

# Solitary Watch

## Criminal Justice Issues and Prisoners' Rights

<https://solitarywatch.org/2014/08/04/what-solitary-confinement-does-to-the-human-brain/>

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by [Maclyn Willigan](#) | August 4, 2014

*Loneliness is a destroyer of humanity. Jesse Wilson, held in solitary at ADX Florence federal supermax prison*

Based on the [evidence amassed by researchers in the last several decades](#), we have reached a point in time when we may unequivocally state that solitary confinement inflicts psychological damage and distress on those subjected to it. Even in individuals with no prior history of mental illness or instability, extended periods of isolated confinement have produced severe psychological symptoms, and left deep and often permanent psychological scars.

More recently, such findings have been bolstered by the field of neuroscience, which is progressively discovering evidence that long-term isolation has the potential to actually alter the chemistry and structure of the brain.

Among the early researchers investigating the link between solitary confinement and mental abnormalities is Stuart Grassian, who became interested in the subject after visiting Walpole State Penitentiary in 1982 and interviewing several men in solitary confinement. [Grassian realized these people were very sick](#). Those he spoke with exhibited symptoms such as hallucinatory tendencies, paranoia, and delirium a collection of conditions he designated SHU Syndrome. Several other studies have since supported the existence of such a syndrome. The [American Friends Service Committee](#), among others, also cites hypersensitivity to noise and touch, insomnia, PTSD, and uncontrollable feelings of rage or fear.

The rise of supermaxes and solitary confinement units across the country in the 1990s and early 2000s has intensified the problems associated with prison isolation.

According to an [American Journal of Public Health study](#), 53.3 percent of self-harm incidents took place among those in solitary, who make up only about 5 percent of the prison population. Likewise, about half of all prison suicides take place in solitary confinement. When their sentences are complete, individuals housed in solitary are often released directly to the streets a practice that has been linked to increased recidivism rates.

Only recently, however, have researchers begun discussing the neurobiological effects of prolonged isolation. This research was showcased earlier this year at the annual meeting of the American Association for the Advancement of Science (AAAS), at a [panel discussion](#) during which neurologists and activists alike shared their experiences with solitary confinements destructive capabilities.

Panel member Craig Haney, a psychology professor from the University of California Santa Cruz, has spent the past thirty years both evaluating solitary confinement units across the country and documenting the effects of long-term isolation. One notable effect of such seclusion on prisoners, Haney states, is identity disorders that result from the lack of social interaction:

So much of who we are depends on our contact with other people, the social context in which we function, and when you remove people from that context, they begin to lose their very sense of self.

Huda Akil, a neuroscientist at the University of Michigan and also a member of the panel, concedes the fact that there are limitations when attempting to work with prisoners directly, but is confident in a connection between solitary and mental abnormalities because of existing evidence tying the absence of stimulus with changes in the brain:

The physical lack of activity, the lack of interaction with the natural world the lack of interaction with other human beings, the lack of visual stimulation, the lack of touch Each one of those has been studied not just only in humans, but in animal models And each one is by itself sufficient to change the brain, and change it dramatically depending on whether it lasts briefly or extended. And by extended I mean days, not decades

Given the opportunity to document changes in segregated prisoners brains, Akil is certain the findings would support the theory that solitary confinement can fundamentally alter the structure of the brain.

When one considers the wealth of knowledge that behavioral science has contributed to establishing a connection between isolation and

brain degeneration, along with the relatively new, concrete evidence offered by neuroscientists, the existence of a causal relationship is convincing.

In an [article published by AEON Magazine](#) Shruti Ravindran presents a collection of first-hand accounts and recent scientific research supporting the panels central claim: solitary confinement fundamentally alters the brain. Among her resources are formerly incarcerated persons and renowned neuroscientists, who have devoted themselves to documenting the negative effects that prolonged isolation can have on a persons psyche.

Ravindran begins by introducing us to Robert King, a former prisoner and member of the AAAS panel, who spent 29 years in solitary at Louisianas Angola State Prison. King describes his experiences in and out of solitary confinement, and the lasting side effects. Even after his release thirteen years ago, he says, he often feels introverted, struggles with paranoia, and suffers from bouts of depression.

