



Focusing on Health Equity

CDC's vision is to create a world where all people – in the United States and around the globe – live healthier, safer, and longer lives, regardless of identity or background. We all have a role to play to address injustices and overcome obstacles to health and health care to achieve **health equity**.

Terms to Know

Built environment	the human-made environment where people live, work, and play each day
Disparity	preventable difference in the burden of disease, injury, violence, or opportunities to achieve optimal health
Health equity	when everyone has the opportunity to be as healthy as possible
Health inequity	when factors like education, income, gender, environment, and ethnicity cause unfair differences in people's health
Public health	the science of protecting and improving the health of people and their communities
Social determinants of health	the conditions in which people live, work, learn, and play; these can contribute to health inequities

What is Health Equity?

Health equity is achieved when no one is disadvantaged from achieving their full health potential because of social position or other socially determined circumstances. **Health inequities** are reflected in differences in length of life; quality of life; rates of disease, disability, and death; severity of disease; and access to treatment. Recently, the population health impact of COVID-19 has exposed longstanding **inequities** that have systematically undermined the physical, social, economic, and emotional health of racial and ethnic minority populations and other population groups that are bearing a disproportionate burden of COVID-19. Achieving **health equity** requires valuing everyone equally with focused and ongoing efforts to address avoidable **inequities**, historical and contemporary injustices, and the elimination of **disparities** in health and healthcare.



Think About It

1. What are a few reasons why a person might not go to the doctor?
2. How often do you go outside? Do you think this affects your health?
3. How far do you have to travel from your home to find a store that sells fresh affordable vegetables, meat, and fruit? Could you get there on foot or by public transportation if you needed to? Use an online map if you need help.



Health Equity and the Centers for Disease Control and Prevention (CDC)

Equity and equality are not the same thing. In the cartoon, the equality example shows four people who are all given the same bicycle. The child can't reach the pedals, the man is hunched over with his knees at his chest, and the person who uses a wheelchair cannot ride at all. Only the woman can comfortably use the bicycle. Equal distribution of resources has not produced equal results. However, in the equity example, all riders were provided bikes that match their sizes and abilities. When provided with specialized bikes that were tailored to their needs, everyone was able to achieve the same result.



Social determinants of health are factors that can include social, economic, and environmental conditions in a person's life that have an impact on a person's health. These conditions can cause differences in people's health for different groups of people, known as called health **disparities**. An example could be higher incidence of lung diseases among persons who smoke. This difference is based on a controllable behavior. When the **disparities** are caused by **social determinants of health**, they often result in **health inequities**, where one group is unfairly disadvantaged compared to another. An example is that Black women are three times more likely than White women to die from pregnancy-related causes. Correcting **health inequities** often requires rebuilding entire systems to fix discriminatory imbalances.

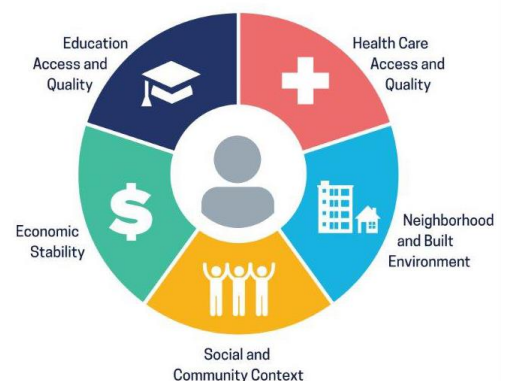
Healthcare Access and Quality

In the United States, having access to healthcare often begins with having health insurance. Without insurance, many people do not have access to preventive medicine that can catch growing health issues early. People who live in rural or lower income areas often do not have access to health and dental providers simply because there are none in the area. Access to healthcare is also limited for people with limited English proficiency. Reliance on emergency rooms for basic medical care puts strain on the healthcare system, lengthens wait times for people with medical emergencies, and costs more money than preventive care does.

Education Access and Quality

People with higher levels of education are most likely to be healthier and live longer. Children from low-income families, children with disabilities, and children who routinely experience forms of social discrimination, like bullying, are more likely to struggle with math and reading. They're also less likely to graduate from high school or go to college. This means they're less likely to get safe, high-paying jobs and more likely to have health problems like heart disease, diabetes, and depression. In addition, some children live in places with poorly performing schools, and many families can't afford to send their children to college. The stress of living in poverty can also affect children's brain development, making it harder for them to do well in school. Access to quality early childhood education programs, which have been shown to increase school performance, is limited for children who live in poverty. Interventions to help children and adolescents do well in school and help families pay for college can have long-term health benefits.

