index is considered a representative measurement of research impact because it discounts the disproportionate weight of highly cited publications and that work that has not yet been cited. However, the h-index is not without issues. While the basic calculation of the h-index is consistent across databases, the result can vary depending on a particular database’s contents or the inclusion of older publications. An h-index can also be impacted by self-citation\(^2\).


Tools to calculate your h-index

The following resources can be used to calculate your h-index. Please note that Web of Science and Scopus are licensed by McGill University to McGill faculty, staff, researchers and students, and require authentication with a McGill e-mail address and password.

Web of Science:
The first database to include the h-index, Web of Science indexes over 10,000 journals in the arts, humanities, sciences, and social sciences. It requires authentication with a McGill username and password.

To find your h-index, begin by selecting the Author Search option. Select “Life Sciences Biomedicine” in the Research Domain tab. You may restrict your search further by selecting “McGill University” as an organization.

On the results page, click on “Create Citation Report”.

![Web of Science search interface](image_url)
The citation report will include your h-index in Web of Science, along with several other measures, including the total citation count and the average citations per item. To remove items that you did not author from the Citation Report, select them using the checkboxes and click on “Go”.

Scopus
A multi-disciplinary database of peer-reviewed literature, Scopus indexes a broader range of journals than Web of Science, which can result in a higher h-index. However, citations to pre-1996 articles published after 1996 are not currently included in the h-index calculation provided by Scopus. Like Web of Science, Scopus requires authentication with a McGill username and password.

To find your h-index, begin by selecting the Author Search option. Restrict your search by typing “McGill” in the affiliation box. You may further restrict your results by “Life Sciences” and “Health Sciences” as subject areas.
Select the proper author from among the search results, and click on “View citation overview”.

Google Scholar

Google Scholar provides a simple way to check who is citing your publications, and to graph citations over time. Beyond journals, Scholar indexes a selection of academic websites, theses, and other publications, which can also result in a higher h-index.

Using a Google (gmail) account, create a profile in Google Scholar Citations. This profile can be public or private. Once complete, your profile will show all the times your articles have been cited by other documents in Google Scholar, and an h-index will be provided.
Publish or Perish

Publish or Perish is a free program that retrieves and analyzes academic citations. It uses Google Scholar and Microsoft Academic Search to obtain citations, and presents a variety of statistics and metrics including the h-index. While the Publish or Perish software can be installed without administrator rights, installation on public computers is not recommended.

Because the coverage between citation databases varies, no single resource will provide a comprehensive measurement of impact. For a complete analysis of the impact of an author or a publication, one needs to search multiple databases for all possible citations.

To find out more about citation tracking and measuring your research impact, contact your hospital librarian