

FDA: Protecting Public Health Since 1906

by Cheryl Baisden

When it comes to what Americans put in their bodies—in terms of food or supplements—protections provided by the Food and Drug Administration (FDA) can be key to preventing death and providing good choices with increased information on product labels.

Origin of the FDA

Before the federal government created the FDA in 1906, anything could be marketed as food or



CONTINUED ON PAGE 6

Concussions in Football— A Game Changer

by Phyllis Raybin Emert



More than 111 million people watched the Super Bowl this year, demonstrating the popularity of the game. That popularity has come at a cost to some NFL players in the form of debilitating head injuries and is starting to trickle down to college and youth sports as well.

In 2013, the National Football League (NFL) agreed to pay unlimited damages to thousands of **CONTINUED ON PAGE 4**

Solitary Confinement—Not for Juveniles in Federal Prison

by Robin Foster

From lower courts to the U.S. Supreme Court, juvenile offenders are often treated differently in the eyes of the law. Along those lines, in

January 2016, President Barack Obama banned the use of solitary confinement for juveniles in federal prisons. Many



human rights activists would like to see the ban expanded to include adults as well.

History of solitary

Ironically, Philadelphia—the city of brotherly love-is considered the birthplace of the modern prison system. The Quakers, a Christian religious group, built the Walnut Street Jail in 1773, which contained 16 one-man cells. Inmates housed there would essentially serve their entire sentences isolated. Later, in 1829, Eastern State Penitentiary was built with solitary confinement in mind. Prisoners were incarcerated with only a Bible in their cell. The theory was that a prisoner would use the solitude to atone or bring **penitence**, which is where the word penitentiary comes from.

An opinion written by U.S. Supreme Court Justice Samuel Freeman Miller for the 1890 case of In Re Medley, said this about solitary confinement: "A considerable number of prisoners fell, after even a short confinement, into a semi-fatuous [insensible] condition, from which it was next to impossible to arouse them, and others **CONTINUED ON PAGE 5**



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Ethics and Gene Editing—A Delicate Balance

by Jodi L. Miller

Advances in medical technology are growing rapidly. There was a time when ethical concerns about in vitro fertilization (IVF) and stem cell research dominated the headlines. Today, both practices are common but gene editing technology and where advances in that field could lead are coming under fire.

Gene editing refers to the deliberate alteration of an organism's **genome**. New genetic technology, called CRISPR, has made the possibility of changing a person's DNA—something that previously was relegated to science fiction—closer to reality. The possibility has raised ethical concerns about the technology, which can be applied in medical, food and environmental areas.

"A gene can be edited by adding, deleting or replacing single **nucleotide** or fragments of DNA at specific places in the genome of an organism," says Dr. Angela Foster, a North Brunswick attorney and scientist with experience in biotechnology and biochemistry. "Genetic editing is like a spell checker in a computer that identifies and corrects misspellings or grammatical errors. Genetic editing can be used to identify and change specific letters (nucleotides) that make up the DNA of an organism."

Potential benefits

Professor David M. Frankford, a professor at the Rutgers Institute for Health, Health Care Policy and Aging Research and a specialist in bioethics, explains that CRISPR can target monogenetic disorders, like Huntington's disease, sickle cell disease, Tay-Sachs disease and cystic fibrosis. These diseases are caused by a mutation of one gene, which the CRISPR program could eliminate or replace, thereby saving that person from living with a debilitating hereditary disease. CRISPR technology has already been used to create a mosquito that is immune to malaria and wheat crops resistant to killer fungi. Scientists are also experimenting with the technology to alter pigs genetically with the goal of transplanting organs into humans and using it in the development of treatments for HIV and cancer by genetically altering specific cells.

In addition, according to the Food and Drug Administration (FDA), research is underway to alter organisms that could carry infectious diseases, such as mosquitos that carry the Zika virus and mice that transmit bacteria which causes Lyme disease; to improve the health of food producing animals, like cattle or pigs; and to alter traits of food plants or fungi, like non-browning mushrooms. This research could potentially increase food production rates.