Social Determinants of Health



Social and Community Context

People's relationships and interactions with family, friends, co-workers, and community members can have a major impact on their health and well-being. Many people face challenges and dangers they can't control, like unsafe neighborhoods, discrimination, or trouble affording the things they need. This can have a negative impact on health and safety throughout life. Positive relationships at home, at work, and in the community can help reduce these negative impacts. But some people, like children whose parents are in jail and adolescents who are bullied, often don't get support from loved ones or others. Interventions to help people get the social and community support they need are critical for improving health and well-being.

Behavioral interventions for parents and children can help foster communication between them. Increasing healthy interactions between parents and children, such as reading bedtime stories, allows for more open and positive communication skills to develop. Providing community support for children in situations where they are not getting enough support, like bullied children or those in foster care, is critical for improving lifelong health and well-being.

Economic Stability

In the United States, 1 in 10 people lives in poverty. Many people can't afford things like healthy foods, health care, and housing. People with steady employment are less likely to live in poverty and more likely to be healthy, but many people have trouble finding and keeping a job. People with disabilities, injuries, or conditions like arthritis may be especially limited in their ability to work. In addition, many people with steady work still don't earn enough to afford the things they need to stay healthy. Employment programs, career counseling, and high-quality childcare can help more people find and keep jobs. In addition, policies to help people pay for food, housing, health care, and education can reduce poverty and improve health and well-being.



Neighborhood and Built Environment

The neighborhoods people live in have a major impact on their health and well-being. Many people in the United States live in neighborhoods with high rates of violence, unsafe air or water, and other health and safety risks. Racial/ethnic minorities and people with low incomes are more likely to live in places with these risks. In addition, some people are exposed to things at work that can harm their health, like secondhand smoke or loud noises. Interventions and policy changes at the local, state, and federal level can help reduce these health and safety risks and promote health. For example, providing opportunities for people to walk and bike in their communities — such as adding sidewalks and bike lanes — can increase safety and help improve health and quality of life.



Think About It

1. How does education access and quality connect to other categories of **social determinants of health**?
2. Describe four reasons why someone might be unable to get medical care.
3. Generational poverty occurs when two or more generations of a family live in poverty. Why do you think the cycle of poverty is hard for families to break?



From the Experts:

Health equity can be impacted by various factors in the environment. Organizations and communities can help end **health inequity** by investing in **public health** and addressing health **disparities** that affect many, making **health equity** available for all. The pandemic made disproportionate **disparity** in communities more visible. Since the beginning of COVID-19, CDC has made gathering data regarding race and ethnicity a focal point. Watch the linked video to see more about how CDC addresses health **inequities**. <https://youtu.be/s8dK3s5xGos>

CDC's Racism and Health page: <https://www.cdc.gov/healthequity/racism-disparities/index.html>

Call to Action

In order to understand **health equity**, it is essential that people understand how **social determinants of health** affect the health of different groups. You can help people by following these steps:



1. Examine your built environment. Conduct an audit of the **built environment** in one area of your community using a checklist.



2. Compare the environments of two different places. Use CDC's Environmental Justice Dashboard to compare the environmental exposures, community characteristics, and health burden of two areas with different median incomes.



3. Reexamine your built environment. Use CDC's Environmental Justice Dashboard to view your community's data. Then revisit and revise the **built environment** audit checklist to make it broader and more inclusive.



4. Share your findings. One of the ways CDC communicates information is through social media. Your demonstrations can help CDC communicate the work they have done and are doing to improve healthy equity.



Why Participate? A Message from CDC

CDC and its partners work to identify and address the factors that lead to health **disparities** among racial, ethnic, geographic, socioeconomic, and other groups so that barriers to **health equity** can be removed. The first step in this process is to shine a bright light on the problems to be solved. Providing accurate, useful data on the causes of illness and death in the United States and across the world is a foundation of CDC's mission and work. Your exploration of **health equity** and your conversations with peers and community members help to bring these issues to the forefront of the public consciousness. Going forward, we can use your community support to continue the process of addressing and correcting the **disparities** so that all can live healthy lives.



Think About It

1. What were some **disparities** and **inequities** exposed by the COVID-19 pandemic?
2. What items, features, and services does a person who uses a wheelchair need in their **built environment**?
3. Property taxes are frequently used to pay for improvements and amenities in the **built environment**. How does this contribute to poorer community health in lower income areas with lower property values and less tax revenue?



