NLM’s Online Playground:
K-12 Health & Science
Information Resources for
Librarians, Teachers, Staff, Students & Parents

Carolyn Martin, MLS, AHIP
Consumer Health Coordinator
National Network of Libraries of Medicine Pacific Northwest Region
martinc4@uw.edu
Agenda

- Introduction and Overview
- Resources
  - MedlinePlus
  - Career
  - Medicine and Health
  - Environmental Health
  - Genomics/Genetics
  - Additional
NIH
NLM
NN/LM
What’s the difference?
Pacific Northwest Region

National Network of Libraries of Medicine (NN/LM) Pacific Northwest Region


The mission of the NN/LM is to enhance access to biomedical and health information for researchers, health professionals, and the public. Located at the University of Washington, the Regional Medical Library for the NN/LM Pacific Northwest Region offers education programs, funding, and consultation to support research, health information services, resource sharing, community partnerships, and outreach in the region.

If your institution is not a member learn more about the benefits of membership and join now!

What is LactMed?

The LactMed® database contains information on drugs and other chemicals to which breastfeeding mothers may be exposed. It includes information on the levels of such substances in breast milk and infant blood, and the possible adverse effects in the nursing infant. Suggested therapeutic alternatives to those drugs are provided, where appropriate. All data are derived from the scientific literature and fully referenced.

Updates: LactMed® is updated monthly.
NLM K-12 Science and Health Education Resources
How do you search for health information?
MedlinePlus: Topics of Interest

Asthma
Autism
Disaster Preparation and Recovery

Attention Deficit Hyperactivity Disorder
Bullying
Child Safety

Domestic Violence
Drugs and Young People
Environmental Health

Weight Control

Winter Weather Emergencies
Food Labeling
Teen Violence

Safety Issues
Pet Health
Lice

Teen Development

...and more
Searching MedlinePlus
Autism Spectrum Disorder

Autism spectrum disorder (ASD) is a neurological and developmental disorder that begins early in childhood and affects throughout a person's life. It affects how a person acts and interacts with others, communicates, and learns. It includes what used to be known as Asperger syndrome and pervasive developmental disorders.

It is called a “spectrum” disorder because people with ASD can have a range of symptoms. People with ASD might have problems talking with you, or they might not look you in the eye when you talk to them. They may also have restricted interests and repetitive behaviors. They may spend a lot of time putting things in order, or they may say the same sentence again and again. They often seem to be in their own world.

At well-child checkups, the health care provider should check your child's development. If there are signs of ASD, your child will have a comprehensive evaluation. It may include a team of specialists, doing various tests and evaluations to make a diagnosis.

The causes of ASD are not known. Research suggests that both genes and environment play important roles.

There is currently no one standard treatment for ASD. There are many ways to increase your child’s ability to grow and learn new skills. Starting them early can lead to better results. Treatments include behavior and communication therapies, skills training, and medications to control symptoms.
For Children

MedlinePlus

For Teens
**Sertraline**

pronounced as (ser' tra leen)

- **Why is this medication prescribed?**
- **How should this medicine be used?**
- **Other uses for this medicine**
- **What special precautions should I follow?**
- **What special dietary instructions should I follow?**
- **What should I do if I forget a dose?**

**IMPORTANT WARNING:**

A small number of children, teenagers, and young adults (up to 24 years of age) who took antidepressants (mood elevators) such as sertraline during clinical trials became suicidal thinking about harming or killing oneself or planning or trying to do so. Children, teenagers, and young adults who take antidepressants to treat depression or other mental illnesses may be more likely to become suicidal than children, teenagers, and young adults who do not take antidepressants to treat these conditions. However, experts are not sure about how great this risk is and how much it should be considered in deciding whether a child or teenager should take an antidepressant.

You should know that your mental health may change in unexpected ways when you take sertraline or other antidepressants even if you are an adult over 24 years of age. You may become suicidal, especially at the beginning of your treatment and any time that your dose is increased or decreased. You, your family, or your caregiver should call your doctor right away if you experience any of the following symptoms: new or worsening depression; thinking about harming or killing yourself; or planning or trying to do so; extreme worry, agitation, panic attacks; difficulty falling asleep or staying asleep; aggressive behavior, irritability, acting without thinking; severe restlessness; and frenzied abnormal excitement. Be sure that your family or caregiver knows which symptoms may be serious so they can call the doctor if you are unable to seek treatment on your own.

Your healthcare provider will want to see you often while you are taking sertraline, especially at the beginning of your treatment. Be sure to keep all appointments for office visits with your doctor.

