

Review TEDX List of Potential EDCs

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[The Endocrine Disruptor Exchange \(TEDX\)](#) is a non-profit organization founded by Dr. Theo Colborn. Its website includes a link to a [database](#) of chemicals that TEDX believes has the potential to affect the endocrine system.

TEDX considers that endocrine effects include not only direct effects on traditional endocrine glands, their hormones and receptors (such as estrogens, anti-androgens, and thyroid hormones), but also all other hormones and signaling cascades that affect the body's systems and processes, including reproductive function and fetal development, the nervous system and behavior, the immune and metabolic systems, gene expression, the liver, bones, and many other organs, glands and tissues.

The stated purpose of the TEDX List is “to present the chemicals for which at least one peer-reviewed study has been published, so that scientists, regulators, advocates, and the public are better informed.”

As a starting point in developing the TEDX List, its authors drew from [two other comprehensive lists](#) as well as additional original research contained in their in-house literature database.

To date, nearly 1,000 endocrine disruptors have appeared on the TEDX List. Chemicals can be searched by full or partial chemical name, by CAS number, or by categories derived from the uses and sources of the chemicals. Every chemical on the TEDX List has one or more verified citations. Each citation is from published, accessible, primary scientific research which TEDX considers demonstrates effects on the endocrine system.

References are provided to support each chemical's inclusion on the list. The number of citations presented in the TEDX List has been limited for practical reasons. It does not reflect the relative amount of research that has been done on each chemical and therefore should not be used as a method of ranking or prioritizing.

What is the pool of chemicals considered for potential listing as EDCs?

All chemicals, synthetic and naturally occurring.

How many chemicals are listed as EDCs?

Approximately 1000 chemicals are listed as potential EDCs.

Do the authors use the WHO/IPCS definition of an EDC?

No. An extensive search of the TEDX website failed to identify any working definition of an EDC; however, it is very apparent that the authors assume that, if a chemical has any measurable interaction with the endocrine system, regardless of whether it causes an adverse health effect, it is an EDC.

Is the list homogeneous or does it classify different categories of EDCs?

It is homogeneous with a single category labeled “potential EDC.”

What scientific expertise do the authors have?

The website lists an executive director (Ph.D. in psychology), two other staff members with doctoral degrees (a Ph.D. in reproductive and developmental endocrinology with post-docs at NTP and NIEHS and a Ph.D. in Molecular, Cellular, and Integrative Physiology, with a Designated Emphasis in Reproductive Biology), a research associate (BA and MS in Integrative Physiology) and a research assistant (BS in International Agronomy).

None of the staff members hold degrees or certifications in toxicology or epidemiology.

Do the authors of the list engage other stakeholders?

No process for engaging other stakeholders is described.

Is the list based on primary research or do they rely on other lists?

To jumpstart their list, the authors relied on two published lists of chemicals purported to be EDCs; however, they require at least one primary research study finding to justify a chemical listing as a potential EDC.

Is the list updated on a regular basis with new information?

New chemicals are added to the TEDX list as new studies are published and as prior research is identified for endocrine disruptors not on the current list. However, it is apparent that once a chemical is added to the list, no amount of new research data that contradicts the original data that got the chemical on the list can get that chemical removed from the list. Nor is there a commitment to even add citations for new research regardless of its findings.

Is there a process to appeal the listing of a chemical?

No such process is described.

What are the strengths of the list?

- The list is easily accessed and searched.
- The criteria for listing a chemical are fairly transparent.

What are the weaknesses of the list?

- Does not employ the WHO/IPCS definition of an EDC.
- Lack of scientific robustness
- The reviewers may lack sufficient qualifications to undertake a robust evaluation of the evidence.
- Very low threshold for listing a chemical resulting in too many chemicals that truly are not EDCs being listed as potential EDCs (a single, unreplicated study is deemed sufficient).
- No systematic review and/or weight of the evidence evaluation of a body of literature on a chemical.
- Once a chemical is listed, no amount of new contradictory data appears sufficient to get it unlisted, even if the information is scientifically compelling.
- No multi-stakeholder process for nominating chemicals or appealing listed chemicals.

What are the implications of the list for the Value Chain?

If downstream users rely on the TEDX list they will deny themselves access to many valuable chemicals that actually do not possess endocrine disrupting properties.