Scientific Method Overview

The scientific method is a great tool to use to create and test a hypothesis. Use the flow chart below to think out your plan.

Ask a question

Describe the question you are trying to answer.

- How does the **built environment** of my community support **public health** and reduce **inequities**?

Do background research

Use the internet to find reference materials about the topic.

- Videos from credible sources
- Webpages from credible sources (e.g., cdc.gov, who.gov)

Construct a hypothesis

Make a prediction about the results from an experiment.

- Communities with better **built environments** have better health and longer life expectancies.

Test with an experiment

Conduct your experiment.

- Evaluate the **built environment** of your community using an audit checklist.

Analyze data

Examine your data and look for patterns in the results.

- Compare data collected to data from CDC's Environmental Justice Dashboard.

Draw conclusions

Interpret the patterns in the data to determine what it means.

- Evaluate the **built environment's** role in a community's health.
- Look for **health inequities** and ways to address them.

Communicate results

Share your information with others!

- Use social media to share with CDC accounts listed.
- Tell others about your experimental results!



Examine your Built Environment

Choose an area of your community to study. It could be the downtown area, your trip from home to school, or just a random place you visit. Keep the area small to make sure it is easy to study. The checklist below contains features of healthy, accessible communities. Visit your chosen area and work through this checklist. You can also use street view online mapping tools if you are unable to visit in person.

Walkability/Transportation

- Sidewalks present
- Pedestrian buttons/walk signals present
- Clearly marked crosswalks
- Curb cuts or ramps at intersection
- Public parking available
- Public transit available
- Dedicated bike lanes and signage present
- How many traffic lanes (on average)?
- What is the posted speed limit (on average)?
- How wide is the buffer between road and sidewalk?

Amenities

- Trash bins available
- Benches available
- Bike racks present
- Public water fountains present
- Fountains, sculptures, art features present
- Landscaping, gardens, ponds present
- Adequate street lighting installed
- How much tree cover is present?
- Is cover available for inclement weather?

Maintenance

- Buildings well maintained
- Sidewalks in good repair with no trip hazards
- Area free from graffiti/tagging
- No broken glass or litter
- Buildings habitable, not abandoned
- Is there evidence of drug use or illegal activity?

Facilities: How many of the following building types are present in the area?

Positive features:

- _____ Grocery store/supermarket
- _____ Sit down restaurant
- _____ Small business retail stores
- _____ Big box retail stores (ex. Home Depot, Target)
- _____ Farmer's market
- _____ Community garden
- _____ Parks/playing fields/playgrounds
- _____ Gyms/fitness center
- _____ Pharmacy/drug store
- _____ Medical office/hospital
- _____ Government offices
- _____ Schools

Negative features:

- _____ Fast food restaurants
- _____ Liquor stores/bars
- _____ Abandoned buildings
- _____ Unmaintained lots



Compare the Environments of Two Different Places

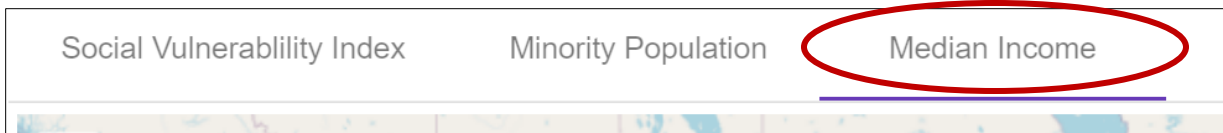
Where we live, work, and play affects our health. Environmental justice will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment. Racial and ethnic minority, low-income, and indigenous communities are often disproportionately affected by environmental hazards, such as environmental pollutants and climate-related events. These types of exposures, along with historical injustices, racism, inadequate community design, limited access to resources, and other socio-economic factors, can lead to poor health effects, like increased chronic disease and complications involving pregnancy and infants.

In this activity, you will use CDC's Environmental Justice Dashboard to explore data on environmental exposures, community characteristics, and health burden - factors important to understanding and addressing environmental justice issues. <https://ephtracking.cdc.gov/Applications/ejdashboard/>

On the main dashboard page, scroll down to the map at the bottom. Use the "Median Income" map to locate two areas to compare:

- One area with high median income (dark blue)
- One area with low median income (yellow)

Scroll over an area, and its name will pop up. Write the names of each place in the chart below.



Environmental Exposures		
Place Name →		
% of Impervious Surfaces		
% of Seniors Living Alone		
% of Adults 18+ with Asthma		
% of Mobile Home Housing Units		
Average Annual PM _{2.5} Concentration		
# of Days with 8-Hour Ozone Above NAAQS		
# of Extreme Heat Days		
# of Extreme Precipitation Days		
# of People within a Flood Hazard Area		

🔍

Explore environmental justice data for your community.

