

Health Literacy

Part 2:
Creating Successful Materials



Facilitators



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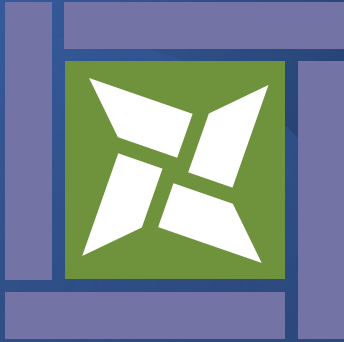
Agenda

- 01** Introduction – Facilitators & EPRC
- 02** Learning Objectives
- 03** Importance of Health Literacy
- 04** Written Communication
- 05** Creating Materials
- 06** Misinformation & Technology
- 07** Recap & Resources



Emory Prevention Research Center

Partnering with communities and leveraging research to prevent cancer and promote health equity



Emory Prevention Research Center (EPRC)

Core (CDC-funded) research focuses on cancer prevention & reducing health disparities related to chronic disease in **rural** communities

Based in the Department of Behavioral, Social, and Health Education, Rollins School of Public Health, with strong connections to Winship Cancer Institute

Funded by CDC from 2004-2014, and now again 2019-2024

Strong partnership in **southwest Georgia** since 2004, building on Cancer Coalition of South Georgia's (now called Horizons Community Solutions) Board of Directors for our **Community Advisory Board** initially and prior study on smoke-free homes

Encourage and support SIP proposals to focus on southwest Georgia when appropriate



RESEARCH



EVALUATION



TRAINING



COMMUNITY



DISSEMINATION

EMORY UNIVERSITY

ROLLINS SCHOOL OF PUBLIC HEALTH

Emory Prevention Research Center

About EPRC | Research | Evaluation | Training | Community | Dissemination

PRC PREVENTION

Partnering with communities and leveraging research to prevent cancer and promote health equity
With a strong emphasis on rural Georgia

Welcome!

Welcome to the website for the Emory Prevention Research Center (EPRC). We are dedicated to improving the lives of Georgia residents by developing and testing innovative interventions, evaluating promising practices, and training practitioners on evidence-based practices to prevent cancer and other chronic diseases. We are located in Emory University's Rollins School of Public Health. Please take a moment to browse our website and learn more about the EPRC.

[More »](#)

Spotlight On

April Hermsstad, MPH, an RSPH graduate, joined the EPRC in 2007. She is an experienced coordinator of research and evaluation projects addressing healthy eating and physical activity behaviors, cancer screening, and access to health care and health-supporting environments. Current evaluations include Healthcare Georgia Foundation's The Two Georgias Initiative and CDC's Racial and Ethnic Approaches to Community Health (REACH) in Hancock County, Georgia.

[More »](#)

What's New?

A new NCI R01 grant will expand the EPRC's Smoke-Free Homes intervention to rural Native American households. Building on successful collaborations, this study will create an innovative and effective model for promoting smoke-free homes in rural areas, and for reducing secondhand smoke among American Indian nonsmokers and children and related cancer disparities. Dr. Michelle Kieger's research was featured in Emory's *Research Roundup*. A new NCI R01 grant will expand the EPRC's Smoke-Free Homes intervention to rural Native American households. Building on successful collaborations, this study will create an innovative and effective model for promoting smoke-free homes in rural areas, and for reducing secondhand smoke among American Indian nonsmokers and children and related cancer disparities.

[More »](#)

RSPH Home | EPRC Home | Contact EPRC | Directions & Maps

f i t

EMORY HOME | CONTACTS | EMERGENCY | CAREERS | GIVE TO EMORY | ABOUT EMORY'S WEB
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Training Symbols

01



Zoom Poll

02



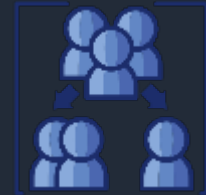
Annotate Feature

03



Video Clip

04



Breakout Room

Learning Objectives



Describe
components of
effective written
communication



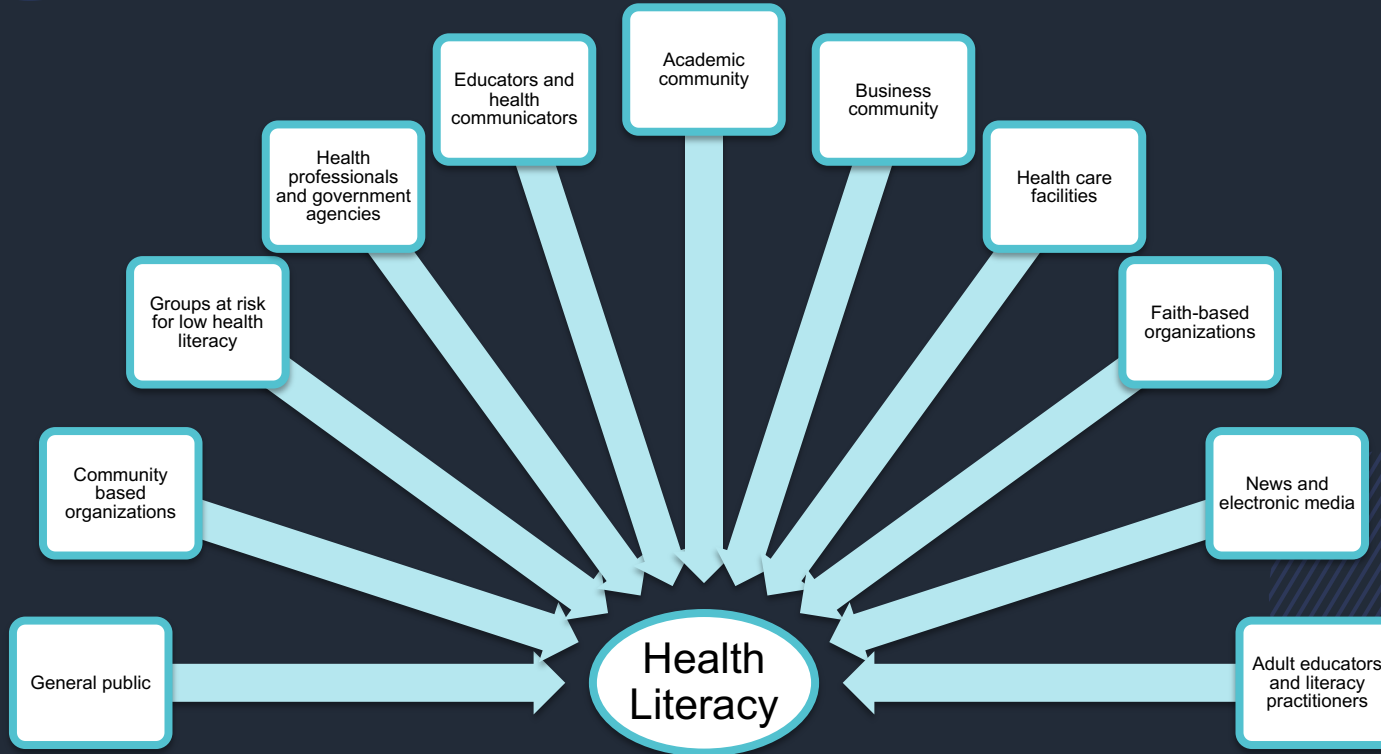
Develop visually
literate health
education
materials



Identify technology
and resources to
improve
communication



Major Stakeholders





Importance of Health Literacy

What is Health Literacy?

“The degree to which individuals have the capacity to **obtain**, **process**, and **understand** basic health information and services needed to make appropriate health decisions.”

The strongest predictor of an individual's health status

Low health literacy is more prevalent among:

- Older adults
- Minority populations
- Medically underserved people
- Those who have low socioeconomic status



Low health literacy is linked to...