The doctor or pharmacist will give you the manufacturer's patient information sheet (Medication Guide) when you begin treatment with sertraline. Read the information carefully and ask your doctor or pharmacist if you have any questions. You can also obtain the Medication Guide from the FDA website: http://www.fda.gov/Drugs/DrugSafety/Informational Dzi/Class/UCM092737

No matter what your age, before you take an antidepressant, you, your parent, or your caregiver should talk to your doctor about the risks and benefits of treating your condition with an antidepressant or with other treatments. You should also talk about the risks and benefits of not treating your condition. You should know that having depression or another mental illness greatly increases the risk that you will become suicidal. This risk is higher if you or anyone in your family has or has ever had bipolar disorder (mood changes from depressed to very high and unstable energy) or has had several attempted or completed suicides.

**MedlinePlus search results for drug and supplement information**

**MedlinePlus**

**Health Information**

**Vitamin D**

Fact Sheet for Consumers

**What is vitamin D and what does it do?**

Vitamin D is a nutrient found in some foods that is needed for health and to maintain strong bones. It does so by helping the body absorb calcium (one of bone's main building blocks) from food and supplements. People who get too little vitamin D may develop soft, thin, and brittle bones, a condition known as rickets in children and osteomalacia in adults.

Vitamin D is important to the body in many other ways as well. Bones need it to move, for example, nerves need it to carry messages between the brain and every body part, and the immune system needs vitamin D to fight off invading bacteria and viruses. Together with calcium, vitamin D also helps protect older adults from osteoporosis. Vitamin D is found in cells throughout the body.

**Table of Contents**

- What is vitamin D and what does it do?
- How much vitamin D do I need?
- What foods provide vitamin D?
- Can I get vitamin D from the sun?
- What kinds of vitamin D dietary supplements are available?
- Am I getting enough vitamin D?
- What happens if I don't get enough vitamins D?
- What are some effects of vitamin D on health?
- Can vitamin D be harmful?
- Are there any interactions with vitamin D that I should know about?
- Vitamin D and my health
- Where can I find out more about vitamin D?
- Disclaimer
Videos of Surgical Procedures

This page provides links to prerecorded webcasts of surgical procedures. These are actual operations performed at medical centers in the United States. Please note that you cannot send in questions by email, though the webcast may say that you can, because you are not seeing these videos live.

The videos are in Flash format. You will need Flash Player to view the programs. You can download Flash Player for free at www.adobe.com/products/flashplayer.

The videos open in a second window. If you have a pop-up blocker, you will need to disable it to view the programs.

Blood, Heart and Circulation

Angioplasty
- Coronary Angioplasty Stent Placement (Shriners Hospitals for Children, Seattle, WA, 2010)
- Transradial Approach for Coronary Catheterization: The New Frontier of Coronary Intervention (University of Chicago Medical Center, Chicago, IL, 2012)

Aortic Aneurysm
- Abdominal Aortic Dissection and Aneurysm (New York Presbyterian Hospital, New York, NY, 2004)
- Aortic Aneurysm Repair (St. Luke's Episcopal Hospital, Houston, TX, 2005)
- Hybrid Aortic Debranching (Mgh Cardiothoracic Surgery, Boston, MA, 2010)
- Repair Options for Abdominal Aortic Aneurysms (Shriners Hospitals for Children, Seattle, WA, 2005)
- Transesophageal Echocardiogram (TEE) (Shriners Hospitals for Children, Philadelphia, PA, 2017)

Atrial Fibrillation
- Insertable Cardiac Monitor (Scripps Clinic, La Jolla, CA, 2014)
- Pacing for Atrial Fibrillation (Montefiore Einstein Heart Center, New York, NY, 2008)
- Total Thoracoscopic Maze (Pinnacle Health, Harrisburg, PA, 2012)

Surgery Videos

Find videos of operations and surgical procedures.
MedlinePlus

Information for Librarians and Trainers

The goal of MedlinePlus is to bring appropriate, authoritative health information to those who need it. We appreciate your efforts in training people on how to use MedlinePlus. Here are some training resources which might help you with your classes and health fairs.

Resources for Teaching MedlinePlus

MedlinePlus Tour

- MedlinePlus Tour in English and Spanish - A narrated tour of the main features of MedlinePlus. The video runs about 2.5 minutes.

