

Why do we need Toxicologists?

Toxicologists make important contributions to science and society. They investigate what happens to us when we are exposed to toxic levels of drugs, pesticides, air pollutants and other chemicals. **They are the scientists who help us decide how much is too much of a good thing!**



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For more information,
check out the
SOT Web site at
<http://www.toxicology.org>

SOT | Society of
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How About a Career in Toxicology?



**“All substances are poisons;
there is none which is not a
poison. The right dose
differentiates a poison
from a remedy.”**

Paracelsus, 1493–1541



What is Toxicology?

Much of the good life we enjoy is because we use chemicals properly, including medicines, pesticides, and cleaning products. **Toxicology** is the study of harmful effects of chemicals on people, animals and other living organisms. Misunderstanding what chemicals can do can sometimes lead to overexposure and poisoning or, conversely, unnecessary anxiety and fear of chemicals that are harmless when used properly. **A toxicologist is a scientist who studies toxicology. They are the scientists who help us decide how much is too much of a good thing!**



Tox

What exactly do Toxicologists do?

Toxicologists work in many settings including colleges and universities, industry, and government. Their daily activities can vary tremendously depending on what they do. Some will use robotic or molecular tools and techniques to investigate a chemical in the laboratory in order to develop or understand a chemical. Some will use state-of-the-art computer technology and software to analyze and interpret exciting new data and unwrap the mysteries that can surround a chemical. Some will use new and traditional communication and information technologies to explain the risks and benefits of chemicals so that the public and the government can work together to set policy. Some examples of the specialties of toxicologists are:

- **Clinical Toxicologists** help diagnose patients with diseases caused by toxic substances and work with Poison Control Centers.
- **Environmental Toxicologists** study how chemical pollution affects people, communities and the environment by conducting laboratory and field research.
- **Forensic Toxicologists** help establish the cause of death or identify important toxicological clues that can solve a crime.
- **Industrial Toxicologists** help develop new and useful products like pharmaceuticals, industrial chemicals, and consumer products, such as soaps, paints, cosmetics, and food additives.
- **Mechanistic Toxicologists** investigate how chemicals cause toxic effects in living organisms.
- **Regulatory Toxicologists** help determine if a drug or other chemical is safe enough to be on the consumer market, and if it is, how much a person could be exposed to without becoming poisoned.



Specialities



Who can become a Toxicologist?

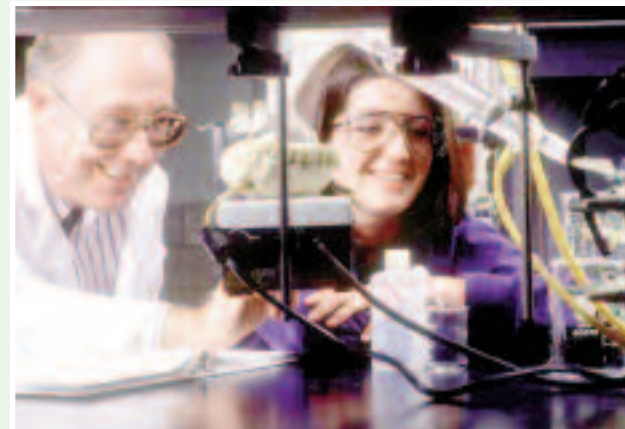
You can!

If the field sounds interesting and you like science, find out what it takes to become a toxicologist! Your parents, teachers, and guidance counselors may know toxicologists or have some other ideas about how to pursue this career. You can also consult college and university programs that offer degrees in toxicology and related fields.

What does it take to become a Toxicologist ?

A toxicologist is multitalented and uses skills from all sciences, which is why many choose this career!

You can consider a wide range of undergraduate majors including chemistry, biology, and related fields to prepare yourself for a career in toxicology. With further education, your job and income opportunities will increase! Many colleges and universities offer Masters and Doctoral degrees in Toxicology. With these degrees, you can teach, lead a research team, or work to set government policy. Additional career information is available on the SOT Web site at www.toxicology.org.



The sky is the limit!!!... and you will be helping to ensure the safety of people and the environment!

The Society of Toxicology (SOT) is a scientific organization that includes scientists from academic institutions, government, and industry. Contact the SOT to request names of local scientists who are willing to discuss a career in Toxicology with you.



Preparation