Climate Change, Health Equity and Maternal, Child and Adolescent Health

Linda Rudolph, MD, MPH
January 19, 2021
Health impacts Of Climate Change

• Potentially catastrophic for human survival

• Undermine the last half-century of gains in development and global health

• A medical emergency

From Nick Watts

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60854-6/fulltext
Impact of Climate Change on Human Health

- Injuries, fatalities, mental health impacts
- Asthma, cardiovascular disease
- Heat-related illness and death, cardiovascular failure
- Malaria, dengue, encephalitis, hantavirus, Rift Valley fever, Lyme disease, chikungunya, West Nile virus
- Forced migration, civil conflict, mental health impacts
- Respiratory allergies, asthma
- Extreme heat
- Air pollution
- Changes in vector ecology
- Increasing allergens
- Environmental degradation
- Sealevel rise
- Water and food supply impacts
- Water quality impacts
- Cholera, cryptosporidiosis, campylobacter, leptospirosis, harmful algal blooms
46% of African Americans and 36% of Latinos reside in the two highest risk categories compared to 30% of whites.

Median income in the highest risk area is 40% lower than the lowest risk area.

English et al, Intl J Climate Change, 2013
Climate Change, Health, and Equity: A Framework for Action

SPECTRUM OF HEALTH INTERVENTIONS

Living Conditions

Social & Structural Inequities

Policies & Systems

Health Outcomes & Inequities

Empower Collaborate Advocate

Climate, Health, and Equity Benefits

Greenhouse Gas Emissions

Environmental Change

Climate Health Impacts & Inequities

SPECTRUM OF CLIMATE ACTION
Key Messages: Climate, Health and Equity

• The root causes and upstream drivers of climate change and health inequities are often the same
• The health risks and impacts of climate change are not equally or fairly distributed across people, communities or nations
• Climate change exacerbates existing health and social inequities
• Interventions that act on upstream shared systemic causes can most effectively address both climate change and health inequities
• Building political and economic power and voice are essential components of climate resilience
Intergenerational Equity

• What we do today affects the conditions of generations that follow us
  • Adverse impacts of current greenhouse gas emissions will be experienced by future generations of people
• To ensure the survival and well-being of future generations we must sustain the most basic of earth’s resources—clean water, clean air, food, shelter, security
• These all rest on a stable climate

• “to protect the climate system for the benefit of present and future generations of humankind” Article 3, UNFCCC founding principles
• “We have been mortgaging the health of future generations to realize economic and development gains in the present.” Rockefeller Foundation–Lancet Commission on planetary health
Climate Vulnerability

• The degree to which people or communities are at risk of experiencing negative impacts of climate change
  • Tightly coupled with health and social inequities

• Key components of climate vulnerability:
  • Exposure
    • Geography impacts type of climate impacts
    • Occupation
    • Living conditions (e.g. unsheltered)
  • Capacity to adapt and respond
    • Differential access to resources
    • Living conditions (e.g. PH infrastructure, housing, tree canopy, social cohesion)
  • Sensitivity to threats
Climate Resilience

• “The capacity of a community to anticipate, plan for and mitigate the risks—and seize the opportunities—associated with environmental and social change” brought about by climate change

• Characteristics of vulnerability and resilience coexist at same time For example, a neighborhood may be exposed to high levels of air pollution but also have a strong local food system and a high-quality community clinic

• Improving the underlying health status and structural and systems determinants of health is one of the most effective strategies to build climate resilience

• Building resilience to climate change and addressing social and health inequities requires addressing systemic causes in collaboration with impacted communities
ACOG Position Statement 2021

“Climate change is an urgent women’s health concern as well as a major public health challenge.”

“Environmental exposures, including those related to climate change, have a disproportionate effect on women’s health and further exacerbate health inequities. The effects of climate change include food and water insecurity, civil conflicts, extreme weather events, and spread of disease—all of which put women at elevated risk of disease, malnutrition, sexual violence, poor mental health, lack of reproductive control, negative obstetric outcomes, and death.”

AAP Technical Report on Global Climate Change and Children’s Health

“Children are a uniquely vulnerable group. Children in the world’s poorest countries, where the disease burden is already disproportionately high, are most affected by climate change. Climate change is currently affecting child health through increased heat stress, decreased air quality, altered disease patterns of some climate-sensitive infections, physical and mental health effects of extreme weather events, and food insecurity in vulnerable regions.”