MedlinePlus Brochures

- MedlinePlus PDF Brochure - in English (updated May 2015) and Spanish (updated May 2015)
- MedlinePlus PDF Brochure in Creole (updated October 2010)
- MedlinePlus for Health Professionals PDF Brochure (updated July 2015)
- MedlinePlus Connect PDF Brochure (updated June 2014)
- MedlinePlus XML Data Sources PDF Brochure (updated December 2013)

About MedlinePlus

- Articles about MedlinePlus
- Citing MedlinePlus FAQ
- E-mail Updates – Sign up to receive emails containing links to new topics, new sites, and health news.
- MedlinePlus FAQs
- MedlinePlus Quality Guidelines
- MedlinePlus Search Tips

Resources for Teaching How to Find Health Information Online

General

- Evaluating Internet Health Information: A Tutorial from the National Library of Medicine (download)
- Finding Accurate and Reliable Health Information on the Internet - PDF (University of Minnesota Health Sciences Libraries)
- Finding Quality Health Information on the Web - A Tool Kit (University of Washington Center for Public Health Nutrition)
- MedlinePlus Guide to Healthy Web Surfing
- MedlinePlus Page: Evaluating Health Information
- MedlinePlus Page: Understanding Medical Research
Consumer Health Resources

Health Information

- General Health
- Drugs & Supplements
- Specific Populations
- Genetics
- Environmental Health & Toxology
- Clinical Trials
- Biomedical Literature

General Health

- MedlinePlus
  - Over 360 health topics
  - Interactive tutorials
  - A medical encyclopedia with images
  - Drug and supplements information
  - Latest health news
  - Surgery, anatomy and news videos
  - Guidelines for evaluating internet health information
  - Population-specific Health Information
  - More about MedlinePlus (Fact Sheet) | FAQs | MedlinePlus en español

FAQ: Find a Doctor or Information About a Doctor
Resources for individuals trying to find a doctor or information about a doctor.

Drugs & Supplements

- DailyMed
  - A directory of Food and Drug Administration (FDA) drug labels.
- Dietary Supplements Labels Database
  - A database with label information for thousands of brand-name dietary supplements.
- Drug Information Portal
  - A portal that provides quick access to high quality drug information.
- Pillbox
MedlinePlus.gov

Latest news & info on health & medicine. Tweets are not medical advice. Maintained by the National Library of Medicine. Privacy Policy.

Baltimore, MD
dmedlineplus.gov
Joined March 2009

372 Photos and videos

People 60 years or older should get the #shingles vaccine. Learn more details from @CDCgov: usa.gov/1JyjDcl

New study suggests using tanning beds at a young age significantly raises risk of skin cancer.
NLM K-12 Twitter
School Health

Summary

Your child spends more time at school than anywhere else except home. Schools can have a major effect on children's health. Schools can teach children about health, and promote healthy behaviors. Physical education classes give children a chance to get exercises.

Schools work to

- Prevent risky behaviors such as alcohol and tobacco use, or bullying
- Encourage healthy habits like exercise and healthy eating
- Deal with specific health problems in students, such as asthma, obesity and infectious diseases

The school building and environment should be a safe and healthy place for your child.

Start Here

- Safe Youth, Safe Schools (Centers for Disease Control and Prevention)
- Student Health and Academic Achievement (Centers for Disease Control and Prevention)

Latest News

- Schools Must Do More to Combat Obesity Among Hispanic Kids: Report (01/02/2016, HealthDay)
- “Standing Desks” in Classrooms May Kickstart Kids’ Activity (01/22/2016, HealthDay)
- Schools Offering Drinking Water May Have Slightly Slimmer Students (01/19/2016, HealthDay)
- More News on School Health

Resources

For You

- Children
- Teenagers
Using This Information

Flu

Flu is a respiratory infection caused by a number of viruses. The virus enters your body through your nose or mouth. Between 5% and 20% of people get flu each year. The flu can be serious or even deadly for elderly people, newborns, and people with chronic illnesses.

Symptoms of the flu come on suddenly and are worse than those of the common cold. They include:
- Body or muscle aches
- Chills
- Headache
- Fatigue
- Cough
- Sore throat
- Runny or stuffy nose
- Nasal congestion
- Sneezing
- Muscle aches

Some people also have nausea or vomiting.

Flu Symptoms & Severity

The flu is different from a cold and can cause mild to severe illness. Most people will recover from the flu in less than 2 weeks, but some will develop complications. Learn more about flu symptoms and those who are at high risk from the flu.
Using This Information

Food Allergies
Using This Information

Athletic Injuries

Head Injuries

Also called: Concussions, Skull fractures, Skull injuries

On this page
- Basics
- Summary
- Learn More
- Child
- Athletes
- Recent Issues
- For You
- Traumatic Brain Injury
- Resources
- Strategic and Research
- Journal Articles
- Videos & Tools
- Clinical Trials
- Patient Education

Summary

Changes are you've bumped your head before. Usually, the injury is minor because your skull is hard and it protects your brain. But other head injuries can be more serious, such as a skull fracture, concussion, or traumatic brain injury.

