

# COMMUNITY GRANTS PROGRAM



## CASE STUDY

### HBCAC Educates Student Ambassadors on Endocrine Disrupting Materials to Ensure Better Lifestyle Choices

The Huntington Breast Cancer Action Coalition, Inc., (HBCAC) is a not-for-profit 501(c)(3) community grassroots organization that has been in existence since 1993. HBCAC is dedicated to the eradication of breast cancer through education and awareness. As a community group partnering with research institutions, HBCAC continuously works to translate science and educate the community on environmental health through creative outreach platforms. Recognizing the diversity in New York State, HBCAC targets reach multiple socio-economic, ethnic, gender, and age groups.

#### Challenge

Endocrine disrupting chemicals (EDC) are mostly man-made chemicals found in various materials such as pesticides, metals, additives or contaminants in food, and personal care products. Throughout one's life, there are seven windows of susceptibility where individuals are more vulnerable to low-dose detrimental chemical exposures, which can increase the likelihood disease onset later in life. These chemicals are also detrimental to the environment, causing harm and leaving long lasting impacts as the chemicals build up over time. The pubertal period is one of the critical windows of susceptibility for harm from EDCs.

#### Solution

HBCAC educated 2,000 middle and high school students on EDCs, through peer-to-peer interaction. HBCAC taught them to translate and disseminate scientific information on hazardous chemicals through a variety of outreach platforms. These platforms included interactive presentations, social media, videos, email, handouts, and more.

#### Results

HBCAC developed content for their program by partnering with a school network, community leaders from Huntington, libraries and senior centers, Dr. Sarah Evans from Mount Sinai Health System and HBCAC interns. Six student mentors were chosen as environmental health ambassadors to be trained to educate their peers. The ambassadors developed a baseline survey (200 distributed with a 60% return rate) deciding what information to provide to their community, peers, and middle schoolers.

With guidance, the ambassadors created videos, a group presentation, individual presentations, and handouts on hazardous chemical identification in personal care products, how to avoid these chemicals, other exposures of concern, the health impact these chemicals can have, and the impact on the environment through contamination.

#### CHALLENGE

- Endocrine disrupting chemicals (EDC) are mostly man-made chemicals found in various materials such as pesticides, metals, additives, or contaminants in food and personal care products which can increase the likelihood of disease later in life.

#### SOLUTION

- HBCAC's goal is to educate students on the potential harms of EDCs thus resulting in better lifestyle choices now and during future points of susceptibility.

#### RESULTS

- Six student mentors were chosen as Environmental Health Ambassadors to be trained to educate their peers.
- Ambassadors created videos, presentations, and handouts on hazardous chemicals, the impact they can have, and how to avoid them.
- These materials were used for the mentors to train additional mentors and were disseminated through 25 events with 2,135 total attendees, as well as through social media.

## CONTACT INFO

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The materials were used for mentors to help train additional mentors and were disseminated to the community through outreach events, HBCAC's website, email, and social media platforms; this included 25 events with 2,135 total attendees and 2,500 educational materials distributed through events and social media. In addition, the students distributed an exit survey and compiled the lessons learned from the surveys. They also developed a toolkit and shared it via social media.

## Mercury Mythbusters

**Mercury Facts**  
Mercury is a natural metal. It is released from rock, coal-fired power plants, and waste incinerators into the environment. Methylmercury, the organic form of mercury, accumulates in fish. When bigger fish eat smaller fish, they also accumulate their toxins. The concentrations vary depending on the fish's age, diet, and region of harvest.

**Why Should We Be Concerned About Mercury?**  
Mercury affects development of the nervous system and normal functioning of the brain, kidneys, and heart. Bigger fish contain higher concentrations of mercury, and can lead to health risks if we consume them too frequently.

**What Can We Do?**  
Eat a portion of a healthy diet, choose fish from lower mercury. Bigger fish which have more mercury should be eaten less frequently. Use the diagram below to make healthy choices. Avoid "red" choices like swordfish and tuna when possible, but comfortable making "green" choices like salmon and sardines 2-3 times per week.

**Low Mercury:** Salmon, Sardines, Trout, Tilapia, Catfish, Flounder, Sole, Shrimp, Crab, Lobster, Shellfish, Anchovies, Mackerel, Herring, Pollock, Whitefish, Walleye, Rainbow Trout, Trout, Tilapia, Catfish, Flounder, Sole, Shrimp, Crab, Lobster, Shellfish, Anchovies, Mackerel, Herring, Pollock, Whitefish, Walleye, Rainbow Trout.

**Medium Mercury:** Yellow Perch, Rock Bass, Striped Bass, Bluefish, Atlantic Croaker, Atlantic Herring, Atlantic Mackerel, Atlantic Menhaden, Atlantic Sardine, Atlantic Silverside, Atlantic Tomcod, Atlantic Weakfish, Atlantic Whitefish, Atlantic Yellow Perch, Atlantic Rock Bass, Atlantic Striped Bass, Atlantic Bluefish, Atlantic Atlantic Croaker, Atlantic Atlantic Herring, Atlantic Atlantic Mackerel, Atlantic Atlantic Menhaden, Atlantic Atlantic Sardine, Atlantic Atlantic Silverside, Atlantic Atlantic Tomcod, Atlantic Atlantic Weakfish, Atlantic Atlantic Whitefish.