- Increased hospital stays and visits to the ER

- Decrease in likelihood to follow treatment(s)

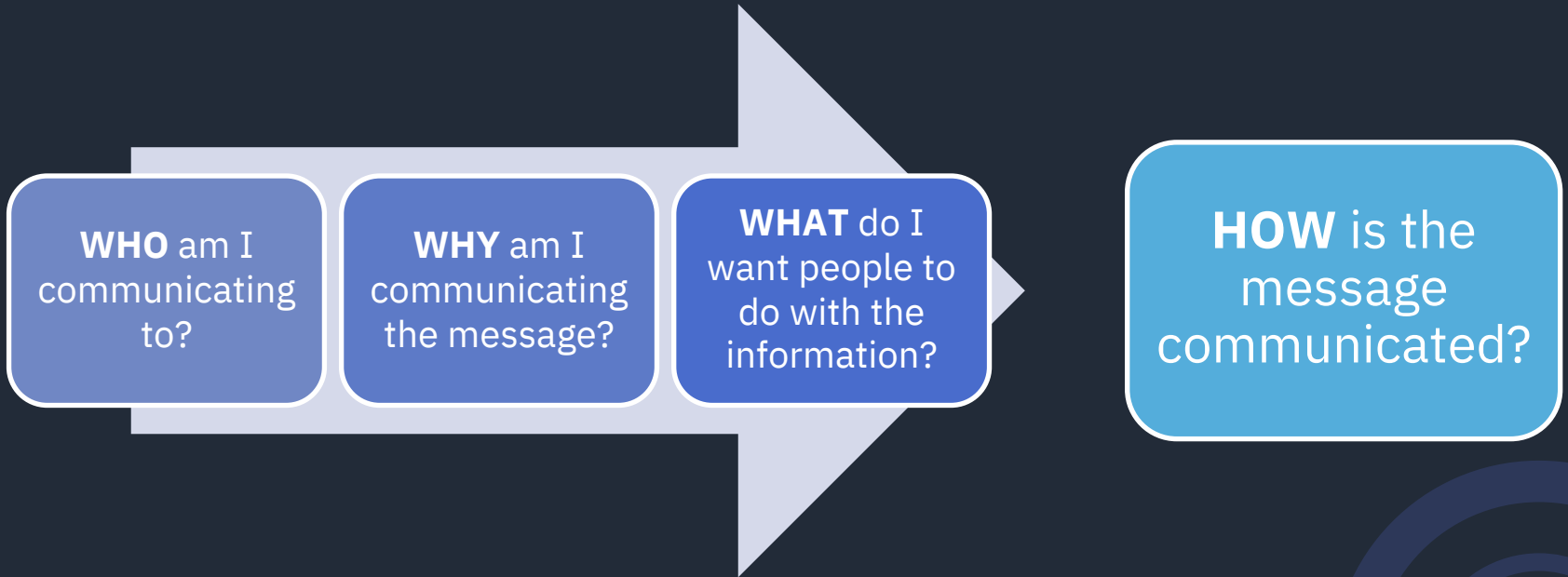
- Avoidance of important medical tests

- Absence or decrease in preventative health behaviors

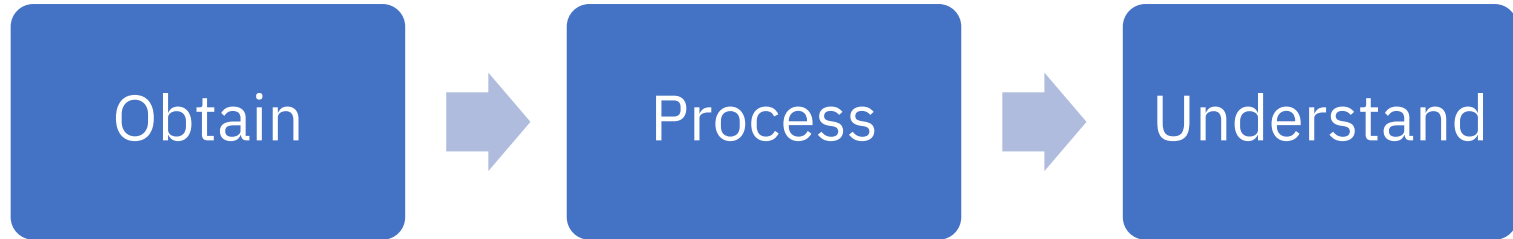
- Higher mortality rates

- Poorer quality of life

Communicating the Message



The WHO Receiver (patient, client...)



...



...



The single overriding communication objective (SOCO) is the main message to your target audience



SOCO

It has 2 components:

KEY MESSAGE

Describe the key point

KEY FACTS

Discuss the 2-3 most important facts you want people to know

Health Professionals' Responsibility

Create Judgement-Free Environments

- All patients/clients should feel welcomed and comfortable at each stage of the health care encounter

Simplify Information

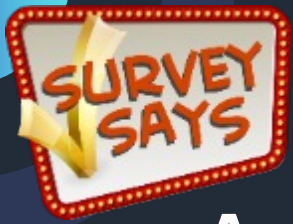
- Communicate clearly with plain language and visual cues, such as models, pictures, or videos.

Listen Carefully

- Avoid interrupting patients when they are speaking and use words the patients use to describe their health or illness in discussion of health and medical planning.

Confirm Comprehension

- Use the teach-back and Ask Me 3 methods.



Approximately what percent of adults have proficient health literacy skills?

A 12%

B 30%

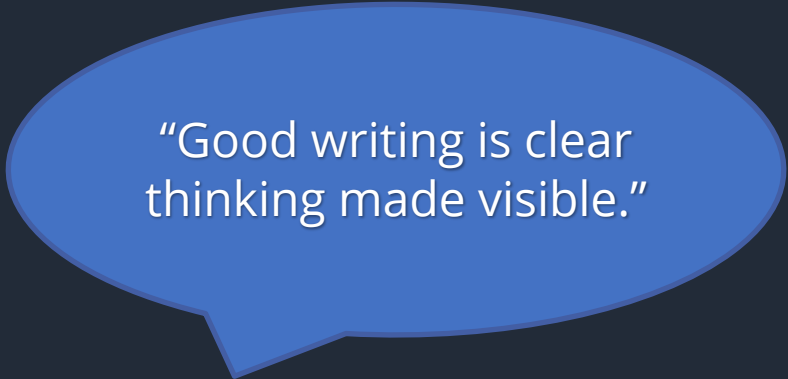
C 47%

D 64%





Written Communication



“Good writing is clear thinking made visible.”

Plain Language

Plain language is communication (oral and written) designed to ensure the reader understands as quickly, easily, and completely as possible

Dietary Guidelines: Losing Weight Safely

The Department of Health and Human Services took a six-page article and replaced it with a single, fold-out brochure, conveying the same information. Here is an excerpt.

✘ Before

The Dietary Guidelines for Americans recommends a half hour or more of moderate physical activity on most days, preferably every day. The activity can include brisk walking, calisthenics, home care, gardening, moderate sports exercise, and dancing.

✔ After

Do at least 30 minutes of exercise, like brisk walking, most days of the week.

Tips for Writing in Plain Language

- Keep paragraphs and sentences short and simple
- Always use language that is familiar to your users
- Use the active voice
- Define complex terms
- Use everyday examples to explain medical or technical concepts
- Write in a friendly, conversational tone



Everyday Word Search

THIS

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People™

EVERDAY WORDS A-Z INDEX ▾

Everyday Words for Public Health Communication

Everyday Words for Public Health Communication offers expert recommendations from CDC's Health Literacy Council and other agency communicators on how to reduce jargon and improve reader understanding.

You can search for public health jargon or plain language words and find *alternatives* and *example sentences*.

Search jargon or plain language words below:

The plain language words and example sentences can help you follow the [Federal Plain Language Guidelines](#) and the [CDC Clear Communication Index](#) criteria.