Ethical concerns and the yuck factor

As with every advance, this new technology comes with consequences. For instance, scientists could engineer a mosquito that does not reproduce in order to reduce the spread of malaria. However, there could be adverse effects to the ecosystem by eliminating a food supply for other animals. Any change made to one species has consequences for others—that includes humans.

"There is concern that experienced scientists may alter the human genome without knowing what the full results will be," Dr. Foster says. "With so much unknown about CRISPR, there is the concern that the technique can be misused or abused due to lack of knowledge and regulations."

Professor Frankford says that with every new technology, there is always a "yuck factor," a term coined by a bioethicist to describe the distasteful first response to certain technology.

A Delicate Balance CONTINUED FROM PAGE 2

For example, people were outraged when advances were made in cloning animals, stem cell research and IVF.

In terms of gene editing, the yuck factor comes from the possibility of parents choosing one trait over another for their unborn child, which could move the technology beyond just preventing a hereditary disease to making what some term "designer babies."

For instance, many scientists are concerned about the technology being used in germ line editing, where specific genes are deliberately passed on to future generations, essentially creating genetically modified people. The fear is (although it is not possible yet) that traits such as beauty, intelligence and strength will be emphasized and only those who are in a position to afford the technology will benefit.

Marcy Darnovsky, executive director of the Center for Genetics and Society, told *The New York Times*, "This opens the door to advertisements from fertility clinics of giving your child the best start in life with a gene-editing packet. And, whether these are real advantages or perceived advantages, they would accrue disproportionately to people who are already advantaged."

Security threat?

In 2016, former Director of National Intelligence James R. Clapper, in testimony to the Senate Armed Services Committee, asserted that gene editing presented a global danger. In his Worldwide Threat Assessment document, Clapper wrote: "Research in genome editing conducted by countries with different regulatory or ethical standards than those of Western countries probably increases the risk of the creation of potentially harmful biological agents or products. Given the broad distribution, low cost, and accelerated pace of development of this dualuse technology, its deliberate or unintentional misuse might lead to far-reaching economic and national security implications."

One possible scenario where the technology could be used to do harm, according to Professor Frankford, is by taking a **pathogen** or bacteria, editing it to make it more deadly and "as contagious as the common cold," creating a superbug. He also points out, however, "most technology can be used for good or bad

purposes."

Oversight and regulation In February 2017, an advisory group from the National Academy of Sciences and the National Academy of Medicine issued a report supporting alterations to human embryos that could create traits passed down to future generations. They stipulated, however, that the technology should only be used to prevent babies from inheriting "serious diseases and disability" and only when no "reasonable alternative" is available.

This is a turnaround from when scientists from the National Academy of Sciences, the Chinese Academy of Sciences and the Royal Society of the United Kingdom gathered to discuss the ethical and moral implications of gene editing in 2015. Then, the scientists agreed it would be "irresponsible to proceed" with making "heritable changes to the human genome." "Given the leadership role of the United States in biomedical and biological sciences, we cannot afford to fall behind in this exciting scientific frontier," FDA Commissioner Robert M. Califf and Ritu Nalubola, senior policy advisory with the FDA, wrote in a January 2017 joint blog post.

• "Oversight provided by the FDA is one aspect of broader governance necessary for safe and responsible research and development of genome editing applications. Moreover, the expansive scope of

> intentional genomic alterations using modern genome editing technologies has triggered debate on fundamental ethical and social issues, which will continue to influence public opinion and acceptance of genome editing applications. Even as

FDA implements necessary steps for effective regulation to ensure the safety of products, the role of broader, inclusive public discussion involving multiple constituencies (e.g., scientists, developers, bioethicists, and public interest and community groups) to address the larger societal considerations should not be overlooked."

For its part, the FDA is cosponsoring two studies on gene editing to be completed in 2017.

Both Professor Frankford and Dr. Foster believe the government does have a role to play in gene editing oversight.