Head injuries can be open or closed. A closed injury does not break through the skull. With an open, or penetrating, injury, an object pierces the skull and enters brain tissue. Closed injuries are not always less severe than open injuries.

Some common causes of head injuries are falls, motor vehicle accidents, violence, and sports injuries.

It's important to know the warning signs of a moderate or severe head injury. Get help immediately if the injured person has:
- A headache that gets worse or does not go away
- Repeated vomiting or nausea
- Convulsions or seizures
- An inability to wake up
- Dilation of one or both pupils of the eyes
- Slurred speech
- Weakness or numbness in the arms or legs
- Loss of coordination
- Increased confusion, restlessness, or agitation

Sports Injuries

Exercising is good for you, but sometimes you can injure yourself when you play sports or exercise. Accidents, poor training practices, or improper gear can cause them. Some people get hurt because they are not in shape. Not warming up or stretching enough can also lead to injuries.

The most common sports injuries are:
- Sprains and strains
- Knee injuries
- Shoulder injuries
- Achilles tendon injuries
- Patellar tendon injuries
- Shoulder injuries
- Fractures
- Dislocations

If you get hurt, stop playing. Continuing to play or exercise can cause more harm. Treatment often begins with the RICE (Rest, Ice, Compression, and Elevation) method to relieve pain, reduce swelling, and speed healing. Other possible treatments include pain relievers, keeping the injured area from moving, rehabilitation, and sometimes surgery.

NIH: National Institute of Arthritis and Musculoskeletal and Skin Diseases

Start Here
Using This Information

Internet Safety
Using This Information

Bullying is when a person or group repeatedly tries to harm someone who is weaker or who they think is weaker. Sometimes it involves direct attacks such as hitting, name calling, teasing or taunting. Sometimes it is indirect, such as spreading rumors or trying to make others reject someone.

Often people dismiss bullying among kids as a normal part of growing up. But bullying is harmful. It can lead children and teenagers to feel tense and afraid. It may lead them to avoid school. In severe cases, teens who are bullied may feel they need to take drastic measures or react violently. Others even consider suicide. For some, the effects of bullying last a lifetime.

Centers for Disease Control and Prevention

Bullying information:
- Bullying: It’s Not OK (American Academy of Pediatrics)
- Dealing with Bullies (Nemours Foundation)
- Helping Kids Deal with Bullies (Nemours Foundation)
- What is Bullying? (Health Resources and Services Administration)
# Child Nutrition

## Basics
- **Summary**
- **Start Here**
- **Latest News**
- **Diagnosis/Symptoms**

## Learn More
- **Related Issues**
- **Specific Conditions**

## See, Play and Learn
- **Health Check Tools**
- **Videos**
- **Games**

## Research

- **Statistics and Research**
- **Clinical Trials**
- **Journal Articles**

## Resources

- **Reference Desk**
- **Find an Expert**
- **Finance and Policy**

## For You
- **Children**
- **Teens**
- **Patient Handouts**

## Summary

A healthy diet helps children grow and learn. It also helps prevent obesity and certain diseases, such as diabetes. To give your child a nutritious diet:

- Make half of what is on your child's plate fruits and vegetables.
- Choose healthy sources of protein, such as lean meat, nuts, and beans.
- Serve whole-grain breads and cereals because they are high in fiber.
- Limit fast food and junk food.
- Limit water or milk instead of sugary fruit drinks and sodas.

Learn about your children's nutrient requirements. Some of them, such as iron and calcium, change as your child ages.

### NH National Institute of Diabetes and Digestive and Kidney Diseases

## Start Here

- Health and Nutrition Information for Preschoolers (Department of Agriculture)
- Healthy Eating (Remuneration Foundation)
- Available in Spanish

## Tips for Parents

- Supporting your child's diet (National Institute of Diabetes, Digestive and Kidney Diseases)

### Preschoolers (3-5 yrs)

Parents and caregivers of children 3-5 years old can explore ways to help preschoolers grow up healthy, play actively, enjoy meals, be a healthy weight, and feel good.

### Kids (6-11 yrs)

Offering science-based online, MyPlate Kids' Plate can help kids build healthy meals and to maintain or achieve a healthy weight. Parents and teachers are invited to use the MyPlate Kids' Plate Resources for Parents and Educators for free resources and information. Through fun, interactive activities with children to involve everyone at home and at school.