“Climate change is not about a distant, unforeseeable future. It is about the world in which our children live today and the future in which they will raise their own children.”

MCAH Populations Uniquely Vulnerable

• Biological sensitivity and susceptibility
  • Physiologic and immunologic changes in pregnancy make pregnant women more susceptible to climate-related health impacts of heat, air pollution and infectious diseases.
  • Innate physiological, anatomical, and developmentally based behavioral differences make infants and children more vulnerable to climate impacts.

• Children take in proportionally larger amounts of air, water and food, relative to their body weight
  • Face higher risks for illness related to heat, ozone, toxic particulate air pollution, and zoonotic, water, and food-borne illnesses
Greater exposures due to behaviors and environments

- Children’s small size, dependency, cognitive development increase their risk for injury, illness, death, adverse mental health consequences, and separation from caregivers following extreme events
  - Children less able to independently respond to hazards

- Children more likely to be active outdoors
  - Increased exposure to air and water pollution, allergens, vector-borne diseases, extreme heat

- Climate disasters disrupt community resources on which children depend, e.g. schools, childcare
Heat and children

• Children younger than 1 year old uniquely vulnerable to heat-related mortality
  • Immaturity of infants’ thermoregulatory systems

• Child farm laborers (~120,000 in US) at risk for extreme heat

• US student athletes at high-risk for exertional heat injury
  • Deaths from heat stroke US high school and college football players doubled in past decade

• Exposure to higher ambient temperatures is associated with rapid infant weight gain (in turn associated with childhood obesity)

Maria Isabel Vasquez Jimenez died May 16, two days after collapsing from heat exhaustion on a farm east of Stockton, Calif.

Courtesy of Jocelyn Sherman of The United Farm Workers

https://www.bmj.com/content/371/bmj.m3811

https://onlinelibrary.wiley.com/toc/13653016/2022/36/1?utm_campaign=Hot%20News&utm_medium=email&_hsmi=201172662&_hsenc=p2ANqtz-8uaU-1xtNtT4ShdV2ybZKlxY_LMvr12p9x-vfWrr5f2ccorHRrbVsQGXPHhMUI3t9HaoJFS28kXOTpPZyISDeSyuiQg&utm_content=201172662&utm_source=hs
Heat and pregnancy

• Higher temperature associated with stillbirth, premature birth, low birth weight
• Associations between temperature and outcomes largest among women in lower socioeconomic groups, living in neighborhoods with high levels of economic deprivation, and at age extremes
• Associations stronger for pregnant women with co-morbidities or smoking
  • any chronic illness, diabetes or hypertension

https://onlinelibrary.wiley.com/toc/13653016/2022/36/1?utm_campaign=Hot%20News&utm_medium=email&_hsmi=201172662&_hsenc=p2ANqtz-8uaU-1xtNtT4ShdV2ybZKlxY_lMvr12p9x-vfWrrSf2corHRibVsQGXPIHhMU3t9HaoIFS2BkXOToPZYISDe5yuiQg&utm_content=201172662&utm_source=hs

https://www.bmj.com/content/371/bmj.m3811
Air Pollution

• Warmer temperatures, more stagnation events increase ozone levels
• Wildfires and burning fossil fuels raise PM2.5 exposures
• Ozone
  • Increases risk for child asthma, asthma ED visits and hospital admissions
• Recent metaanalysis:
  • Exposure to PM$_{2.5}$ or ozone was associated with increased risk of preterm birth in 19 of 24 studies (79%) and low birth weight in 25 of 29 studies (86%).
  • Subpopulations at highest risk were persons with asthma and minority groups, especially black mothers.
  • “This review suggests that increasingly common environmental exposures exacerbated by climate change are significantly associated with serious adverse pregnancy outcomes across the US.”