"Without hampering the advancement of science and research, the government should have oversight on genetic engineering with more concern with the implications and uses of the genetic product on humans or human-related products," Dr. Foster says.

Concussions CONTINUED FROM PAGE 1

injured former players (or their families) who claimed the League did not protect players from harm or properly identify the risks of concussions. Many former players are suffering from brain diseases like dementia, Lou Gehrig's disease (ALS), Parkinson's disease and chronic traumatic encephalopathy (CTE). The League did not admit any

liability in the settlement, however Jeff Miller, NFL executive vice president of health and safety policies, acknowledged a link between football and CTE in 2016. This admission came after years of denial from the NFL.

Distribution payments will be made to ailing, retired NFL players who suffer from concussion-related injuries from their collective years playing football. Individual players (or their families) can receive up to \$5 million if they were diagnosed before the settlement was approved in April 2015.

The actual amount will be based on the age of the retired player and the years he played in the NFL. The agreement also requires NFL owners to pledge \$75 million for medical evaluations, and \$10 million for education about head injuries.

The brain is like Jell-O

Concussions result from severe blows to the head, which can cause loss of consciousness, balance problems, confusion, headaches, dizziness and nausea. An article in *The New York Times* likened the brain to Jell-O. The article explains, "The real damage from concussions, [scientists] say, actually occurs deeper in the brain—in so-called white matter—as a result of fibers pulling and twisting after impact....You know what happens when you take a plate of Jell-O and give it a hard shake? The stretches and contortions approximate what is happening to the wiring in the brain."

A special mouth guard, developed by scientists at Cam Lab at Stanford University, gauges the G-force (energy acting on a body as a result of gravity) power of hits taken by football players. According to *The Times* article, a study using data from the mouth guard tracked the G-force from just 10 of the 62 hits [an] offensive lineman accumulated in a single game. The data revealed the "average G-force (25.8) is roughly equivalent to what we would see if the offensive lineman crashed his car into a wall going about 30 miles an hour."

> The Chronic Traumatic Encephalopathy Center at Boston University has linked CTE with repeated and cumulative blows to the head. Typical

symptoms of CTE are depression, mood swings, anger, thoughts of suicide, and a progression to dementia, muscular and memory issues. The Center studied the brains of 94 former NFL players and found that 90 of them had CTE.

At this point in scientific research, CTE can only be

diagnosed by a dissection of the brain after death. However, researchers are currently trying to discover a way to diagnose CTE in living people. For that reason, a section to the NFL settlement was added that allowed annual reviews about diagnosis in case a CTE test is developed for the living. The settlement does not cover future players who begin to show symptoms of these brain trauma-related diseases.

Assuming the risk

Professor Camille Andrews, a professor at Rutgers Law School—Camden, who specializes in sports law, believes that NFL players "assume the risk that brain injury can occur when playing the sport. But, they [players] have a right to assume and rely upon the league/team doing whatever is reasonable and practical to prevent that risk." While she doesn't feel that the NFL has enacted enough protections, Professor Andrews does note that the League has done "a good job with their 'in

"If a player upon examination by an independent (nonteam) NFL physician on the field immediately thereafter shows signs of a concussion, the player cannot come back into the game," Professor Andrews explains. In the past, players have admitted that they often played injured to avoid signs of weakness.

"But, they have not done enough," Professor Andrews declares. "The NFL could further change the rules to more aggressively prevent intentional (dirty) helmet to helmet contact." There is a penalty for these hits, but they still occur during games. She suggests the NFL "suspend a player for the season without pay, which would put a quick end to these types of tactics."

Amateur and youth football

game' [concussion] protocol."

According to the National Center for Catastrophic Sport Injury Research, from 2013 to 2015, 20 middle or high school football players died as a result of injuries sustained on the field.