Search the dashboard (top right) for your two places to pull up the available data. Use the information and maps provided by the dashboard to fill in data for each of your selected places.

Community Characteristics		
Place Name →		
% of people by age group	0-4	
	5-19	
	20-34	
	35-54	
	55-64	
	65+	
% of people by race	White	
	Black	
	Other	
	Asian/ Pacific Islander	
	American Indian/ Alaskan Native	
Note: all categories also include Hispanic		
% of people living in poverty		
# of households without internet		
# of households without a vehicle available		
Overall Percentile Vulnerability Rank		
CHOOSE ONE (CIRCLE): Low Income and Low Food Access % of Population with a Disability % of Population that Speaks English Less Than "Very Well" % of Population >= 25 with High School Education or Higher % of Population >= 16 Who Are Unemployed % of Housing Units with No Vehicle Available		

For these two rows, the larger map area will be broken into smaller ones. Just write a summary of what you see. Look at the major color(s) present. Zoom in and look at the map details for each area, such as city names, highways, airports, etc. You can mouse over areas to see their individual values.

For the second row, choose one of the dropdown options. Circle it in the chart to show what you're discussing. Make sure to use the same one for both places.

Health Burden		
Place Name →		
% of Population without Health Insurance		
# of Hospital Beds per 10,000 people		
% Population over 5 Living with a Disability		
CHOOSE ONE (CIRCLE): Life Expectancy at Birth % of Adults with Not Good Mental Health for >=14 Days % of Adults with Current Asthma % of Adults Who Have Had a Stroke		
Average Annual Infant Mortality per 1,000 births		
Percent of Low Birth Weights		

Choose one topic as you did on the last chart and summarize the map data.

Points of Interest		
--------------------	--	--

Use the dropdown option to add points of interest to any of the maps. Record observations about hospitals, landfills, parks, power plants, public schools, runways, or superfund sites.

Compare Your Selected Environments

Find information from your charts that represents each of the five **social determinants of health**.

- Compare the data you recorded for the two places you selected.
- Identify any **disparities** you see and explain how they might affect residents' health.
- Propose interventions that might reduce the **disparities** identified.

Health Care Access and Quality

Education Access and Quality

Social and Community Context

Economic Stability

Neighborhood and **Built Environment**



Reexamine your Built Environment

Use the Environmental Justice Dashboard to look up your zip code. Examine the data provided for environmental exposures, community characteristics, and health burden. Pay close attention to the various maps and look for **inequities** within the larger map area. Add the points of interest layers to the maps. Consider the following questions:

- Does the data provided match your preconceived ideas of the place where you live?
- When you looked at the smaller map areas, did you notice any **inequities**?
- Were there any points of interest on the maps that surprised you?
- How did your town's data compare to the two places you examined earlier?

Go back to your original checklist and reevaluate with a more critical eye. View the environment from different lenses. What would a person with a visual or hearing impairment need? A person who uses a wheelchair? A person with a lower income? An older adult? A parent with young children? A teenager? Add categories to the checklist to make it more inclusive to all.

Walkability/Transportation

- | | |
|---|--|
| <input type="checkbox"/> Sidewalks present | <input type="checkbox"/> How many traffic lanes (on average)? |
| <input type="checkbox"/> Pedestrian buttons/walk signals present | <input type="checkbox"/> What is the posted speed limit (on average)? |
| <input type="checkbox"/> Clearly marked crosswalks | <input type="checkbox"/> How wide is the buffer between road and sidewalk? |
| <input type="checkbox"/> Curb cuts or ramps at intersection | |
| <input type="checkbox"/> Public parking available | |
| <input type="checkbox"/> Public transit available | |
| <input type="checkbox"/> Dedicated bike lanes and signage present | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |

Amenities

- | | |
|--|--|
| <input type="checkbox"/> Trash bins available | <input type="checkbox"/> How much tree cover is present? |
| <input type="checkbox"/> Benches available | |
| <input type="checkbox"/> Bike racks present | <input type="checkbox"/> Is cover available for inclement weather? |
| <input type="checkbox"/> Public water fountains present | |
| <input type="checkbox"/> Fountains, sculptures, art features present | |
| <input type="checkbox"/> Landscaping, gardens, ponds present | |
| <input type="checkbox"/> Adequate street lighting installed | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |

Maintenance

- Buildings well maintained
- Sidewalks in good repair with no trip hazards
- Area free from graffiti/tagging
- No broken glass or litter
- Buildings habitable, not abandoned
-
-
-
-
-
- Is there evidence of drug use or illegal activity?