Wildfires

• Smoke from wildfires—laden with fine particulate matter (PM2.5)—spreads over long distances
  • Increased risks of premature deaths, ED visits, and hospitalizations
  • 2003 wildfire in southern California resulted in a 25% higher rate of asthma admissions in 5- to 19-year-olds during the fire and a 56% higher rate after the fires
  • Eye symptoms and upper and lower respiratory symptoms
Allergies

• Longer, stronger pollen seasons due to warming
• Increased pollen production and potency
• More potent poison ivy and oak
• Higher temperatures $\rightarrow$ more ozone $\rightarrow$ increased sensitivity of the respiratory tract
Infectious Diseases

• Increased waterborne pathogen exposure from sewer runoff and overflow after flooding with risk of diarrheal disease
• Mold exposure after flooding, extreme precipitation
• Drought → Valley Fever (*Coccidioides immitis* spores), West Nile Virus
• Expanded mosquito and tick habitats
  • Dengue, WNV, Zika
  • Lyme Disease
Children and Natural Disasters

• Natural disasters more frequent & severe due to climate change
• Cause physical & mental health & learning problems in children
• Children suffer more severe physical effects from disasters
• Disaster impacts on parents, teachers, caretakers affect children’s care & protection and erode support systems
• Children also may suffer longer-term physical, psychological, and educational deficits
Food Security

• Heat, drought and extreme weather lower crop yields
  • Lower yields associated with higher prices
• Extreme heat impacts livestock and milk production
• Algal blooms, increased shellfish toxins
• Higher atmospheric CO₂ levels reduce quality of grains
  • Lowered protein content of the edible portions of wheat, rice, and barley
Living near active oil and gas wells impacts birth outcomes

• About 2.1 million Californians live within one mile of an active oil or gas well

• Growing body of evidence links residential proximity to oil/gas wells with adverse birth outcomes
  • Premature birth
  • Low birth weight
  • Heart defects

• LBW more pronounced among Hispanic women (vs. non-Hispanic White women), women with lower educational attainment, and women in more urban areas
Pollution from Fossil-Fuel Combustion is the Leading Environmental Threat to Global Pediatric Health and Equity: Solutions Exist

“Fossil-fuel combustion by-products are the world’s most significant threat to children’s health and future and are major contributors to global inequality and environmental injustice.”

https://www.mdpi.com/1660-4601/15/1/16/htm
Gas Stoves, Climate and Children’s Health

- Methane (natural gas) more than 25 times as potent as carbon dioxide at trapping heat in the atmosphere
  - Accounting for about 20 percent of global emissions
- Natural gas-burning stoves and furnaces can produce particulate matter (PM), nitrogen dioxide (NO2), carbon monoxide (CO), formaldehyde
- Use of gas appliances, especially for cooking, associated with with a higher risk of a range of respiratory problems and illnesses
- Children living in homes with gas stoves
  - 42% higher risk of experiencing asthma symptoms
  - Lifetime 24% increase risk of being diagnosed with asthma.
- long-term exposure to elevated NO2 was correlated with a higher risk of death from Covid-19

Climate Change and Mental Health

• Extreme weather events can be ACES
  • Loss of family member, friend
  • Loss of home

• Associated with anxiety, depression, PTSD in children and youth
  • Hurricane Katrina: about 25% of the youth suffered from PTSD

• Stress increases parental anxiety with child impacts, impacts on domestic violence
Climate anxiety in youth

**CLIMATE ANXIETY**
A survey of 10,000 young people shows that negative feelings about climate change can cause psychological distress.

**How worried are you about climate change?**

<table>
<thead>
<tr>
<th>Extremely worried</th>
<th>Moderately worried</th>
<th>Not worried</th>
</tr>
</thead>
<tbody>
<tr>
<td>27%</td>
<td>25%</td>
<td>5%</td>
</tr>
</tbody>
</table>

- Very worried 32%
- A little worried 11%

**Climate change makes me feel...**

- Sad 68%
- Afraid 68%
- Anxious 63%
- Angry 58%
- Powerless 57%
MCAH, Climate and Equity

- **Extreme Heat**
  - Urban heat islands with nighttime temperatures as much as 22°F higher
  - Map onto areas of historical residential segregation and redlining
  - Costs of operating and maintaining an air conditioner are a major barrier to staying cool during extreme heat

- Low-income families are more vulnerable to food and water insecurity from rising food and water prices associated with drought and crop loss
  - 22.5% of African American households and 18.5% of Hispanic households are food insecure, compared to 9.3% of White households

- Communities of color and low income communities have higher levels of air pollution

- Low income families lack home insurance and resources for disaster recovery
“Responding to climate change could be the greatest global health opportunity of the 21st century”