Not this



Numeracy

Numeracy is the “ability to access, use, interpret, and communicate mathematical information and ideas, to engage in and manage mathematical demands of a range of situations in adult life”

2 Types of Numeracy

Subjective

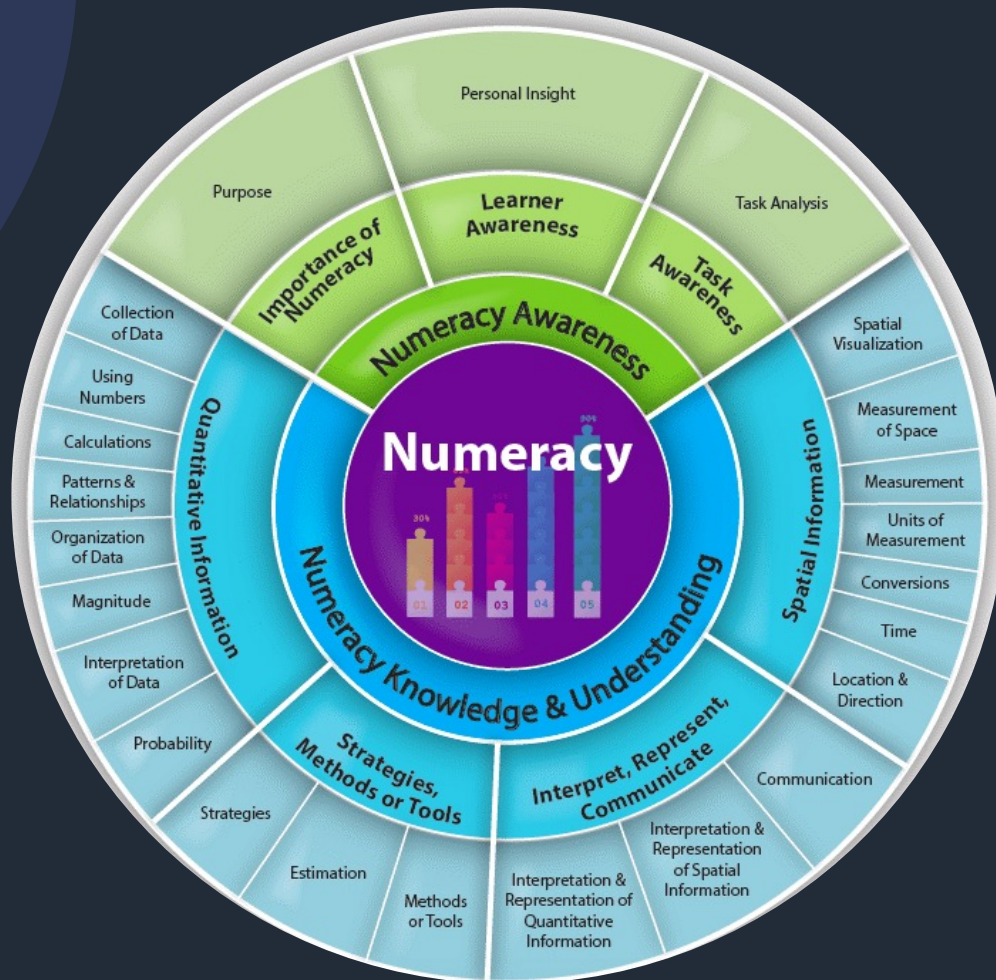
a person’s reported confidence in understanding mathematical data

Objective

measures a person’s actual math skills

Numeracy & Literacy





Numeracy

Assess perceived confidence and actual ability to understand risk data

Tailor communication/ messaging using a combination of text and visual formats that address perceived and actual risk



Self-managed Care

- Controlling medication and doses
- Monitoring conditions

Health Prevention

- Understanding risk and percentages
- Interpreting screening test results

Patient Choice

- Comparing treatment risks.
- Understanding hospital safety data.

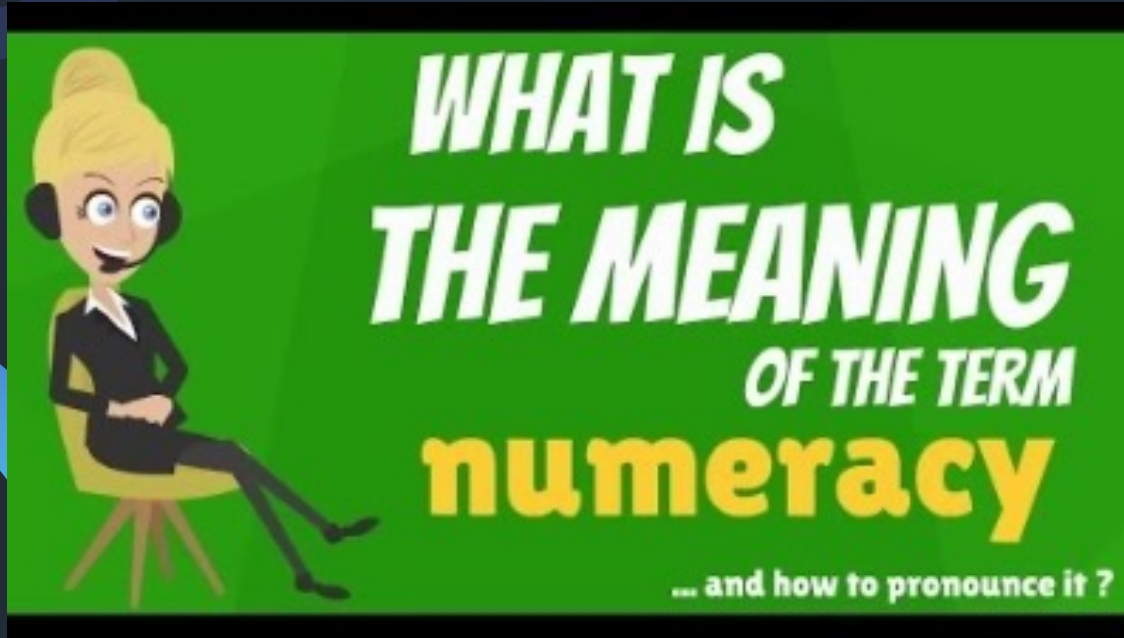
- Calculating oral and fluid drug doses
- Understanding and conveying risks and percentages
- Diagnostic Error

Medical Error

Patient Centred Care



What is the Meaning of Numeracy



(0:00 – 1:40)



How to Measure Numeracy & Literacy

WHAT IS HEALTH LITERACY?



Häagen-Dazs
vanilla

Nutrition Facts	
Serving Size	1/2 cup
Servings per container	4
Amount per serving	
Calories	260
	Per Cal. 130
Total Fat 12%	24%
Saturated Fat 8%	16%
Cholesterol 35%	7%
Sodium 10%	2%
Total Carbohydrate 26%	5%
Dietary Fiber 4%	8%
Sugars 24%	
Protein 4%	8%

*Percent Daily Values are based on a diet of other people's secrets. Your daily intake may vary depending on your secret-keeping skills.

Ingredients: Cream, Sugar, Milk, Egg Yolks, Vanilla Egg Yolks, Arrowroot, Vanilla, Potassium Sorbate, Natural Flavors, Emulsifiers, Cellulose Gum, Carrageenan, Vanilla Extract.

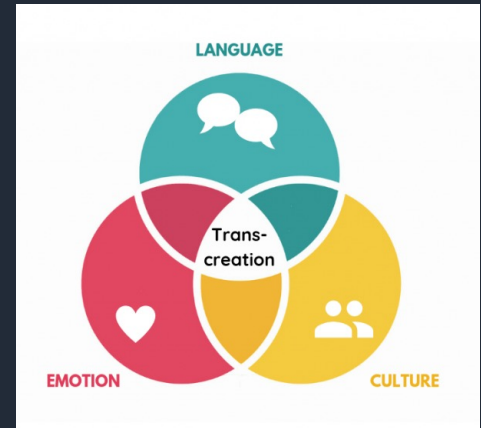
(3:07 – 8:50)

Accessibility/Translation/Transcreation

Along with plain language and numeracy, **accessibility** to the information is important towards health literacy

Translations can improve health literacy by ensuring information about health care is accessible to minority communities and in commonly spoken community languages

Transcreation can be used to recreate campaigns while taking cultural differences into account, more effectively reaching and motivating target audience



Sources:

Text: www.unitedlanguagegroup.com

Image: <https://gtelocalize.com/differences-between-translation-and-transcreation/>

Tips for Translation

Decide on language for translations

Translate using rigorous methods

Have a professional review

Receive feedback from your audience

Principles for Inclusive Communications

Using a healthy equity lens

Using person-first language

Using preferred terms for populations of focus while recognizing that preferred terms may differ

Looking for ways to be more inclusive in text and images

Avoiding unintentional blame

Exploring other resources related to health equity communications

Creating Materials





What proportion of US adults have trouble reading and acting on health-related information?