CTE has also been discovered in the brains of several former Pop Warner football players and parents sued the youth tackle football league in September 2016, for misrepresenting the safety and risks of the game for 5



Concussions CONTINUED FROM PAGE 4

to 15-year-olds. The plaintiffs want warning labels on the helmets, disclosure of the risks involved in the program, and financial damages.

In a piece for HBO's *Real Sports with Bryant Gumbel*, Dr. Ann McKee, director of the Chronic Traumatic Encephalopathy Center at Boston University, said, "I've looked at brains of young teenagers and seen damage that I've never seen before. And it came from football impact injuries."

Former NCAA players have filed lawsuits charging that the concussion risk was covered up to protect the lucrative business of college football. The NCAA recently settled a lawsuit to provide \$70 million to screen, test and diagnose current and former NCAA players, including \$5 million for concussion research. In addition, a 2017 class action lawsuit (involving multiple athletes) against Riddell, a manufacturer of football helmets, claims the helmets are dangerous and defective and don't protect the players from severe blows to the head.

What can be done?

According to the Sports and Fitness Industry Association, in recent years, participation in tackle football by those ages six to 12 has decreased by 20 percent. Most doctors recommend sticking to flag football for younger kids and not playing tackle football until the teenage years.

Dr. Robert Stern, director of clinical research at the Chronic Traumatic Encephalopathy Center, told *The New York Times*, "The earlier they started playing, the worse their brains fared later on."

In early 2017, USA Football, which oversees amateur football in America, began changing the game to resemble

flag football. Team size will be reduced from 11 players to either six or nine, the field will be cut in size, and kickoffs and punts will be abolished. Also, players will line up in a crouching position instead of with one hand on the field (the three-point stance) to eliminate the upward surge into other players when the ball is snapped.

Professor Andrews notes, "Every state and the District of Columbia now have concussion protocol laws for students and youth sports. Kids get hurt at any level," she stated. "It is about whether your brain could get damaged." As of late 2016, eight state legislatures had also enacted "return to learn" laws for non-athlete minors who have had head injuries and need time to adjust to school activities.

Some studies show that parents are rethinking their children's participation in football at younger ages. A *Bloomberg Politics* poll revealed 50 percent of Americans don't want their child to play the game. "If I had a son," says Professor Andrews, "under the current League rules and what we know about concussions, I would not let him play football. I love football, but I would love my son more."

Some in the athletic world agree, including former NFL coach Mike Ditka, who told *The Week* that he wouldn't let a son of his play football. "That's sad—and my whole life was football. I think the risk is worse than the reward."

As for the future of football, Professor Andrews says, "Ignoring this problem is a much greater threat to the NFL than the threat of paying a large settlement. If there is not a change that leads people to believe that the sport and its rules are safer, parents will not let their children play, and the NFL will not survive. It will kill the sport from the ground up."

Solitary Confinement CONTINUED FROM PAGE 1

become violently insane; others still, committed suicide; while those who stood the ordeal better were not generally reformed, and in most cases did not recover sufficient mental activity to be any subsequent service to the community."

Modern solitary confinement

The Department of Justice (DOJ) defines solitary confinement as incarceration in a room for at least 22 hours per day, alone or with one other person. Federal government figures estimate approximately 100,000 inmates are currently being held in solitary confinement, and the Bureau of Prisons estimates that there are only 26 juveniles in the federal prison system.

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In 2015, President Obama directed the DOJ to investigate the use of solitary confinement in U.S. prisons. Following its study, the DOJ issued a report that included 50 guiding principles that all federal prisons must follow. These principles include: increasing the amount of time inmates committed to solitary can spend outside of their cells; using solitary as a last resort; refraining from putting an inmate in solitary during the last 180 days of his/her term; and a ban on solitary confinement for juveniles. This move by the federal government adds to a growing movement among state lawmakers to limit or end the use of solitary in state prisons. In 2015, the Association of State Correctional Administrators called for a limit or end to the use of solitary for lengthy periods of time, and several states such as Colorado and New Mexico

CONTINUED ON PAGE 7

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FDA CONTINUED FROM PAGE 1

a medical cure. In fact, published reports at the time exposed such atrocities as diseased cows being ground up in the Chicago stockyards along with dead rats (and the poison used to kill them) and sold as canned meat, and "medications" designed to calm crying babies being laced with morphine.