### High School Students

The SuperTracker Nutrition Learning Plan for High School Students is a series of lesson plans designed to help high school students learn how to build a healthy diet using SuperTracker. Each lesson plan includes learning objectives, detailed instructions, and accompanying resources and handouts.
Using This Information

Teen Mental Health

Teen Mental Health

Being a teenager is hard. You’re under stress to be liked, do well in school, get along with your family, and make big decisions. You can’t avoid most of these pressures, and stressing about them is normal. But feeling very sad, hopeless or worthless could be warning signs of a mental health problem.

Mental health problems are real, painful, and sometimes severe. You might need help if you have the signs mentioned above, or if you:

- Often feel very angry or very worried.
- Feel grief for a long time after a loss or death.
- Think your mind is controlled or out of control.
- Use alcohol or drugs.
- Exercise, eat, and drink too much.
- Hurt other people or destroy property.
- Do reckless things that could harm you or others.

Mental health problems can be treated. To find help, talk to your parents, school counselors, or health care provider.

Get Teen Mental Health updates by email.

Start Here
- Understanding Your Teen's Emotional Health (American Academy of Family Physicians)
- Also available in Spanish.
Using This Information
Disaster Planning
Using This Information

Current Concerns
### Our Mission

**Biblioteca Las Américas**

To empower high school students and assist them in serving their communities.

**Implementation Guide**

To improve the awareness and use of quality health information resources in communities, and.

**History**

To create student-centered programs for community health outreach.

**Activities**

We offer free support for those starting new peer tutoring programs that seek to partner teachers and high school students and wish to learn from the experiences of others.

**Personnel**

**South Texas ISD**

**Publications**

**Awards**

Download our recently updated Implementation Guide!

### Awards

- 2003 Texas Library Association Project of the Year
- 2003 HCOA Student Community Awareness Project
- 2006 National School Library Media Program of the Year

### Funded

This project has been funded in whole or in part with Federal funds from the National Library of Medicine, National Institutes of Health, under Contract No. HHSN-276-2011-00007C with the Houston Academy of Medicine-Texas Medical Center Library.

**Explore Health Careers.org**
Careers
Health Careers: MedlinePlus
Enviro-Health Links

Enviro-Health Links - Education, Careers, and Outreach in Toxicology, Chemistry, and Environmental Health

Topics of Interest
- Academic Program Directories
- Continuing Education and Tutorials
- Educational Outreach
- K-12 Education
- General Science Resources
- Accreditation Boards
- Career Resources
- Professional Societies
- International Societies
- Disclaimers

Academic Program Directories
- Graduate Programs in Toxicology
- Programs in Environmental Science and Environmental Health Sciences
- Programs in Medical Toxicology
- Programs in Occupational Medicine and Related Disciplines

Stay Connected
- Join the listserv
- Subscribe to RSS
- Follow us on Twitter
- Connect with NLM

About TDEH
- Database Descriptions
- Which Resource Should I Use?
- NIEHS News
- Conference Exhibit Schedule

A to Z Index of Resources
- Academic and Postdoctoral Programs and Web Sites
- Society of Toxicology
- Association of Environmental Health Academic Programs
- Current Affiliates of the National Council for Science and the Environment
- Environmental Internship Clearinghouse
- National Council for Science and the Environment
- National Environmental Health Science and Protection Accreditation Council (EHSC)
Not Invented Here

LifeWorks
Explore health and medical science careers

Explore Careers

Browse our 200+ career descriptions by...

Alphabetical List  Interest Area
Education Required  Median Salary

Education Makes a Difference

text version

College & Career Planning Time Line

Find out what you should be doing for each year of high school to improve your chances of getting into the college of your choice and make the application process easier.

Check Out a Success Story

Meet a real Biomedical Engineer:

Abby Vogel

“My career goals are to graduate with a Ph.D. in Biological Resources Engineering and to publish as a first author in a leading professional journal. After graduating with a Ph.D., I am undecided about whether to pursue a career in academia as a professor, or in industry as a biomedical engineer.”

Activities

Apply knowledge of engineering, biology, and biomechanical principles to the design, development, and evaluation of biological and health systems and products, such as artificial organs, prostheses, instrumentation, medical information systems, and health management and care delivery systems.

Minimum Education Required

Bachelor’s Degree

Learn more about Biomedical Engineer

More Interviews [View All]

Scientist, Medical (Zayd Khalig)
Epidemiologist (Jill Koshol)
Immunologist (Jennifer Sargent)
Physician Assistant (Yvonne Vigil)
Dentist (Iliax Alejivizos)
GeneEd

Careers in Genetics

The study of genetics and genomics is improving our understanding of the biology of health and disease, and that of our biological world in ways that was never before possible. These advancements have wide applications to biology, health, and society. Opportunity to use training in genetics and genomics exists in a range of fields, including in medicine, academic research, law, journalism, agriculture, commercial industries, and education to name a few.