A $1/5$

B $1/4$

C $1/3$

D $1/2$



Materials



Sleep Hygiene

- Set a schedule.**
 Establish a regular sleep schedule every day of the week. Don't sleep in more than an hour, even on your days off.
- Don't force yourself to sleep.**
 If you haven't fallen asleep after 20 minutes, get up and do something calming. Read a book, draw, or write in a journal. Avoid computer, TV, and phone screens, or anything else that's stimulating and could lead to becoming more awake.
- Avoid caffeine, alcohol, and nicotine.**
 Consuming caffeine, alcohol, and nicotine can affect your ability to fall asleep and the quality of your sleep, even if they're used earlier in the day. Remember, caffeine can stay in your body for up to 12 hours, and even decaf coffee has caffeine!
- Avoid napping.**
 Napping during the day will make sleep more difficult at night. Naps that are over an hour long, or those that are later in the day, are especially harmful to sleep hygiene.
- Only use your bed for sleeping.**
 If your body learns to associate your bed with sleep, you'll start to feel tired as soon as you lie down. Using your phone, watching TV, or doing other waking activities in bed can have the opposite effect, causing you to be more alert.
- Exercise and eat well.**
 A healthy diet and exercise can lead to better sleep. However, avoid strenuous exercise and big meals for 2 hours before going to bed.
- Sleep in a comfortable environment.**
 It's important to sleep in an area that's adequately quiet, comfortable, and dark. Try using an eye mask, ear plugs, fans, or white noise if necessary.

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Nanomaterials for Healthcare, Energy and Environment

Ajaykumar K. Chari
 Imran Khan
 Pradyumn K. Sahu
 Pradyumn K. Sahu
 Pradyumn K. Sahu
 Pradyumn K. Sahu

© Springer

In the Medical Field

Your valuable gains here

Antidepressants USA

11% increase in prescriptions
 11% increase in prescriptions
 11% increase in prescriptions

HEALTH CARE

TREATMENT
 PREVENTION



What is Health Informatics?

Graduate Health Informatics
 Graduate Health Informatics
 Graduate Health Informatics

YOUR LIFE, YOUR PLAN: DEMOCRATIZING YOUR PERSONAL FINANCIAL PLAN

extra
 31%

Caregivers

2016 Caregiver Statistics
 2016 Caregiver Statistics
 2016 Caregiver Statistics

Healthy Living

Healthy Living
 Healthy Living
 Healthy Living

MENTAL HEALTH RESOURCE GUIDE

Mental Health Resource Guide
 Mental Health Resource Guide
 Mental Health Resource Guide





ANNOTATE



3

You are viewing: screen

View Options ▾

1

Zoom Ratio Fit to Window >

Request Remote Control

Annotate

✓ Side-by-side mode

2



TYPES OF MATERIALS



Words, Words, Words

Font Type

Font Size

Color

Active
Voice

Plain
Language

Words, Words, Words

Font Size

Font size is important because it impacts your audience's ability to read the text (2 pt.)

Font size is important because it impacts your audience's ability to read the text (4 pt.)

Font size is important because it impacts your audience's ability to read the text (8 pt.)

Font size is important because it impacts your audience's ability to read the text (10 pt.)

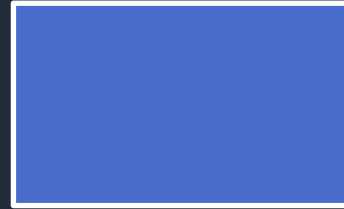
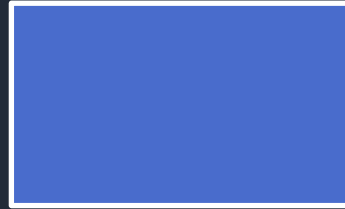
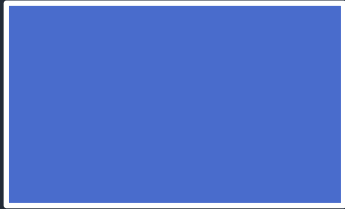
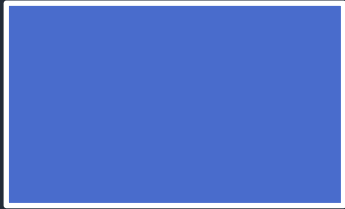
Font size is important because it impacts your audience's ability to read the text (12 pt.)

Font size is important because it impacts your audience's ability to read the text (14 pt.)

Font size is important because it impacts your audience's ability to read the text (16 pt.)

Font size is important because it impacts your audience's ability to read the text (18 pt.)

Words, Words, Words



		Background								
		Red	Orange	Yellow	Green	Blue	Violet	Black	White	Gray
Foreground	Red	Red	Poor	Good	Poor	Poor	Poor	Good	Good	Poor
	Orange	Poor	Orange	Poor	Poor	Poor	Poor	Good	Poor	Poor
	Yellow	Good	Good	Yellow	Poor	Good	Poor	Good	Poor	Good
	Green	Poor	Poor	Poor	Green	Good	Poor	Good	Poor	Good
	Blue	Poor	Poor	Good	Good	Blue	Poor	Poor	Good	Poor
	Violet	Poor	Poor	Good	Poor	Poor	Violet	Good	Good	Poor
	Black	Poor	Good	Good	Good	Poor	Good	Black	Good	Poor
	White	Good	Good	Good	Poor	Good	Good	Good	White	Good
	Gray	Poor	Poor	Good	Good	Poor	Poor	Poor	Good	Gray

Source:
[Google-image-cereal](#)
[Contrasting-color-fonts](#)

Words, Words, Words



Passive Voice	Active Voice
This medicine should be taken with food.	Take this medicine with food.
You should be wearing a helmet when riding a bike	Wear a helmet when riding a bike.
The vaccines were given by the nurse	The nurse gave the vaccines.
The form was processed and returned.	We processed the form and mailed it to you.

Words, Words, Words



Plain
Language

Harder	Easier
Significant	Important, big, serious
Prescription	Medicine, medication, pills
Practice social distancing	Stay at home. Get groceries once per week.
You are eligible	You can get it
Respond	Let us know

Layout & Spacing

Chunking
Information

Bullet
Points

How is a mammogram done?

Mammograms are quick and easy. You simply stand in front of an x-ray machine. The person who takes the x-rays places your breast between two plastic plates. The plates press your breast and make it flat. This may be uncomfortable for a few seconds, but it helps get a clear picture. You will have x-rays taken of each breast. A mammogram takes only a few seconds.



Where can I get a mammogram?

To find out where you can get a mammogram:

- Ask your doctor or nurse.
- Ask your local health department or clinic.
- Call the National Cancer Institute's Cancer Information Service at **1-800-4-CANCER** (1-800-422-6237).



Bullet Points

Children should get six shots by age 2:

- Measles, mumps, rubella
- *Haemophilus influenzae* type b
- Polio
- Diphtheria, tetanus, pertussis
- Hepatitis B
- Varicella

By age 2, children should get shots against measles/mumps/rubella; *Haemophilus influenzae* type b; Polio; diphtheria, tetanus, pertussis; hepatitis B; and varicella.

Margins

Example A

This column does not have a right-justified margin. The spaces between words are even. The jagged right edge also makes it easier to distinguish one line from the other.

Example B

This column has right-justified margins. The spaces between words are uneven and the lines are all the same length. This can confuse readers, especially unskilled readers, and make it harder to differentiate one line from the others.

Paragraphs

Paragraph A

This is a paragraph aptly titled Paragraph A. Its only purpose is to demonstrate a specific size and spacing of paragraphs and text.

Paragraph B

This is another paragraph that we'll call Paragraph B because it comes after Paragraph A. Again, this paragraph is here for the sole purpose of demonstrating specific sizing and spacing of paragraphs and text.

Paragraph C

This is, well you guessed it, another paragraph! It's probably best we call it Paragraph C to fit the pattern. Same old same old because this paragraph is also here for the purpose of demonstrating specific sizing and spacing of paragraphs and text. Don't worry, there won't be a Paragraph D.

Paragraphs

Paragraph A

This column is only 20 to 25 characters long and is hard to read. Your eyes jump back and forth too much and quickly get tired.