Facilities: How many of the following building types are present in the area?

- | | |
|---|--|
| <input type="checkbox"/> Grocery store/supermarket | <input type="checkbox"/> Fast food restaurants |
| <input type="checkbox"/> Sit down restaurant | <input type="checkbox"/> Liquor stores/bars |
| <input type="checkbox"/> Small business retail stores | <input type="checkbox"/> Abandoned buildings |
| <input type="checkbox"/> Big box retail stores (ex. Home Depot, Target) | <input type="checkbox"/> Unmaintained lots |
| <input type="checkbox"/> Farmer's market | <input type="checkbox"/> |
| <input type="checkbox"/> Community garden | <input type="checkbox"/> |
| <input type="checkbox"/> Parks/playing fields/playgrounds | <input type="checkbox"/> |
| <input type="checkbox"/> Gyms/fitness center | <input type="checkbox"/> |
| <input type="checkbox"/> Pharmacy/drug store | <input type="checkbox"/> |
| <input type="checkbox"/> Medical office/hospital | <input type="checkbox"/> |
| <input type="checkbox"/> Government offices | |
| <input type="checkbox"/> Schools | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |
| <input type="checkbox"/> | |

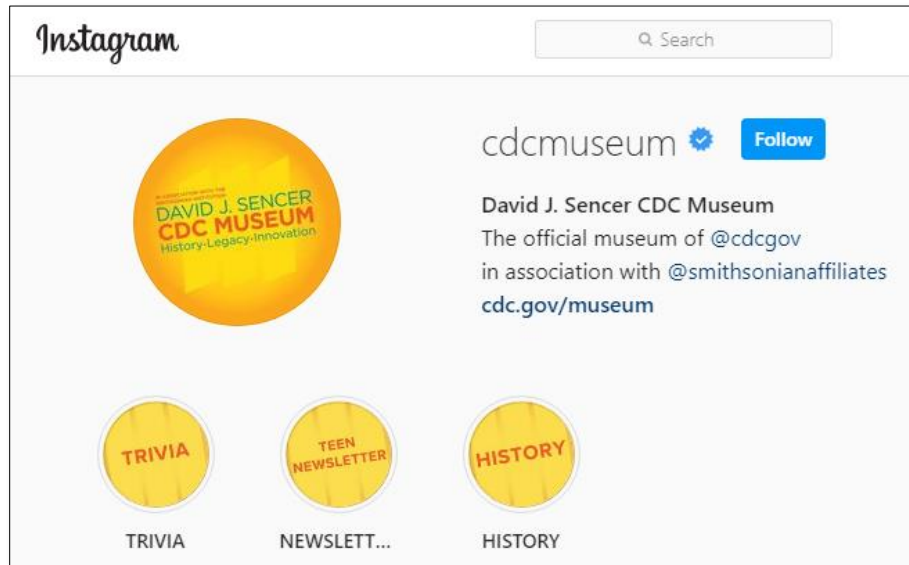
What do you think of your community's **built environment**? What changes are needed?

If you find yourself interested in this topic, check out community strategies to improve physical activity from CDC's Division of Nutrition, Physical Activity, and Obesity.
<https://www.cdc.gov/physicalactivity/community-strategies/index.htm>



Share Your Findings

The David J. Sencer CDC Museum uses award-winning exhibits and innovative programming to educate visitors about the value of **public health** and presents the rich heritage and vast accomplishments of CDC. Your investigation could be a valuable contribution! Share your results with the CDC Museum on Instagram using **@CDCmuseum**.





Reflections

Now that you have completed this investigation, think about what you learned from your research and experiment. Answer the questions below.

1. Provide examples of 3 things in your **built environment** that contribute to good health.

2. Based on the data you collected, what health **inequities** did you see in your community?

3. When does a health **disparity** become a **health inequity**? Provide an example.

4. There's a saying in **public health** that your zip code affects your health more than your genetic code. What do you think this saying means?

5. Provide an example of how poverty relates to each of the five **social determinants of health** discussed in this lesson.

6. Systemic racism is linked to poorer health for racial and ethnic minority groups than for White persons. An example occurs when medical schools train doctors using images of skin symptoms only on pale skin, not skin with darker pigmentation. This results in a medical system that is not properly trained to treat people of color. What are some other systems that produce health **disparities** for people of color?