**Becoming a Scientist**
Description: Detailed articles, video interviews with various scientists, and additional information resources for students curious about becoming a scientist.
Source: Cold Spring Harbor Laboratory | URL: [http://library.cshl.edu/education/public/scientific-experience/becoming-scientist/](http://library.cshl.edu/education/public/scientific-experience/becoming-scientist/)

**Careers in Human Genetics**
Description: Information on careers in human genetics

**Genetic Counselling**
Description: Genetic counsellors are health professionals who help people faced with the possibility of a genetic disease to make informed decisions about their futures.
Source: Genome Research Limited and Wellcome Trust Sanger Institute | URL: [http://www.yourgenome.org/node/146/gene-counseling](http://www.yourgenome.org/node/146/gene-counseling)

**GeneticsCareers.org**
Description: Explore real genetics career job postings on this site developed by The American Society of Human Genetics and the Genetics Society of America
Source: GeneticsCareers.org | URL: [http://geneticscareers.org](http://geneticscareers.org)

**Genomic Careers - Find Your Future**
Description: Video interviews with genomic professional, information on genomic careers, a tool for rating your favorite genomic careers, and an opportunity to test your knowledge of careers in this field.

**Genomics: Towards a Healthier You**
Description: A website presenting information on why genetics is important to health, plus information on genetic counseling as a career. The skier and performer T-Baz shares her personal story about living with sickle cell anemia as one example of genomic health issues.
Source: National Human Genome Research Institute | URL: [https://www.youtube.com/watch?v=Q5Zwpv5Y/9Q](https://www.youtube.com/watch?v=Q5Zwpv5Y/9Q)
Changing the Face of Medicine

IS A MEDICAL CAREER FOR YOU?
- What is a career in medicine like? Why do people choose medicine? What can I do to get some hands-on experience in a medical environment? How expensive is it? Access information to help you learn more about this fascinating field.

UNDERGRADUATE EDUCATION
- The first step to a promising career in medicine is to get a good undergraduate education. Find helpful tips and practical information on the types of courses to take while you are an undergraduate, how to get into a medical school, the broad range of medical careers open to you, and how to finance the first phase of your education.

MEDICAL SCHOOL
- Once you are in medical school, you will be launched on a challenging and rewarding path. Learn about elective opportunities in the fourth year, medical specialties, combined M.D./Ph.D. programs, research and training programs, and medically focused financial aid opportunities.

RESIDENCY AND FELLOWSHIPS
- Once you complete medical school, you need to enter a residency program that is three to seven years long depending on the medical specialty you choose. After that, you may elect to gain one to three years of additional medical training if you want to become highly specialized. Find out how medical students secure residencies and learn about fellowship opportunities, the requirements for certification in a specialty, and the resources and organizations available to help you along the way.

PRACTICING MEDICINE
High School

American Indian Science and Engineering Society (AISES) Pre-College Programs
http://www.aises.org/what/programs/precollege
AISES offers a variety of programs for Native high school students, including annual national and international science and engineering fairs, summer math and science camps, and technology-based initiatives.

ASPIRINGDOCS.ORG® by the Association of American Medical Colleges (AAMC)
http://www.aspiringdocs.org
ASPIRINGDOCS.ORG® is supported by AAMC to increase diversity in medicine. The FAQs & Resources section will help high school students consider a career in medicine, as well as help them navigate through the process of getting into and paying for medical school.

Association of American Indian Physicians (AAIP) Patty Iron Cloud National Native American Youth Initiative
http://aaip.site-ym.com/?pages=NNAYI
This annual congress takes place in Washington, D.C. and is designed for American Indian and
Medicine/Health
Gas
Also called: Belch, Burp, Eruption, Flatulence, Flatus

Summary
Everyone has gas. Most people pass gas 13 to 21 times a day. Passing gas through the mouth is called belching or burping. Passing gas through the anus is called flatulence. Most of the time gas does not have an odor. The odor comes from bacteria in the large intestine that release small amounts of gases that contain sulfur.

Gas in the digestive tract comes from two sources: air that you swallow and the breakdown of undigested food by bacteria in the large intestine. Certain foods may cause gas. Foods that produce gas in one person may not cause gas in another.

You can reduce the amount of gas you have by
- Drinking lots of water and non-fizzy drinks
- Eating more slowly so you swallow less air when you eat
- Avoiding milk products if you have lactose intolerance

Medicines can help reduce gas or the pain and bloating caused by gas. If your symptoms still bother you, see your health care provider.