Paragraph B

This column is the best length. It is 40 to 50 characters long. Your eye can return to the beginning of the next line easily, and it doesn't jump back and forth very much. Try to design your materials like this one.

Paragraph C

This paragraph is hard to read because the lines are too long. After reading one line, your eyes have to move back across the entire page to find the start of the next line. Paragraphs that run across the whole page also look very dense and don't allow for much white space on the page.

Graphics & Visuals

How is a mammogram done?

Mammograms are quick and easy. You simply stand in front of an x-ray machine. The person who takes the x-rays places your breast between two plastic plates. The plates press your breast and make it flat. This may be uncomfortable for a few seconds, but it helps get a clear picture. You will have x-rays taken of each breast. A mammogram takes only a few seconds.



Where can I get a mammogram?

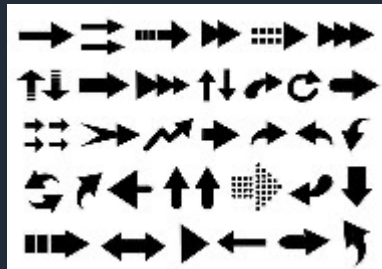
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- Ask your doctor or nurse.
- Ask your local health department or clinic.
- Call the National Cancer Institute's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237).



Partnering with communities and leveraging research to prevent cancer and promote health equity
With a strong copyright on racial justice

Stock Photos



Shapes & Arrows



Cartoons

When Washing Your Hands

Hum the "Happy Birthday" song from beginning to end twice.



Use Soap
And
Warm Water



Wash Hands
For
20 Seconds



Rinse Hands
Well



Dry Your
Hands

Icons

Simple Drawings

White Space

Secondhand smoke hurts adults too.
The longer you are around secondhand smoke, the more likely it is to hurt you.

Nonsmokers who breathe smoke at home or at work are more likely to become sick and die from heart disease and lung cancer. Studies show that secondhand smoke may cause other serious diseases, too.

Secondhand smoke is bad for your heart.
Breathing secondhand smoke makes the plaques in your blood behave like those of a regular smoker. Even a short time in a smoky room causes your blood plaques to stick together. Secondhand smoke also damages the lining of your blood vessels. In your heart, these bad changes can cause a deadly heart attack.



Secondhand smoke changes how your heart, blood, and blood vessels work in many ways. Adults who breathe 5 hours of secondhand smoke daily have higher "bad" cholesterol than dogs do.

WHAT CAN YOU DO?

Protect your health.

More restaurants and bars are smoke-free than ever. New York City restaurants and bars increased smoke-free by 8 percent after becoming smoke-free.

- Choose restaurants and bars that are smoke-free. There may be a sign outside.
- Get details of businesses that are not smoke-free from the state tobacco quit line. Tell them "no smoking" signs is not good enough.

44

Document A

Secondhand smoke hurts adults too.
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- Choose restaurants and bars that are smoke-free. There may be a sign outside.
- Get details of businesses that are not smoke-free from the state tobacco quit line. Tell them "no smoking" signs is not good enough.

Secondhand smoke is bad for your lungs.
Breathing secondhand smoke makes the plaques in your blood behave like those of a regular smoker. Even a short time in a smoky room causes your blood plaques to stick together. Secondhand smoke also damages the lining of your blood vessels. In your heart, these bad changes can cause a deadly heart attack.

Secondhand smoke changes how your heart, blood, and blood vessels work in many ways. Adults who breathe 5 hours of secondhand smoke daily have higher "bad" cholesterol than dogs do.

Nonsmokers who breathe smoke at home or at work are more likely to become sick and die from heart disease and lung cancer.



45

Document B





The average American is considered to have a readability level equivalent to a

A 5th grader

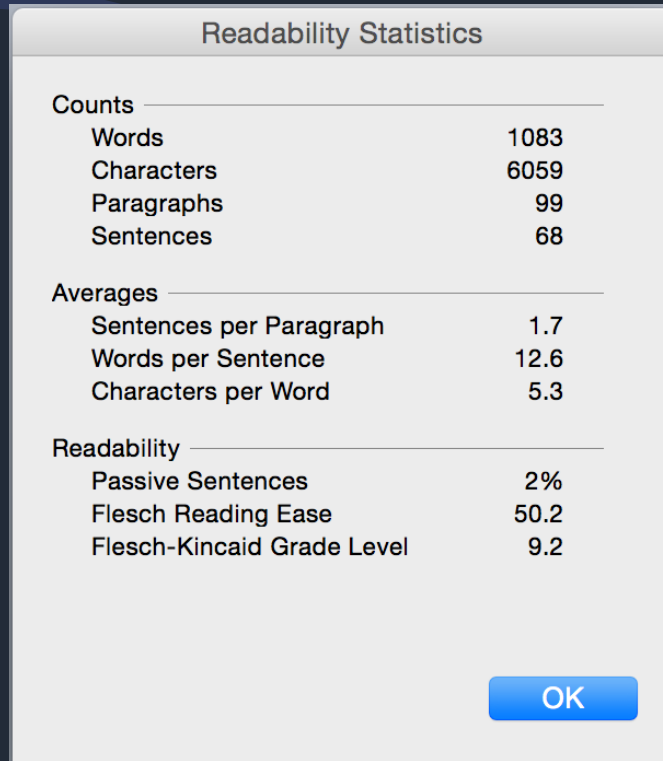
C 10th grader

B 7th/8th grader

D 11th/12th grader



Check for Readability

A dialog box titled "Readability Statistics" with a light gray background and a white border. It contains three sections: "Counts", "Averages", and "Readability", each with a horizontal line above its items. The "Counts" section lists Words (1083), Characters (6059), Paragraphs (99), and Sentences (68). The "Averages" section lists Sentences per Paragraph (1.7), Words per Sentence (12.6), and Characters per Word (5.3). The "Readability" section lists Passive Sentences (2%), Flesch Reading Ease (50.2), and Flesch-Kincaid Grade Level (9.2). A blue "OK" button is located at the bottom right of the dialog box.

Readability Statistics	
Counts	
Words	1083
Characters	6059
Paragraphs	99
Sentences	68
Averages	
Sentences per Paragraph	1.7
Words per Sentence	12.6
Characters per Word	5.3
Readability	
Passive Sentences	2%
Flesch Reading Ease	50.2
Flesch-Kincaid Grade Level	9.2

What Can be Improved?

Sleep Hygiene

What is Sleep Hygiene?

"Sleep hygiene" is the term used to describe good sleep habits. Considerable research has gone into developing a set of guidelines and tips which are designed to enhance good sleeping, and there is much evidence to suggest that these strategies can provide long-term solutions to sleep difficulties.

There are many medications which are used to treat insomnia, but these tend to be only effective in the short-term. Ongoing use of sleeping pills may lead to dependence and interfere with developing good sleep habits independent of medication, thereby prolonging sleep difficulties. Talk to your health professional about what is right for you, but we recommend good sleep hygiene as an important part of treating insomnia, either with other strategies such as medication or cognitive therapy or alone.

Sleep Hygiene Tips

- Get regular.** One of the best ways to train your body to sleep well is to go to bed and get up at more or less the same time every day, even on weekends and days off. This regular rhythm will make you feel better and will give your body something to work from.
- Sleep when sleepy.** Only try to sleep when you actually feel tired or sleepy, rather than spending too much time awake in bed.
- Get up & try again.** If you haven't been able to get to sleep after about 20 minutes or more, get up and do something calming or boring until you feel sleepy, then return to bed and try again. Sit quietly on the couch with the lights off (bright lights will tell your brain that it is time to wake up), or read something boring like the phone book. Avoid alcohol, caffeine, stimulating or interesting, as this will wake you up even more.
- Avoid caffeine & nicotine.** It is best to avoid consuming any caffeine (in coffee, tea, cola drinks, chocolate, and some medications) or nicotine (cigarettes) for at least 4-6 hours before going to bed. These substances act as stimulants and interfere with the ability to fall asleep.
- Avoid alcohol.** It is also best to avoid alcohol for at least 4-6 hours before going to bed. Many people believe that alcohol is relaxing and helps them to get to sleep at first, but it actually interrupts the quality of sleep.
- Bed is for sleeping.** Try not to use your bed for anything other than sleeping and sex, so that your body comes to associate bed with sleep. If you use bed as a place to watch TV, eat, read, work on your laptop, play balls, and other things, your body will not learn the connection.