**High Mercury:** King Mackerel, Shark, Swordfish, Tilefish, Bigeye Tuna, Bluefish, Atlantic Bluefish, Atlantic King Mackerel, Atlantic Shark, Atlantic Swordfish, Atlantic Tilefish, Atlantic Bigeye Tuna.

## Beauty Is More Than Skin Deep

**Phthalates**  
Found in personal care products that contain fragrance, perfume, and essential oils. Most listed on product labels.

**Endocrine Disruptors**  
Used as preservative in products. Listed on product labels as parabens and ingredients ending in -parol.

**Synthetic Musk**  
Found in many personal care products. They mask the scent of the musk deer. They are also found in fragrances.

**Triclosan**  
Found in some anti-bacterial soaps and toothpastes. Choose plain soap and water which are proven to be equally effective when washing your hands.

**Chemicals in our products wash down the drain, enter water, and rain. Build up in the bodies of animals and humans. By changing the products you use, you can reduce exposure and risk of disease.**

**Number of Personal Care Products Used Each Day By Men and Women (EWG, 2004)**

Category	Men (EWG)	Women (EWG)
Products Per Day (EWG)	6	12

**Chemical Exposures Each Day for Men and Women from Personal Care Products (EWG, 2004)**

Category	Men (EWG)	Women (EWG)
Chemicals Per Day (EWG)	85	168

Choose fragrance-free, choose paraben-free, choose triclosan-free.

## The squeeze on sun screen

**SUNSCREEN FACTS**  
Sunscreen can protect us from harmful rays of the sun. What's the deal with SPF? If you take care from burning without sunscreen for 5 minutes, then theoretically you would be safe for 250 minutes with SPF 50 sunscreen. However, the sunscreen may not protect for that whole period of time because it may wear off in the water or wipe off on a beach towel. Many of the chemicals used in sunscreens have not been adequately tested since the 1970s.

**WHAT IS OXYBENZONE?**  
Oxybenzone is a common sunscreen chemical that filters UV rays. It is absorbed through the largest organ in our body: the skin. Oxybenzone is in most sunscreens. Approximately 65% of the non-mineral sunscreens contain this chemical. You can find it on the label. It is under "active ingredients."

**WHAT IS THE PROBLEM?**  
oxybenzone  
It has shown estrogen-like activity in animals, and may alter the normal functions of human hormones. These types of hormone disruptors can contribute to obesity, infertility, and cancer. Other names for Oxybenzone include: Benzophenone, BP-3, 2,2,4,4-tetrahydroxyacetophenone and trade names: Mincarb 3, Escalor 4360, Escalor 507, K14, Oxybenzone 233.

**A Study from the Federal Centers for Disease Control and Prevention**  
Detected Oxybenzone in 97% of the Population

**WHAT CAN WE DO?**  
Watch out for chemicals like Oxybenzone. Others include Octinoxate, Homosalate, Octylsalicylate, Octocrylene. Look for SPF 30 or higher that is labeled as "Broad Spectrum or Full Spectrum" protection. Also, stick to the shade! Lounging under a tree and using coverage from hats and cover-ups is most effective. Remember: there is no such thing as a free lunch. It can provide vital nutrients like Vitamin D, which has been shown to be beneficial in preventing cancer. So go play outside, just be SUN SMART!

## Climate Change Challenge

**What is it?**  
Climate change encompasses the extreme temperatures, worsening weather conditions, and poor air quality that we are experiencing today.

**Why should we be concerned?**  
Contributes to higher rates of asthma and worsening of asthma symptoms. Melting ice caps lead to rising sea levels and increased risk of flooding. Natural disasters lead to displacement, our social networks change, and may increase the spread of disease, such as sexually transmitted infections. Higher risk of heat exhaustion and dehydration. Decrease in agriculture resulting in food shortages.

**Contributions to climate change include:**  
electricity, Car emissions, Industrial and residential use, Deforestation, Plastics, Mass agriculture.

**What can we do?**  
bring reusable bags when you shop, reduce use of plastics, and recycle. carpool, take public transportation, walk or bike. encourage laws that reduce carbon emissions. choose locally grown food and eat less meat.

**NASA has 150 years worth of records regarding annual temperatures. According to their studies, 15 out of 16 of the hottest years occurred after 2000.**  
plant trees and support local parks and green spaces.

- Online Media:**
- Website
  - Facebook
  - LinkedIn

## TESTIMONIAL

"During my time as an educational leader in two school districts, I have witnessed directly the tremendously positive influence HBCAC programs have had on so many students from diverse backgrounds. I have served as Superintendent of the Huntington School District for the last eight years, during which time numerous students have found their passion and achieved immeasurably as participants in HBCAC's Students & Scientists Environmental Research Scholarship Program; others have found their way through internship opportunities offered by the organization. Additionally, HBCAC has helped our staff on several occasions to integrate hands-on, inquiry-based curricular components at the elementary level, particularly at our STEM Magnet School, that have succeeded in broadening student interest and engagement."

– James W. Polansky  
Superintendent of Schools  
Huntington, New York

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New York Manufacturing Extension Partnership

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