NIH: National Institute of Diabetes and Digestive and Kidney Diseases
KidsHealth: Information on Body
PubMed Central
PubMed Health
Environmental Health
Hazardous Waste

Summary

Even if you use them properly, many chemicals can still harm human health and the environment. When you throw these substances away, they become hazardous waste. Some hazardous wastes come from products in our homes. Our garbage can include such hazardous substances as old batteries, bug spray cans and paint thinner. U.S. residents generate 1.6 million tons of household hazardous waste per year. Hazardous waste is also a by-product of manufacturing.

You may have hazardous wastes in your basement or garage. How do you get rid of them? Don’t pour them down the drain, flush them, or put them in the garbage. See if you can donate or recycle. Many communities have household hazardous waste collection programs. Check to see if there is one in your area.

Environmental Protection Agency

Start Here

- Environmental Health Topics
- Tox Town
- Household Products Database (National Library of Medicine)

Related Issues

- ToxicFAQs (Agency for Toxic Substances and Disease Registry)
- TOXNET, Toxicology Data Network (National Library of Medicine - Databases on toxicology, hazardous chemicals, and related areas)

Specifics

- Best Way to Get Rid of Used Needles and Other Sharps (Food and Drug Administration)
- Volatile Organic Compounds (VOCs) (Environmental Protection Agency, Indoor Environments Division)

On this page

Basics

- Summary
- Start Here
- Latest News

Resources

- Statistics and Research
- Journal Articles

Research

- Research Resources
- Find an Expert
- For You
- Children
- Patient Handbooks
Environmental Health & Toxicology
Environmental Health Student Portal

What is Environmental Health?

Environmental Health is the interrelationship between human health and the environment, either natural or manmade.

Learn More

Interested in a trailer of our animations about characteristics, uses, and health effects of hazardous chemicals? Please, click here to preview.
Educational Games

- ToxMystery
- Run4Green
- TOXinvaders
- BriteThru

Welcome to WHAT'S WRONG IN THIS ROOM, a ToxMystery activity. Enter the house by clicking on the front door.
Household Products Database (HPD)
Welcome to TOXNET
Your resource for searching databases on toxicology, hazardous chemicals, environmental health, and toxic releases

SEARCH TOXNET
Search all or select specific databases

- e.g. Benzene, endocrine disruptor

TOXNET Databases

- MOST VISITED BY TOXNET USERS
  - HSDB: Hazardous Substances Data Bank. Peer-reviewed toxicology data for over 6,000 hazardous chemicals
  - TOLXIME: 4 million references to literature on biochemical, pharmacological, physiological, and toxicological effects of drugs and other chemicals
  - ChemIDplus: Dictionary of over 449,000 chemicals (names, synonyms, and structures)

- BREASTFEEDING & DRUGS
  - LexiMed: Drugs and Lactation Database. Drugs and other chemicals to which breastfeeding mothers may be exposed

- DEVELOPMENTAL TOXICOLOGY LITERATURE
  - DART: Developmental and Reproductive Toxicology Database. References to developmental and reproductive toxicology literature

- CHEMICAL RELEASES & MAPPING
  - TOXMAP: Environmental Health Maps provides searchable, interactive maps of BPA, TRI and Superfund data, plus US Census and NCI health data
  - TRI: Toxics Release Inventory. Annual environmental releases of over 600 toxic chemicals by U.S. facilities

- GENOMICICS
  - CTD: Comparative Toxicogenomics Database. Access to scientific data describing relationships between chemicals, genes and human diseases

- HOUSEHOLD PRODUCT SAFETY
  - Household Products Database

- Did you know
  - There is a guide to choosing a database
    - Which Resource Should I Use can help you pick the right resource for your search.
    - More FAQs
Welcome!

The Arctic Health website is a central source for information on diverse aspects of the Arctic environment and the health of northern peoples. The site gives access to evaluated health information from hundreds of local, state, national, and international agencies, as well as from professional societies and universities. In addition, our own always expanding Arctic Health Publications Database, (currently more than 250,000 records), can help you find Arctic-specific articles, out of print publications and information from special collections held in the Alaska Medical Library.

The Arctic Health website is sponsored by the National Library of Medicine’s Division of Specialized Information Services and maintained by the University of Alaska Anchorage’s Alaska Medical Library.
Genomics/Genetics
Genetics Home Reference provides consumer-friendly information about the effects of genetic variation on human health.