- No naps.** It is best to avoid taking naps during the day, to make sure that you are tired at bedtime. If you can't make it through the day without a nap, make sure it is for less than an hour and before 3pm.
- Sleep rituals.** You can develop your own rituals of things to remind your body that it is time to sleep - some people find it useful, as it will raise your body temperature, causing you to feel sleepy as your body temperature drops again. Research shows that sleepiness is associated with a drop in body temperature.
- Bathtime.** Having a hot bath 1-2 hours before bedtime can be useful, as it will raise your body temperature, causing you to feel sleepy as your body temperature drops again. Research shows that sleepiness is associated with a drop in body temperature.
- No clock-watching.** Many people who struggle with sleep tend to watch the clock too much. Frequently checking the clock during the night can wake you up (especially if you turn on the light to read the time) and reinforces negative thoughts such as "Oh no, look how late it is, I'll never get to sleep" or "It's so early, I have only slept for 5 hours, this is awful".
- Use a sleep diary.** This worksheet can be a useful way of making sure you have the right facts about your sleep, rather than making assumptions. Because a diary involves watching the clock (see point 10) it is a good idea to only use it for two weeks to get an idea of what is going and then perhaps a few months down the track to see how you are progressing.
- Exercise.** Regular exercise is a good idea to help with good sleep, but try not to do strenuous exercise in the 4 hours before bedtime. Morning walks are a great way to start the day feeling refreshed!
- Eat right.** A healthy, balanced diet will help you to sleep well, but timing is important. Some people find that a very empty stomach at bedtime is distracting, so it can be useful to have a light snack, but a heavy meal soon before bed can also interrupt sleep. Some people recommend a warm glass of milk, which contains tryptophan, which acts as a natural sleep inducer.
- The right space.** It is very important that your bed and bedroom are quiet and comfortable for sleeping. A cooler room with enough blankets to stay warm is best, and make sure you have curtains or an eyemask to block out early morning light and earplugs if there is noise outside your room.
- Keep daytime routine the same.** Even if you have a bad night sleep and are tired it is important that you try to keep your daytime activities the same as you had planned. That is, do not avoid activities because you feel tired. This can reinforce the insomnia.



Safe Ritual Nasal Rinsing

Use safe water to protect yourself from a deadly brain infection.

Many tiny germs live in warm water. *Naegleria fowleri* is a water-loving amoeba (very small germ) that is often found around the world in ponds, lakes, and rivers. It also can hide in pipes connected to tap water. *Naegleria* is so small, even water that looks, smells, and tastes clean can have the amoeba swimming in it. Nasal rinsing with unsafe water can lead to infection.



Many people perform ritual nasal rinsing. This practice is included in Yogic, Ayurvedic, and Islamic traditions. Within the Islamic faith, ritual nasal rinsing is included in a cleansing process called "wudu" or "ablution." It is usually performed several times a day in preparation for prayer.

Infections from *Naegleria* are deadly and rare.

When water tainted with *Naegleria* is sniffed up the nose, the amoeba can travel to the brain. This causes the disease **primary amebic meningoencephalitis (PAM)**, which destroys brain tissue and usually results in death.

- Infections are deadly:** Of 133 people known to be infected in the United States from 1962–2014, only three people have survived.
- Most *Naegleria* infections are due to swimming in warm lakes or rivers.**
- Infections are rare:** There has only been one reported infection associated with ritual nasal rinsing in the U.S.
- Most infections linked to ritual nasal rinsing have been reported globally.**
- Two infections have been linked to using neti pots or similar devices to rinse sinuses with salt solutions made from contaminated tap water.**

This image shows *Naegleria* 1,000 times bigger than it really is.

Talk to your doctor if you have concerns. *Naegleria* infection may be mild at first and include headache, fever, nausea, or vomiting. Later symptoms may include stiff neck, confusion, seizures, and hallucinations. The disease generally causes death within about 5 days after symptoms start.

You cannot get infected from drinking tainted water. You can only get PAM when contaminated water goes up into your nose.

*Learn more about *Naegleria* at <http://www.cdc.gov/naegleria/>

National Center for Emerging and Zoonotic Infectious Diseases
Division of Foodborne, Waterborne, and Environmental Diseases



ADULT IMMUNIZATION: Importance of Staying Up to Date with Vaccines

And here are several reasons why...

- Vaccines aren't just for kids.** Vaccines are recommended throughout people's lives.
- Adults are at risk.** Most illnesses, hospitalizations, disability, and deaths from vaccine-preventable diseases occur among adults.
- Many adults aren't up to date with their vaccinations.** Most adults are not aware of the many vaccines recommended for them. In fact, only about 1 in 5 adults is actually up to date, leaving many adults vulnerable.
- Adults need more than an annual influenza vaccination.** Although most adults know they are recommended to receive influenza vaccine each year, they may not be aware of other vaccines that might be recommended for them to prevent tetanus, diphtheria, pertussis (whooping cough), pneumococcal disease, shingles, hepatitis A and B, meningococcal disease, measles, mumps, rubella, and human papillomavirus.
- Vaccines help adults stay healthy and able to meet their many obligations.** Adults need to stay healthy so that they can work, take care of their families and themselves, and fulfill other commitments in their lives.
- Vaccines protect loved ones.** Vaccines can help prevent adults from spreading a severe illness to a loved one. For example, getting vaccinated against pertussis can help protect new babies in the family from this serious disease. And, influenza vaccination reduces the risk of spreading illness to family members like infants and elderly people who may be more vulnerable to severe complications associated with influenza.
- Vaccines protect pregnant women and their babies.** Pregnant women who get Tdap and influenza vaccine during pregnancy protect themselves and their babies from influenza and pertussis (whooping cough), influenza-related preterm labor in moms, and hospitalizations for their babies.
- Vaccines prevent serious health-related complications from vaccine-preventable illnesses.** Vaccines can also prevent complications of infections that sometimes occur with a vaccine-preventable disease, such as damage to the eye from shingles or heart attacks brought on by influenza illness.
- Vaccines reduce risks related to other health conditions.** Adults need vaccinations based on their age and health conditions. Some health conditions, including diabetes, heart disease, and lung disease, increase a person's risk of severe illness from vaccine-preventable infections.
- Vaccines help ensure adults stay healthy during travel.** Getting sick while traveling can ruin plans and be costly. Adults should discuss any upcoming travel plans with their providers to make sure they are appropriately vaccinated prior to departure.

For more information on vaccines for adults, talk to your healthcare provider and pharmacist. Additional information is available at Immunization Action Coalition at www.vaccineinformation.org/adults and the Centers for Disease Control and Prevention at www.cdc.gov/vaccines/adults/index.html

Example A

Example B

Example C



WHAT CAN BE IMPROVED?

sleep hygiene

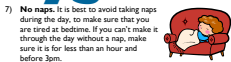
What is Sleep Hygiene?

"Sleep hygiene" is the term used to describe good sleep habits. Considerable research has gone into developing a set of guidelines and tips which are designed to enhance good sleeping, and there is much evidence to suggest that these strategies can provide long-term solutions to sleep difficulties.

There are many medications which are used to treat insomnia, but these tend to be only effective in the short-term. Ongoing use of sleeping pills may lead to dependence and interfere with developing good sleep habits independent of medication, thereby prolonging sleep difficulties. Talk to your health professional about what is right for you, but we recommend good sleep hygiene as an important part of treating insomnia, either with other strategies such as medication or cognitive therapy or alone.

