

SOCIETY OF TOXICOLOGY

Fact Sheet

What is toxicology?

Toxicology is the study of the relationship between a substance and its effects on the living organism. The chief criterion regarding the toxicity of a chemical is the dose—that is, the amount of exposure to the substance. The study of toxicology traces its roots back to a sixteenth-century physician, *Paracelsus*, who wrote, *All things are poison and nothing is without poison, only the dose permits something not to be poisonous*. Nearly all substances are toxic under the right condition. For example, even a benign substance like water can cause harm in excessive amounts.

Why is toxicology important?

Toxicology is the study of natural and manufactured substances—in pesticides, household chemicals, industrial compounds, food additives, and prescription drugs—and their biological, chemical, and physical effects on humans, animals, and the environment. Toxicology is important to the health of humans and animals because it helps scientists learn how to prevent disease and illness, assures safe treatment for disease and illness, and protects the environment. Toxicology involves nearly every science in its continued quest to create a healthier and safer world.

Who are toxicologists? What do they do?

Toxicologists are chemists, microbiologists, molecular biologists, pathologists, pharmacists, and veterinarians, among other scientists. Toxicologists may develop and enforce regulations to ensure that chemical, physical, and biological agents are produced, used, and disposed of safely. They may teach others about the safe use of these substances, train future toxicologists, or conduct research. Toxicologists work in education, government, industry, and other organizations.

What kinds of tests are used?

Toxicologists conduct safety studies—from the test tube to animals, and in some cases, to human trials—to determine the level at which a substance ceases to be safe or causes harm. Research involving laboratory animals is important to protect all living things.

What is the Society of Toxicology?

The Society of Toxicology is a scientific and professional organization for those practicing toxicology. Founded in 1961, the Society has more than 6,000 members who represent a broad spectrum of professional activities in the United States, Canada, and 45 other countries. The Society of Toxicology is a not-for-profit organization headquartered in Reston, Virginia, near Washington DC. For information, go to www.toxicology.org.

Scientific Publications

- *Toxicological Sciences* is the Society of Toxicology's peer-reviewed journal, publicizing important new findings and research results. For more information, go to www.toxsci.oxfordjournals.org.
- A supplement to *Toxicological Sciences*, *The Toxicologist* features the abstracts of presentations at the Society of Toxicology's Annual Meetings. For more information on the publication, go to www.toxicology.org/ai/pub/publications.asp.

Meetings

The Annual Meeting of the Society of Toxicology is held every March in a different city. Attendees exchange ideas, present research findings in toxicology, and participate in continuing education courses, workshops, and symposia. The exhibit hall at Annual Meetings displays the latest in equipment, instruments, services, and supplies. The Society sponsors or partners with other scientific societies throughout the year. For more information, go to www.toxicology.org/ai/meet/am.asp.

Communications

Members of the Society of Toxicology are a respected resource. They can provide expert opinions to the media, brief Congress and its staff, and provide input to government agencies or other groups on scientific issues. For more information, contact the Society's communications media manager **Michele Bupp** at (703) 438-3115 or e-mail: micheleb@toxicology.org.

Educational Outreach

The Society of Toxicology has a strong commitment to toxicologists-in-training and informing other scientists of the important role of toxicology in today's world. Additionally, the Society coordinates training programs for teachers of grades K–12.

Community Outreach

Special efforts are made to provide the general public with a better awareness of what toxicology is and how it can assist in understanding medical issues associated with exposures to chemicals in a variety of situations. The Society is developing information to help families keep their loved ones healthy and safe. For more information, contact **Michele Bupp** at (703) 438-3115 or e-mail: micheleb@toxicology.org.

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Find out more about the Society of Toxicology at www.toxicology.org.