Disturbed by these reports, chemist Harvey Wiley drafted a dozen men—dubbed the Poison Squad—to eat only foods treated with measured amounts of certain chemical preservatives, including formaldehyde, to determine if these common additives were dangerous. The results of the five-year experiment confirmed that the nation's food and drug industries required federal oversight to ensure quality control. As a result, the Pure Food and Drug Act, which established the FDA, was signed into law by President Theodore Roosevelt with **bipartisan** support.

Today's FDA

Since President Roosevelt signed that landmark legislation, the role of the FDA has expanded. Today, the FDA regulates dietary supplements and conventional foods through the Federal Food, Drug, and Cosmetic Act (FFDCA).

Under the FFDCA, substances that are "generally recognized as safe" (GRAS) can be added to foods without approval from the agency, while non-GRAS ingredients must be preapproved before being permitted in a product. There is no requirement that food manufacturers or distributors report serious adverse events that may be linked to their products, so medical professionals or consumers usually submit reports of an illness or injury to the FDA. The FDA then investigates the report before deciding whether the food product actually caused the medical problem and what should be done if a link is found.

When it comes to dietary supplements, which do not require preapproval from the FDA before going on the market, manufacturers and distributors *are* required to report adverse incidents. If an investigation confirms the product was at fault, the agency can move to have it removed from the market as unsafe.

Examples of the FDA's mandate include its ban on certain artificial sweeteners and dyes in foods and ongoing efforts to address concerns over trans fats.

Trouble with trans fats

Partially hydrogenated oils (the primary source of trans fats in processed foods) were originally thought to be healthier for human consumption than saturated animal fats like butter and lard. Making their usage even more attractive, they were cheaper to produce, improved the taste and texture of foods and extended the shelf life of packaged products. As a result, trans fats became a universal ingredient in the vast majority of the nation's processed foods. In fact, the FDA estimated that about 95 percent of packaged cookies, 100 percent of crackers and 80 percent of many frozen prepared products like breakfast foods contained trans fat.

In the early 1990s, scientific research concluded that trans fats negatively impact cholesterol levels, clogging arteries and causing serious health problems like obesity, heart disease and memory loss. Based on those findings, in 1994 the Center for Science in the Public Interest took the first step in the regulatory process by petitioning the FDA to require trans fats be listed on nutritional labels. Following additional research, in 2006 labeling requirements were instituted. As a result, the intake of trans fat among Americans dropped by 78 percent by 2012, according to the FDA, partially because consumers had the labeling information to make healthier choices and partially because some manufacturers began eliminating or reducing the amount of trans fat in their products.

No longer GRAS

In 2013, based on findings from the Institute of Medicine, the FDA took a step further, and announced that trans fats were no longer classified by the agency as GRAS for human consumption. In 2015, the agency set a June 2018 deadline for manufacturers to totally eliminate the ingredients from their products.

"We made this determination based on the available scientific evidence and the findings of expert panels," Susan Mayne, director of the FDA's Center for Food Safety and Applied Nutrition, said in a statement. "Studies show that diet and nutrition play a key role in preventing chronic health problems, such as cardiovascular disease, and today's action goes hand in hand with other FDA initiatives to improve the health of Americans."

According to the Harvard School of Public Health, eliminating trans fats completely could prevent up to one in five heart attacks and heart disease-related deaths.

"The evidence is clear. There is no safe level of trans fat," Dr. Georges Benjamin, executive director of the American Public Health Association, told *The Los Angeles Times*. "Removing this source of industrial trans fat in the food supply will prevent thousands of preventable illnesses and deaths each year from heart disease."

While many food manufacturers have already eliminated trans fats, they still need to be removed from canned frosting, salty snacks like crackers and microwave popcorn, frozen pizza, margarine and coffee creamer.