Sleep Hygiene Tips

- 1) Get regular.** One of the best ways to train your body to sleep well is to go to bed and get up at more or less the same time every day, even on weekends and days off! This regular rhythm will make you feel better and will give your body something to work from.
- 2) Sleep when sleepy.** Only try to sleep when you actually feel tired or sleepy, rather than spending too long awake in bed.
- 3) Get up & try again.** If you haven't been able to get to sleep after about 20 minutes or more, get up and do something calming or boring until you feel sleepy, then return to bed and try again. Sit quietly on the couch with the lights off (bright light will tell your brain that it is time to wake up), or read something boring like the phone book. Avoid doing anything that is too stimulating or interesting, as this will wake you up even more.
- 4) Avoid caffeine & nicotine.** It is best to avoid consuming any caffeine (in coffee, tea, cold drinks, chocolates, and some medications) or nicotine (cigarettes) for at least 4-6 hours before going to bed. These substances act as stimulants and interfere with the ability to fall asleep.
- 5) Avoid alcohol.** It is also best to avoid alcohol for at least 4-6 hours before going to bed. Many people believe that alcohol is relaxing and helps them to get to sleep at first, but it actually interrupts the quality of sleep.
- 6) Bed is for sleeping.** Try not to use your bed for anything other than sleeping and sex, so that your body comes to associate bed with sleep. If you use bed as a place to watch TV, eat, read, work on your laptop, pay bills, and other things, your body will not learn this connection.



- 7) No naps.** It is best to avoid taking naps during the day, to make sure that you are tired at bedtime. If you can't make it through the day without a nap, make sure it is for less than an hour and before 3pm.
- 8) Sleep rituals.** You can develop your own rituals of things to remind your body that it is time to sleep - some people find it useful to do relaxing stretches or breathing exercises for 15 minutes before bed each night, or sit calmly with a cup of caffeine-free tea.
- 9) Bathtime.** Having a hot bath 1-2 hours before bedtime can be useful, as it will raise your body temperature, causing you to feel sleepy as your body temperature drops again. Research shows that sleepiness is associated with a drop in body temperature.
- 10) No clock-watching.** Many people who struggle with sleep tend to watch the clock too much. Frequently checking the clock during the night can wake you up (especially if you turn on the light to read the time) and reinforces negative thoughts such as "Oh no, look how late it is, I'll never get to sleep" or "It's so early, I have only slept for 5 hours, this is terrible."
- 11) Use a sleep diary.** This worksheet can be a useful way of making sure you have the right facts about your sleep, rather than making assumptions. Because a diary involves watching the clock (see point 10) it is a good idea to only use it for two weeks to get an idea of what is going and then perhaps two months down the track to see how you are progressing.
- 12) Exercise.** Regular exercise is a good idea to help with good sleep, but try not to do strenuous exercise in the 4 hours before bedtime. Morning walks are a great way to start the day feeling refreshed!



- 13) Eat right.** A healthy, balanced diet will help you to sleep well, but timing is important. Some people find that a very empty stomach at bedtime is distracting, so it can be useful to have a light snack, but a heavy meal soon before bed can also interrupt sleep. Some people recommend a warm glass of milk, which contains tryptophan, which acts as a natural sleep inducer.
- 14) The right space.** It is very important that your bed and bedroom are quiet and comfortable for sleeping. A cooler room with enough blankets to stay warm is best, and make sure you have curtains or an eyemask to block out early morning light and earplugs if there is noise outside your room.
- 15) Keep daytime routine the same.** Even if you have a bad night sleep and are tired it is important that you try to keep your daytime activities the same as you had planned. This, in turn, doesn't avoid activities because you feel tired. This can reinforce the insomnia.

Example A



WHAT CAN BE IMPROVED?

Safe Ritual Nasal Rinsing

Use safe water to protect yourself from a deadly brain infection.

Many tiny germs live in warm water. *Naegleria fowleri* is a water-loving amoeba (very small germ) that is often found around the world in ponds, lakes, and rivers. It also can hide in pipes connected to tap water.

Naegleria is so small, even water that looks, smells, and tastes clean can have the amoeba swimming in it. Nasal rinsing with unsafe water can lead to infection.



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Infections from *Naegleria* are deadly and rare.

When water tainted with *Naegleria* is sniffed up the nose, the amoeba can travel to the brain. This causes the disease **primary amebic meningoencephalitis (PAM)**, which destroys brain tissue and usually results in death.

- **Infections are deadly:** Of 133 people known to be infected in the United States from 1962–2014, only three people have survived.
 - Most *Naegleria* infections are due to swimming in warm lakes or rivers.
- **Infections are rare:** There has only been one reported infection associated with ritual nasal rinsing in the U.S.
 - More infections linked to ritual nasal rinsing have been reported globally.
 - Two infections have been linked to using neti pots or similar devices to rinse sinuses with salt solutions made from contaminated tap water.

You cannot get infected from drinking tainted water. You can only get PAM when contaminated water goes up into your nose.

Use safe water to protect yourself.*

Take at least one of these actions to make your water safe and lower your risk of becoming infected with *Naegleria* during ritual nasal rinsing:

- **Boil:** Use water that has been previously boiled for 1 minute and left to cool.
 - At elevations above 6,500 feet, boil for 3 minutes.
- **Filter:** Use a filter designed to remove some water-loving germs.
 - The label may read "NSF S3" or "NSF 58."
 - Filter labels that read "absolute pore size of 1 micron or smaller" are also effective.
- **Buy:** Use water with a label specifying that it contains distilled or sterile water.
- **Disinfect:** Learn how to disinfect your water to ensure it is safe from *Naegleria*.
 - Chlorine bleach used at the right level and time will work as a disinfectant against this germ.



This image shows *Naegleria* 1,000 times bigger than it really is.

Talk to your doctor if you have concerns.

Naegleria infection may be mild at first and include headache, fever, nausea, or vomiting. Later symptoms may include stiff neck, confusion, seizures, and hallucinations. The disease generally causes death within about 5 days after symptoms start.

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National Center for Emerging and Zoonotic Infectious Diseases
Division of Foodborne, Waterborne, and Environmental Diseases



CS24954

Example B



WHAT CAN BE IMPROVED?

ADULT IMMUNIZATION:

Importance of Staying Up to Date with Vaccines

And here are several reasons why...

- ▶ **Vaccines aren't just for kids and their babies.**
Vaccines are recommended throughout people's lives.
- ▶ **Adults are at risk.**
Most illnesses, hospitalizations, disability, and deaths from vaccine-preventable diseases occur among adults.
- ▶ **Many adults aren't up to date with their vaccinations.**
Most adults are not aware of the many vaccines recommended for them. In fact, only about 1 in 5 adults is actually up to date, leaving many adults vulnerable.
- ▶ **Adults need more than an annual influenza vaccination.**
Although most adults know they are recommended to receive influenza vaccine each year, they may not be aware of other vaccines that might be recommended for them to prevent tetanus, diphtheria, pertussis (whooping cough), pneumococcal disease, shingles, hepatitis A and B, meningococcal disease, measles, mumps, rubella, and human papillomavirus.
- ▶ **Vaccines help adults stay healthy and able to meet their many obligations.**
Adults need to stay healthy so that they can work, take care of their families and themselves, and fulfill other commitments in their lives.
- ▶ **Vaccines protect loved ones.**
Vaccines can help prevent adults from spreading a severe illness to a loved one. For example, getting vaccinated against pertussis can help protect new babies in the family from this serious disease. And, influenza vaccination reduces the risk of spreading illness to family members like infants and elderly people who may be more vulnerable to severe complications associated with influenza.
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Pregnant women who get Tdap and influenza vaccine during pregnancy protect themselves and their babies from influenza and pertussis (whooping cough), influenza-related preterm labor in moms, and hospitalizations for their babies.
- ▶ **Vaccines prevent serious health-related complications from vaccine-preventable illnesses.**
Vaccines can also prevent complications of infections that sometimes occur with a vaccine-preventable disease, such as damage to the eye from shingles or heart attacks brought on by influenza illness.
- ▶ **Vaccines reduce risks related to other health conditions.**
Adults need vaccinations based on their age and health conditions. Some health conditions, including diabetes, heart disease, and lung disease, increase a person's risk of severe illness from vaccine-preventable infections.
- ▶ **Vaccines help ensure adults stay healthy during travel.**
Getting sick while traveling can ruin plans and be costly. Adults should discuss any upcoming travel plans with their providers to make sure they are appropriately vaccinated prior to departure.