Health Conditions
More than 1,100 health conditions, diseases, and syndromes
Browse A-Z

Genes
More than 1,300 genes and the health effects of genetic

New & Updated
New
- cryptogenic cirrhosis
- fibrochondrogenesis
- DOLK-congenital disorder of glycosylation
Past 12 Months

Updated
- Moebius syndrome
- Poland syndrome
- spondyloepiphyseal dysplasia congenita
GeneEd
Genes and Diseases

• Organized by the parts of the body that genetic disorders affect.
• Over 80 genetic disorder summaries.
• Images and interesting facts.
• PDF downloads of chapters.
• Links to related research literature and pertinent websites.
Links from PubMed
MedGen

- Information about human disorders and features or symptoms that have a genetic component.
- Designed for health care professionals and the medical genetics community.
Base Chase
Interdisciplinary Resources
NLM Traveling Exhibits
FRANKENSTEIN:
PENETRATING THE SECRETS OF NATURE

On a dark and stormy night in 1816, Mary Shelley began writing a story that posed profound questions about individual and societal responsibility for other people.

EXPLORE THE EXHIBITION

FIND EDUCATIONAL RESOURCES
The perspectives of surgeons, physicians, and nurses are richly documented in the history of American Civil War medicine, which highlights the heroism and brutality of battlefield operations and the challenges of caring for the wounded during wartime. Yet the experiences of injured soldiers during the conflict and in the years afterwards are less well-known. Life and Limb: The Toll of the American Civil War focuses on disabled veterans and their role as symbols of the fractured nation.

Explore the experiences of Civil War veterans in the online exhibition, use education resources in middle-school, high-school and undergraduate classes, take a closer look at Civil War-era texts in Digital Documents, or find out if the traveling exhibition is coming to a library near you.

Pictured on the right: Soldiers at Armory Square Hospital, Washington, D.C., 1865s

Courtesy National Library of Medicine
NLM Traveling Exhibits

For All the People presents the following classroom resources for K-12 and undergraduate educators and their students. These resources are designed to be starting points for exploring historical perspectives and existing tools and services for considering people's access to health care in the United States. Educators are welcome to adapt them in whole or in part as appropriate for their students' interests and learning goals.
Additional Resources
Digital Collections
Biology
Against the Odds: Making a Difference in Global Health (Grades 9-12+)
How communities work to improve quality of life. Classroom resources included.
apps.nlm.nih.gov/againsttheodds

MedlinePlus® (Grades 6-12+)
Easy to read health information. An excellent source for all ages. Also available in Spanish.
medlineplus.gov

Rewriting the Book of Nature: Charles Darwin and the Rise of Evolutionary Theory (Grades 9-12+)
Explore the scientific discoveries and contributions of Charles Darwin.
nlm.nih.gov/exhibition/darwin/index.html

PubMed®/MEDLINE® (Grades 11-12+)
A citation index for articles from medical and life science journals. View the PubMed tutorial for site navigation.
pubmed.gov

Visible Human Project® (Grades 6-12+)
Complete, anatomically detailed, 3D representations of the normal male and female human bodies.
nlm.nih.gov/research/visible/visible_human.html

Environmental Health Science
Engaging Educational Animations (Grades 6-8)
Educational Animations that convey complex environmental health concepts.
kidsenvirohealth.nlm.nih.gov/generic/3/videos

Environmental Health Student Portal (Grades 6-8)
Connects middle school students to environmental health information.
kidsenvirohealth.nlm.nih.gov

Household Products Database (Grades 6-12+)
Learn about the potential health effects of chemicals in common household products.
hpd.nlm.nih.gov

TOXMAP® (Grades 9-12+)
Uses maps of the United States to visually explore Superfund and Toxic Release Inventory data from the EPA. Includes classroom materials.
toxmap.nlm.nih.gov/toxmap

ToxMystery™ (Grades 1-5)
Interactive site teaching elementary school students about toxic substances in the home. Includes lesson plans and activities.
Support Your Institution and Your Community!

- Help your students/parents/colleagues be informed about health and science
- Provide health/science resources for parents, kids, youth
- Connect with the community through collaboration and information
- Look to NN/LM PNR for great resources and opportunities.
PNR Rendezvous

NLM’s K-12 Resources: Supporting the Teacher, Engaging the Student
August 17, 2016 1:00 pm PT

Presenter: Andrew Plummer, Outreach Librarian at the National Library of Medicine
Thank You!

Questions?

Carolyn Martin, MLA, AHIP
Consumer Health Coordinator
National Network of Libraries of Medicine, Pacific NW Region
martinc4@uw.edu

[NN/LM PNR website](https://nnlm.gov/pnr)

Presentation resources
[https://nnlm.gov/pnr/training/presentations](https://nnlm.gov/pnr/training/presentations)