Michael F. Jacobson, executive director of the Center for Science in the Public Interest, a consumer group that pushed for the ban, told *The New York Times*, "This is the final nail in the coffin of trans fat. In terms of lives saved,

FDA CONTINUED FROM PAGE 6

I think eliminating trans fat is the single most important change to our food supply."

Evaluating energy drinks

The latest area of concern for the FDA on the dietary supplement front involves the energy drink industry. Growth estimates put the industry on track to reach more than \$26 billion in sales by 2019. Most energy drinks (Red Bull, 5-Hour Energy and Rockstar) are classified as dietary supplements. As such, the companies are required, under

the Dietary Supplement Health and Education Act of 1994, to inform the FDA whenever their products are linked to injury or death. According to the FDA, between Jan. 2012 and Nov. 2014, it received 224 adverse event reports from energy drink manufacturers related to their products, including six deaths.

If an energy drink is classified as a beverage, it is subject to the Nutrition Labeling and Education Act of 1990. For instance, Monster Energy, which originally classified itself as a dietary supplement, reclassified itself as a beverage and only had to affirm that all of its ingredients were GRAS.

Many of these drinks appeal to kids and several lawmakers want to change that, calling for a ban on marketing energy drinks to minors. In a statement, the American Academy of Pediatrics said that energy drinks have "no place in the diet of children and adolescents" due to their high caffeine content. A study published in the medical journal *Pediatrics* revealed that the amount of caffeine contained in some energy drinks "can exceed 500 milligrams (the equivalent to 14 cans of soda) and is clearly high enough to result in caffeine **toxicity**."

As a starting point toward evaluating the potential dangers of energy drinks, the FDA's current maximum

allowable amount of caffeine in a cola drink is 71 milligrams per 12-ounce serving. Energy drinks generally contain far more and may include other additives that also serve as stimulants, all of which increase heart rate and blood pressure and can cause headaches, nausea, sleeplessness and tremors. According to the Substance Abuse and Mental Health Services Administration, in 2011, 20,783 emergency room visits were due to complications from consuming energy drinks. That number compares to

10,068 visits in 2007.

Taking it to court

Lawsuits have been brought against Red Bull and Monster, which are still pending. Monster, however, did settle two wrongful death lawsuits in 2015. One suit involved a 14-year-old girl who died after drinking two Monster Energy drinks in a 24-hour period. Another suit involved Alex Morris, a 19-year-old who went into cardiac arrest and died. Over a three-year period, Morris regularly drank Monster Energy drinks. Both suits were settled by Monster for an undisclosed amount.

In addition, a lawsuit brought against Red Bull for false advertising was settled in 2014 for \$13 million. Benjamin Careathers claimed in his

suit that after consuming Red Bull, he saw no boost to his physical or mental performance. In other words, it did not "give him wings."

Doctors, researchers and public health experts are calling for the FDA to restrict the allowable amount of caffeine in energy drinks and require labels to list the caffeine content. While research continues, the FDA cautions anyone thinking about taking these products to consult with a doctor first, to ensure there are no medical conditions that could worsen as a result of drinking them.

Solitary Confinement CONTINUED FROM PAGE 5

have already implemented this recommendation.

Punishment should fit the crime

In a Washington Post op-ed piece, published in January 2016, President Obama wrote of the "heartbreaking results" of solitary confinement, and told the story of a 16-year-old Bronx youth named Kalief Browder who was sent to Rikers Island Prison to await trial on charges of stealing a backpack. Abused by inmates and guards while at Rikers, Browder spent almost two years in solitary confinement before being released without ever standing trial. The horrors of his experience—a juvenile in a federal prison—haunted Browder and he committed suicide at the age of 22. Browder's story highlights the potentially devastating psychological consequences of solitary confinement. Studies have shown that prisoners who have spent time in solitary confinement have higher rates of suicide, especially juveniles and those with mental illness.