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Example C



Misinformation & Technology

Credibility of Written Content

There is a rise in fake news on the internet and social media

Important if you are considering it as a source for content to know what is credible health information or data to include in materials

Also important to referral or link our public to credible health sources (e.g., websites, social media sites)



Defining Terms



Information or data that is inaccurate but not with a bad intent

Deliberate false or misleading information with an intent to confuse, deceive or manipulate reader



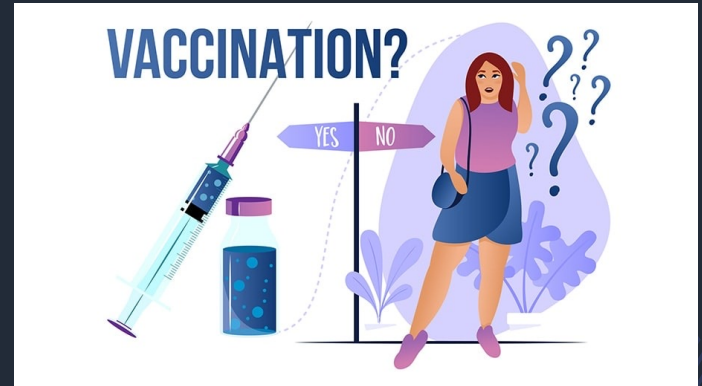
Important to Recognize Sources of Both

Types

- Misleading content
- Imposter content (someone pretending to be a trustworthy source)
- False content or connection to photo, video, article, etc.
- Manipulated content



Impacting public's knowledge, awareness and behaviors on health topics



CRAAP TEST (Librarians Checklist)

C

- **Currency**

- When was the info published? Is information updated? Are links functional?

R

- **Relevance**

- Does info related to your topic? Have you looked at a variety of credible sources?

A

- **Accuracy**

- Where does information or data come from (health agency?)? Has the information been reviewed? Does the language of content seem biased?

A

- **Authority**

- Who is the author/sponsor? Are they qualified?

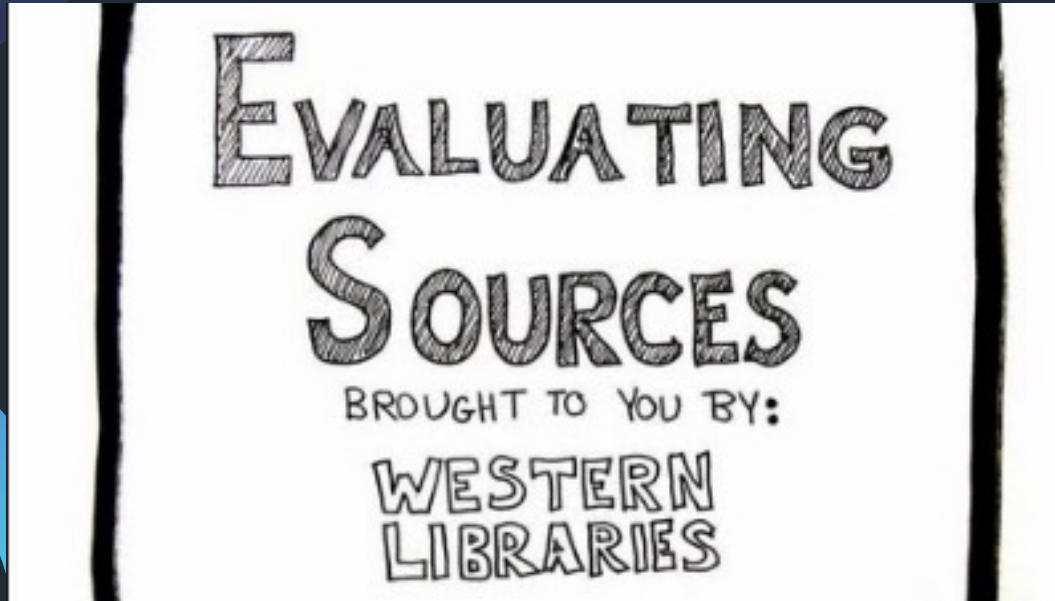
P

- **Purpose**

- Where does information come from? Is the info cited?
- Can you verify the source?



Evaluating Sources



(0:00 – 2:10)

Ways to Address Disinformation

Author & Date

- Check the credentials of the author or institution
- Use data from medical or university websites that are from .edu or .org

Sources

- Get your news and information from *at least* 2-3 different sources.
- Don't rely on one place

Factcheck

- If you are using data or recommending a site, check to see if it is reputable and has correct information
- Go to trusted health sites like national agencies (CDC) or state health agencies reports or websites

Bad Format

- Banners or adds on page
- Misspellings, links not working, no author or affiliation given, etc.



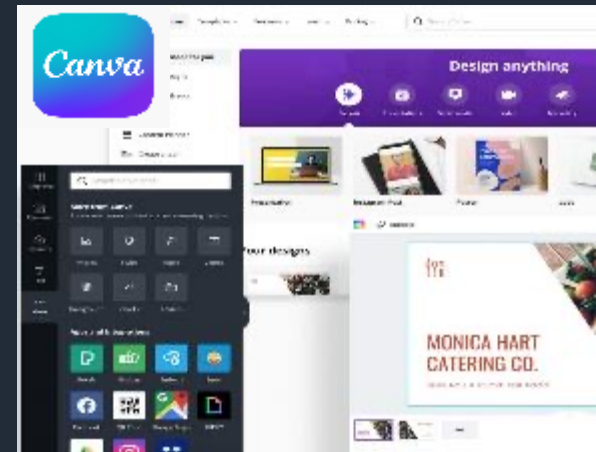
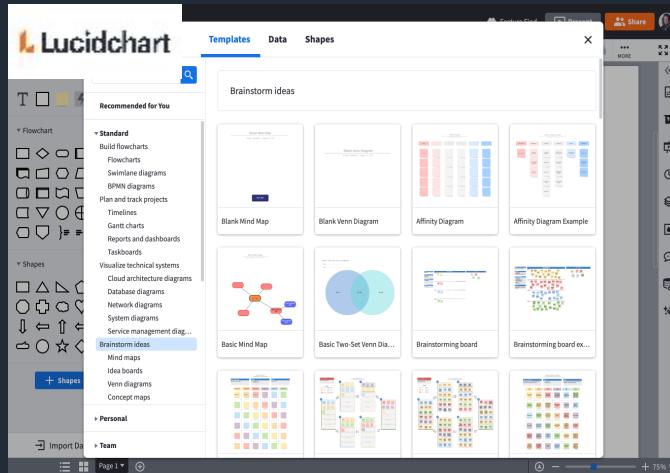
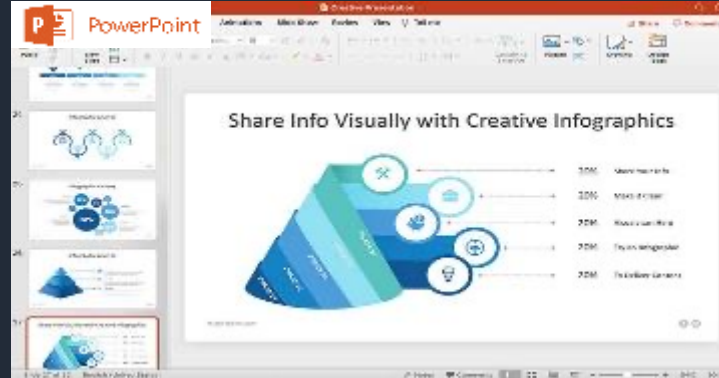
Recap & Resources



LET'S RECAP!



Resources for Creating Materials



Final Summer 2022 EPRC Training

Friday,
August 19th

- Mark your calendars!

10:30am-
12:00pm

- Mark your calendars again!

Training
Focus

- TBD

**You'll be the first
to be notified
about registration!**



Training Evaluation

<https://bit.ly/3uOxh6J>



Emory Prevention
Research Center



Thank you for attending the EPRC's training webinar on Health Literacy Part 2!
Please help us improve future trainings by completing this training evaluation.

Please use the following scale to describe the extent to which you disagree or agree with each of the following statements about the training presenter(s).

1= strongly disagree 2= disagree 3= neutral 4= agree 5= strongly agree

The presenters were responsive to the needs of the audience.

1

2

3

4

5

Thanks!



Stay connected
with the EPRC

Emory Prevention Research Center
<https://web1.sph.emory.edu/eprc/index.html>



@emory_prc

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