From Nick Watts, Lancet Commission

http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60854-6/fulltext
Health Benefits of Climate Action

• Transportation
• Agriculture and Food Systems
• Energy & Fossil Fuels
• Urban Greening & Green Infrastructure
  ➢ Healthy & Sustainable Buildings
Safe, Clean, Renewable Energy & Energy Efficiency

- Clean energy & energy efficiency
  - Respiratory disease, cardiovascular disease, adverse birth outcomes
  - Fuel poverty
An SF-Bay Area study showed that increasing average time using active transportation would reduce CVD and diabetes by 14%, along with reductions in dementia, colon and breast cancers and depression.
Zero emission vehicles and fuel efficiency

✓ Asthma, CVD, premature death
✓ Transportation costs

In 2016, 30% of all US emissions came from transportation, mostly from passenger cars and light-duty trucks.
Urban Greening & Green Infrastructure

- Urban greening & green infrastructure

  - Heat illness, flood risk, air pollution, physical activity, social cohesion, water capture / filtration, carbon capture, healthy foods
Less meat, less food waste, sustainably produced food

Food security, CVD, diabetes, cancer, antibiotic resistance, pesticide exposure, water contamination
Buildings, Climate Change, and Health

Buildings and Climate Change

• Buildings nearly 40% CO2 emissions U.S.
  • Consume 70% electricity load
    • Heating, cooling, lighting, cooking
• Buildings last decades.....but millions of new buildings over next decades

Buildings and Health

• Indoor
  o Materials, ETS, mold, pests, radon
  o Ventilation
• Outdoor air quality
• Siting
  o Complete neighborhoods
  o Transit, walk/bike, food parks, retail, healthcare, good jobs and schools
• Community cohesion
• Safety
  o Crime, fire, injuries
• Well-being/comfort/access to nature
• Affordability/costs
  o Housing costs
  o Energy costs
• Climate resilience
  o Shade, A/C,
CLIMATE CHANGE AFFECTS US THE MOST!
Inaction an act of injustice to all children - AAP

“The social foundations of children’s mental and physical health are threatened by the specter of far-reaching effects of unchecked climate change, including community and global instability, mass migrations, and increased conflict. Given this knowledge, failure to take prompt, substantive action would be an act of injustice to all children. A paradigm shift in production and consumption of energy is both a necessity and an opportunity for major innovation, job creation, and significant, immediate associated health benefits.”

A new public health movement is needed to educate, advocate, and collaborate with local and national leaders regarding the risks climate change poses to children and the major health benefits associated with mitigation policy. In addition, ongoing research into the links between climate and health outcomes and the development of medical and public health interventions to protect individuals and communities from inevitable changes is needed. Pediatricians, as advocates for the population most vulnerable to climate change health effects, have a valuable role to play in this movement.

https://publications.aap.org/pediatrics/article/136/5/992/33836/
Global-Climate-Change-and-Children-s-Health
ACOG

• Calls on our national and international leaders to act to curb greenhouse gas emissions and limit further climate destabilization

• Encourages our members and affiliated health care systems to support environmentally responsible practices in order to decrease the environmental impact and carbon footprint of medicine

• Supports clinical and community-based research into the effects of climate change on health, especially as it affects women, racial and ethnic minority populations, and under-resourced populations

• Promotes policies and programs that seek to mitigate the health-related harms of climate change on women’s health

• ACOG recognizes that addressing climate change is an urgent health priority that affects everyone. As leaders in women’s health care, we support a proactive approach to this important issue.
Key Messages

What Local Health Departments Can Do

MCAH programs can integrate climate change into existing work and foster consideration of MCAH needs into the climate-related work of other agencies in their jurisdictions. MCAH programs can:

- Assess and map community vulnerabilities for climate-related MCAH impacts and enhance surveillance of climate-related diseases.
- Collaborate with agencies in other sectors such as schools, housing, public works, and parks to support policies and implement programs that reduce the risk of exposure to extreme heat, poor air quality, and infectious agents and vectors, and reduce climate pollution.
- Work with LHD Public Health Emergency Preparedness programs and emergency management agencies to ensure that MCAH populations are protected during extreme weather events.
- Inform the public and policy makers about the connections between MCAH and climate change, and the health and health equity benefits of climate action.
- Inform health care providers and patients about how climate change impacts MCAH and how to promote health in the era of climate change, including through using their voice to support climate solutions.
Assessment and Surveillance

