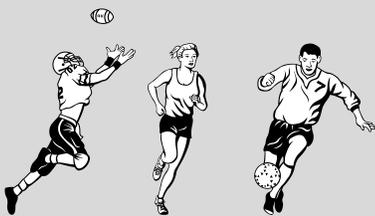


Why Should Athletes Care about Titan?

The next time you participate in outdoor sports...



... think about taking deep breaths of **140 pollutants**.



As an athlete, you may breathe Titan's hazardous pollutants **more deeply into your lungs at consistently higher rates** than non-athletes.



Right now, you enjoy a magnificent natural environment for outdoor activities. Don't let emissions from Titan's proposed cement plant (Carolina Cement) affect your active lifestyle and force you indoors.

As an athlete or outdoor enthusiast, how could Titan's air pollutants affect you?

- **Exposures to airborne pollutants would increase for everyone** in and around New Hanover, Pender and Brunswick Counties – with more people, including athletes, likely to experience chronic and first-time respiratory diseases.
- **The number of “unhealthy air day” warnings would likely increase**, and health professionals would recommend limiting outdoor activity – especially during summer months.
- **The more strenuous the activity, the greater your chances of being negatively affected.** Avoiding unhealthy exposures would include reducing outdoor activity time, level of exercise or both.
- **If you have a child, they would have the highest risk**, because children's lungs are still developing. They also tend to spend more time at high activity levels outdoors.
- **If you have asthma or some other respiratory disease**, you could generally experience negative health effects earlier and at lower levels of exposure. Children are more likely to have asthma, which makes them especially vulnerable.
- **If you are an older adult**, you may already have reduced lung function and decreased resistance to disease; therefore, you are more likely to experience serious health problems associated with airborne pollutant exposures, like those associated with cement plant emissions.
- **Senior citizens are more likely to be hospitalized** during high levels of particle pollution (with deaths sometimes occurring in cases of aggravated heart or lung disease).

What can you do?

- Learn the facts and inform other athletes.
- Get involved in citizens' efforts to halt the proposed Titan cement plant.
- Visit www.stoptitan.org to get started.



Titan Cement could emit more than 140 pollutants into our coastal waters and atmosphere. Here are three of the pollutants that could damage your health...

Ground-Level Ozone:

Ozone (O₃) is a gas that occurs both in the earth's upper atmosphere and at ground level. Ground-level ozone forms when volatile organic compounds (VOCs) and nitrogen oxides (NOx) emitted by cars, power plants, chemical plants and other sources react chemically in the presence of light, such as on hot sunny days.

Out of 100 counties in North Carolina, New Hanover County currently ranks fourth (4th) in emissions of NOx, and twenty-first (21st) for VOC emissions – the two chemical compounds required for creating ground-level ozone. The proposed Titan Cement plant would be the second-largest industrial emitter of ground-level ozone chemicals and increase emissions of NOx by a whopping 26 percent and VOCs by 25 percent – significantly increasing the volume of ground-level ozone in our region.

Breathing ground level ozone can:

- Reduce lung function and make breathing more difficult
- Irritate the respiratory system and aggravate chronic lung disease
- Aggravate asthma, increasing asthma attacks
- Cause permanent lung damage in otherwise healthy children and adults

Sulfur Dioxide:

Sulfur dioxide (SO₂), a cause of acid rain, is one of a group of highly reactive hazardous gasses whose largest sources of emissions are from fossil fuel combustion at power plants (73%) and other industrial facilities (20%). Titan's emissions of 438 tons per year would add to this burden and increase the human health risks to our population.

Breathing sulfur dioxide (5 min. to 24 hrs.) can:

- Cause or worsen respiratory diseases
- Aggravate asthma and existing heart disease

Airborne Particulate Matter:

"Airborne particles" are the main ingredients in haze, smoke and airborne dust. "Airborne particulate matter" is made up of microscopic solids and liquids which are created from a variety of sources, like forest fires and industrial manufacturing facilities. Particle emissions that are smaller than 2.5 micrometers in diameter (PM_{2.5}) pose the greatest risks to health, because they are easily carried deep into the lungs and bloodstream.

As New Hanover County's second-largest single emitter of particulate matter, Titan Cement proposes to emit 200 tons per year of airborne particulate matter – an increase of 23 percent over current levels. About 160 tons per year of Titan's overall particle emissions would be smaller than 2.5 – an increase in PM_{2.5} levels of 30 percent over current levels.

Short-term exposure (days or hours) to airborne particulate matter can:

- Irritate eyes, nose and throat
- Aggravate lung disease
- Cause asthma attacks and acute bronchitis
- Be linked to heart attacks and arrhythmias

Long-term exposure (high airborne particle levels for years) can cause:

- Reduced lung function
- Chronic bronchitis
- Premature deaths

In addition, scientists are evaluating new studies that suggest high particle levels may be linked to fetal deaths, pre-term deliveries, low infant birth weight and infant deaths.

Help protect your right to breathe clean air.

This information provided by your neighbors and fellow athletes with the Stop Titan Action Network, www.stoptitan.org.

Technical information provided by: *Ozone and Your Health*, EPA-425/F-99-003, September 1999; *There's Something in the Air*, North Carolina Department of Environment, Health and Natural Resources; and *Particle Pollution and Your Health*, EPA-452/F-03-001, September 2003. Information on sulfur dioxide was taken from the EPA's website: <http://www.epa.gov/air/sulfurdioxide/>. Information on Titan's proposed emissions was taken from their final air permit from North Carolina Division of Air Quality (2013).