"The United States is a nation of second chances, but the experience of solitary CONTINUED ON PAGE 8



Solitary Confinement CONTINUED FROM PAGE 7

confinement too often undercuts that second chance. Those who do make it out often have trouble holding down jobs, reuniting with family and becoming productive members of society. Imagine having served your time and then being unable to hand change over to a customer or look your wife in the eye or hug your children," President Obama wrote. "In our criminal justice system, the punishment should fit the crime-and those who have served their time should leave prison ready to become productive members of society. How can we subject prisoners to unnecessary solitary confinement, knowing its effects, and then expect them to return to our communities as whole people? It doesn't make us safer. It's an affront to our common humanity."

In his op-ed, President Obama talked about the risks that those who have been subjected to solitary confinement face, including depression, violence and repeat offenses. He also indicated states that have adopted prison reform measures, including reducing the number of people in solitary confinement, have seen positive results. In addition, since 2012, federal prisons have cut the use of solitary confinement by 25 percent and have seen a significant reduction of assaults against staff.

The cost of solitary confinement

In addition to the humanitarian aspects of solitary confinement, there are also economic concerns. Keremet Reiter, a professor at the School of Law at the University of California, Irvine, wrote in Time, "It's easy to dismiss solitary as just another consequence of committing a crime. But that logic ignores broader costs.

> First, it's expensive. A year in solitary averages \$75,000 per prisoner—about three times the average cost of incarceration. Second, it's

dangerous. Isolated prisoners often become psychotic from sensory deprivation. And third, it can be invisible to oversight, enabling abuse."

Reiter, who is the author of a book on the long-term effects of solitary confinement and has testified about the impacts of the practice before state and federal legislators, also points out that prisoners are put into solitary at the discretion of prison administrators, not judges or juries.

"These conditions aren't bad just for prisoners," she wrote. "They're bad for everyone. Because when a solitary prisoner's criminal sentence expires, he is released directly back into the community, ill prepared to adjust."

Solitary in New Jersey

In October 2016, the New Jersey State Assembly passed a bill that would limit the time an inmate in a New Jersey prison can be kept in solitary confinement and would completely ban the use of solitary for juveniles. The bill would require New Jersey prisons and jails to use solitary confinement only as a last resort, and limit its use to 15 consecutive days or 20 days in a two-month period. In December 2016, Gov. Chris Christie vetoed the bill.

Gov. Christie criticized the bill and its sponsors, calling it an "illinformed, politically motivated press release" and argued the use of solitary confinement—and the problems associated with it—do not exist in New Jersey. The New Jersey Department of Corrections uses the terms Management Control Units, Involuntary Protective Custody Units, and Restrictive Housing Units to describe its isolation methods and Gov. Christie claims these are very different from the "solitary confinement" used in other states.

Prison reform advocates, such as the American Civil Liberties Union of New Jersey, however, insist the negative effects of "restrictive housing units" are the same as those associated with solitary confinement.

The international human rights monitoring and advocacy project, American Friends Service Committee's Prison Watch, is part of the New Jersey Coalition Against Isolated Confinement. Bonnie Kerness of the AFSC says that what's needed most here is oversight. She stresses there is little legislative oversight of our nation's prison system, nor is there community oversight. The activities that go on in prisons and jails occur, literally, behind closed doors, she says. The coalition argues that practices like solitary confinement and its associated abuses violate the United Nation's Convention Against Torture and must be abolished in every prison, jail and detention center; not simply limited to the federal prison system.

Speaking at a recent rally against solitary confinement, Kerness urged the crowd to say "loudly and collectively 'Not in My Name' can this violence to the human spirit continue."



bipartisan—supported by two political parties.

genome—the complete set of genes or genetic material present in a cell or organism.

liability—an obligation of responsibility for an action or situation, according to the law.

nucleotide—an organic molecule. Nucleotides form the basic structural units of DNA.

pathogen—an organism that produces disease such as a fungus or virus.

penitence—remorse or regret. **toxicity**—harmfulness.