- Integrate climate and health risks into MCAH assessments:
  - Identify and map areas with large populations of children ages 0–5.
  - Map prevalence of tree canopy, parks and green space and impervious surfaces near schools and childcare facilities to assess heat risk.
  - Map busy roadways and stationary pollution sources and assess proximity to schools and childcare facilities to evaluate air pollution exposure.
  - Identify neighborhoods at risk for vector-borne disease related to poor housing conditions and blight.
Preparing and Planning for Extreme Weather Events and Population Displacement

- Work with Public Health Emergency Preparedness programs to ensure that protocols are in place to provide shelter and assistance for MCAH populations in the event of climate-related disasters.
- Ensure safe and welcoming places for all types of families, children and youth in evacuation centers.
- Prepare for and respond to needs of pregnant and postpartum women, including post-disaster reproductive health assessments.
- Integrate family reunification and educational continuity strategies into disaster planning.
- Encourage pediatric and women’s healthcare providers and pediatric mental health specialists to participate in Medical Reserve Corps and emergency response.
- Advise healthcare providers to monitor vaccine cold chain management during extreme heat events.
- Engage in recovery planning to promote rebuilding that supports families and child health and development, e.g. active transportation, parks, and complete neighborhoods.
Zika virus is transmitted by Aedes aegypti mosquito – now found in many parts of U.S

Prenatal exposure to Zika
- Microcephaly, hearing loss, delayed growth, eye defects.

New Orleans Health Dept Comprehensive Zika Virus Plan
- Citywide education campaign on Zika and mosquito control
- Enhanced mosquito surveillance and collection for Zika testing
- Case management and guidance for pregnant women and clinicians
- Code enforcement, inspections, enhanced mosquito control/spraying ($500K)
Community Engagement and Education

• Partner with those working on climate change in your community: local Environmental Justice (EJ) groups, CBOs, community leaders, academics, other agencies
  • Los Angeles County Department of Public Health contracted with a local EJ organization, Communities for a Better Environment, to conduct a workshop to gather community input on LADPH’s extreme heat response plan. Community recommendations will be compiled and included in the response plan.
  • The New Orleans Health Department partnered with Gulf Coast Center for Law & Policy to host community meetings to assess knowledge of the city’s extreme weather response protocol, communicate impacts of climate change on health, identify community health service needs, and cultivate trust while prioritizing community action steps that address the intersection of climate and health.

• Collaborate with CBOs and community members and leaders to develop culturally and linguistically appropriate materials for public information and dissemination and use an array of channels to ensure information reaches all members of the community
Intersectoral Collaboration

- Build awareness of the connection between the social determinants of health, and the shared systems that create inequities and contribute to climate change with partner government agencies and elected officials.
- Support community and school gardens, urban agriculture, and acceptance of SNAP EBT and WIC at farmer’s markets. Promote food waste reduction.
- Prioritize infrastructure investments to improve climate resilience and health equity in historically neglected communities (e.g. active transportation infrastructure, public parks and green space).
  - Collaborate with transportation, planning, parks and recreation agencies and schools to increase opportunities for safe active transportation, especially for children and youth, including Safe Routes to School, walking school buses, Complete Streets, traffic calming and speed reduction, and lighting and shading on sidewalks and bike paths. Support reduced transit fares or free bus passes for students and youth.
Intersectoral Collaboration (2)

• Work with housing, planning, building, home-visiting, sanitation and code enforcement agencies to identify and address climate-related risks. E.g. remove standing water in vacant properties and encourage addition of window screens in rental properties and apartment buildings.