In an ongoing effort to prove the existence of a causal link between solitary confinement and its devastating mental consequences, neurologists like Elizabeth Gould, Mark Rosenzweig, and Marian Diamond have conducted experiments that demonstrate structural changes in the brain itself. Gould, a Princeton neuroscientist, and Alexis Stranahan, a postdoctoral researcher, together investigated the underlying reasons behind the isolated brains decline and found hormones to be somewhat responsible. They found that isolated rats could not effectively regulate stress hormones, leading to a dangerous buildup that was causing neurons to die. Normally, an animal would be able to maintain a hormone balance that preserves, and even grows neurons. But in a stress-inducing environment, such as the one isolation imposes, the ability to regulate hormones is lost and the bodys systems deteriorate.

Rosenzweig found that rats subjected to supermax-like conditions had fewer connections between neurons and thinner cerebral cortexes than those that were raised in stimulating, engaging environments. Diamond revealed the fragility of the cortex by demonstrating that environmental changes, positive or negative, had the potential to alter both the size and cellular makeup of the cortex at any point in a persons life. The cerebral cortex, Ravindran contests, is the part of the brain that makes us most human. If the cortex is in fact one of the most crucial areas of the brain, it is alarming to find that it is so susceptible to environmental changes, especially the drastic sensory deprivation associated with solitary confinement.

As evidence of solitarys biological affects accumulates, a valid question arises: What does this all mean for the future of solitary confinement? At a minimum it will strengthen every argument against the practice on both ethical and practical grounds. Prisoners are suffering not only mental anguish but also permanent physiological harm that will hinder their efforts to reintegrate into society.

Accurate information and authentic storytelling can serve as powerful antidotes to ignorance and injustice. We have helped generate public awareness, mainstream media attention, and informed policymaking on what was once an invisible domestic human rights crisis.

Only with your support can we continue this groundbreaking work, shining light into the darkest corners of the U.S. criminal punishment system.

by [Juan Moreno Haines](#)

October 25, 2022

by [Solitary Watch Guest Author](#)

October 13, 2022

by [Vaidya Gullapalli](#)

September 29, 2022

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does the permanent, harmful effects occur even if your just playing a game?

I was heavily institutionalized as an adolescent and spent many days (which added up to months and years) in forced isolation. Id be interested to know what effect that has on a developing brain, as well as what the potential behavioral outcomes could be. Is there any research out there on this?

Currently in the work of studying TM (transcendental meditation) which is really good for any FORCED trauma. I have been meditating now for almost a month every day, and it has helped me in so many ways. Blessings to you all

I mean.. duh. But yes, I agree with the other peoples comments to this post and have similar circumstances.

<http://www.collective-evolution.com/2014/06/15/a-neuroscientist-explains-what-happens-to-your-brain-when-you-meditate/>

I was in solitary confinement for 14 months for all non violent tickets. My crime was non violent. I have been out for 3 years and I cannot socialize with anyone, I do not leave my home unless I absolutely have to. I dont see anyone, or even talk on the phone. I didnt think it had an effect on me, but I was dead wrong.

I too did administrative segregation for simply standing my ground about an abusive guard. I did just over 13 months and then released out to the streets with no family or residence. I too have found myself a hermit and so unsociable that I am having a very hard time getting employment. The only thing that I have had even close to rehabilitative treatment is college, and sadly the college was unprepared nor forewarned of me and my state of mind. I would think that is public safety where the true focuses of the legislators, then they would

not want this type of situation to happen at the publics expense. All I can say is keep your head up, and please stay adamant in advocating for change. Merry Christmas and may health and freedom find you for the rest of your life.

Sincerely;  
The American American, Fighting to Restore Our Free Nation.

I had about 8 months and when I got out I moved into a Christian community where I worked and rarely talked. My concentration actually got better but something in me broke and became quiet for better or worse.

I have a recurring dream for the last about 37 years Im locked up not solitary but I realize I dont have to be there and leave. I used to walk in circles and or figure 8s in my room after I got out and then Id remember I was free and go take a walk outside.

Same wishes to you both, health, freedom and a relation with the uncreated creator of all.

If you can see this JM, just know that change is coming for you, for the better.

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