• Collaborate with parks, planning, and community-based organizations to expand tree canopy, urban greening, and park access and programming, especially for youth and children.
Adolescent Health & Positive Youth Development

• Provide opportunities for youth to engage on climate change that will impact them throughout their lives

• Collaborate with youth community services programs to engage youth on climate and health issues, including through peer education and participation in climate action campaigns.
Reduce disaster risk and impacts on children

• Invest in school infrastructure and remediation efforts so schools can withstand disasters
  • Federal Emergency Management Agency (FEMA) national guidance on school natural hazard safety

• Invest in school-based community resilience hubs
  • HVAC for clean air, green school yards, cooling capacity, stockpile necessities

• Increase the availability of evidence-based mental health services for children/families exposed to traumatic natural disasters
  • Place mental health services within schools
  • Target services to the most vulnerable children
Develop a Climate and Health Adaptation Plan
Connect Families to Climate-Related Services

• Refer clients for climate related services with multiple health and economic benefits e.g.
  • Energy assistance (LIHEAP)
  • Weatherization
  • Tree planting
  • Healthy home interventions
Most people think global warming is happening

https://climatecommunication.yale.edu/visualizations-data/ycom-us/
Talk about the climate crisis!

• Make the climate-health connection in education materials for patients, health advisories, trainings for staff, and media messages whenever relevant

• Convene a public workshop or symposium on the issue, or partner with the PTA or school district to organize a workshop for parents focused on climate change and children’s health

• Organize grand rounds for MCAH providers on the connections between climate change and the health of women, children, and adolescents.

Sample tweets
It’s hot! As #ClimateChange increases the frequency & intensity of heat waves in AnyCity we can work together to protect our families’ health. Know where your cooling centers are, and be extra careful with your kids and grandparents, who are more sensitive to heat.

If you were flooded in last week’s storm, the AnyCounty Health Department is here with resources to help. We can help you identify risks for mold and improve the air quality in your home. Visit www.anycountyhealthdepartment.gov for more information. #ClimateChangesHealth

Integrate climate change messaging in routine program messaging, including health advisories, educational materials, and social media messages.

### Nutrition

**Original:** Local food is fresher and tastes better than food shipped long distances from other states or countries. Fresher food is more nutritious.\(^93\)

**Modified:** Local food is fresher, tastes better, and *causes less climate pollution* than food shipped long distances from other states or countries. Fresher food is more nutritious and *better for the environment.*

**Original:** Community gardens are a great way to learn about life and stay healthy too. Not only does gardening provide tasty, healthy foods, it teaches responsibility and patience.\(^94\)

**Modified:** Community gardens are a great way to learn about life and stay healthy too. Not only does local gardening provide tasty, healthy foods, *it teaches responsibility and it reduces climate pollution.*

### Emergency Preparedness

**Original:** Houston, Hurricane Season starts in 9 days. Now is time to prepare: Make a Plan, Build a Kit, Stay Informed, Know Your Neighbors.\(^95\)

**Modified:** Houston, Hurricane Season starts in 9 days. *Climate change is increasing the frequency and severity of extreme storms.* Now is time to prepare: Make a Plan, Build a Kit, Stay Informed, Know Your Neighbors.
<table>
<thead>
<tr>
<th><strong>Heat and Children</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Original:</strong> It is easy to get distracted. Look before you lock.⁹⁶</td>
</tr>
<tr>
<td><strong>Modified:</strong> <em>It is never safe to leave a baby in the car when it’s warm outside, and climate change is making hot days more common.</em> It is easy to get distracted. <em>Never leave a baby alone in a hot car.</em> Look before you lock.</td>
</tr>
<tr>
<td><strong>Original:</strong> Babies and young children can become ill during very hot weather. Their health can be seriously affected by dehydration and need to drink plenty of fluids to avoid becoming dehydrated.⁹⁷</td>
</tr>
<tr>
<td><strong>Modified:</strong> Babies and young children can become ill during very hot weather, <em>which is becoming more frequent due to climate change.</em> Their health can be seriously affected by dehydration and need to drink plenty of fluids to avoid becoming dehydrated.</td>
</tr>
<tr>
<td><strong>Physical Activity</strong></td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td><strong>Original:</strong> Keep the kids active and safe this summer! Pima County’s Natural Resources, Parks and Recreation Department is offering online registration for its summer swim lessons.</td>
</tr>
<tr>
<td><strong>Modified:</strong> <em>Our summers are getting hotter due to climate change.</em> Keep the kids active and safe this summer! Pima County’s Natural Resources, Parks and Recreation Department is offering online registration for summer swim lessons.</td>
</tr>
<tr>
<td><strong>Original:</strong> Walking, biking, and skateboarding are good for our physical and mental health.</td>
</tr>
<tr>
<td><strong>Modified:</strong> Walking, biking, and skateboarding are good for our physical and mental health and <em>create less air and climate pollution.</em></td>
</tr>
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</table>
CLIMATE CHANGE, ASTHMA & YOU

What does climate change have to do with my asthma?

Good question!

Climate pollution makes the world warmer.

When it’s warmer, all pollution gets worse.

Climate pollution makes the world warmer and changes our climate.

Cars, trucks and power plants create climate and air pollution.

More air pollution can lead to more asthma attacks.

What you can do

- Talk with your parents and your doctor about how to manage your asthma and how to check if it’s in a bad state.
- Play and do outdoor activities when the air is back to normal. Mornings are usually a better time for outdoor activities.
- Make some changes at school to be healthy and reduce climate pollution.
- Tell your school and community leaders that you want clean air to breathe.

To learn more and take action, visit: www.climatehealthconnect.org/takeaction

CLIMATE CHANGE, ALLERGIES & YOU

What does climate change have to do with my allergies?

Climate pollution makes the world warmer

Warmer temperatures mean spring comes earlier, and allergy season is longer.

Pollens from weeds, grasses and trees can cause allergies.

Who is most at risk?

People with asthma may experience attacks on high pollen days.

You can take action today to make sure we have a healthy planet with healthy places for healthy people!

- Check air quality reports online at www.airnow.gov.
- When pollen counts are high, stay indoors.
- Keep your home clean and allergen-free.
- Close windows to keep out pollen and other irritants.
- Shower after being outside on high-pollen days.
- Wear breathable and moisture-wicking clothes.
- Vacuum regularly and use high-efficiency particulate air filters if you can.

Talk to your doctor about how to control allergies.

You can find more ways to reduce energy use or save money by using solar power.

Visit www.climatehealthconnect.org/takeaction.

https://climatehealthconnect.org/resources/posters/
EcoMadres brings Latina moms together to address issues of clean air, climate, and toxics that affect the health of Latino children and families.

Born from a meaningful partnership between Moms Clean Air Force and founding partner GreenLatinos, the EcoMadres program now includes a broad cross-section of Latino organizations and plans to expand into even more communities where Latinos live and work. EcoMadres educates, engages, and empowers members to have conversations with lawmakers about the environment’s effect on our children’s health.

Nacido de una significativa asociación entre Moms Clean Air Force y uno de los fundadores, GreenLatinos, el programa EcoMadres se ha ampliado para incluir una amplia selección de organizaciones latinas y tiene planeado expandirse a incluso más comunidades donde viven y trabajan latinos. EcoMadres educa, involucra y potencia a sus miembros para que puedan discutir con los legisladores sobre el efecto del medioambiente en la salud de nuestros hijos.
Green Schoolyards

Oakland Unified School District, Trust for Public Land, & Green Schoolyards America working to transform asphalt-covered schoolyards serving disadvantaged communities into green spaces to provide access to nature, improve health and learning, and benefit communities.

https://www.tpl.org/our-work/oakland-green-schoolyards
STOP new fossil fuel projects: Lead by issuing no new permits for oil & gas extraction, fossil fuel infrastructure, or petrochemical projects in California. Keep it in the ground!

2. DROP existing production: Announce a phase-out of existing production in line with the Paris climate goals and a just & equitable transition that protects workers & communities.

3. ROLL Out science-based setbacks: Create a 2500-foot health and safety buffer zone between fossil-fuel infrastructure and homes, schools, & other sensitive sites.
Inside Clean Energy: Which State Will Be the First to Ban Natural Gas in New Buildings?

- 53 cities/counties in California have adopted building codes to reduce their reliance on gas.
- BAAQMD developing low/zero NOx rule that will encourage electrification.
- New CEC rules effective in 2023.
  - Heat pumps—electric appliances that provide heating and cooling—would become the preferred technology for new construction.
  - Builders must cancel out effects of gas emissions by improving energy efficiency in other parts of building.
  - New single-family homes must be “electric ready.”
Cal BIKE response to Governor Newsom’s Proposed Budget

Cal Bike applauds the governor for dedicating a solid 3% of the discretionary surplus to biking and walking, but... “Big spending and breathless verbal commitments to address the climate crisis, social inequity, and declining health are all meaningless if Californians are forced to drive a car for most of their trips.”
Questions? Ideas? Feedback?

Thank you.