

# **NotToday**

## Self-Defense Against Suicidal Ideation

Research  
Background



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# Definitions

Suicidal Ideation

VS.

Suicidal Crisis

VS.

Chronic Suicidal Ideation



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# Suicidal Ideation

Refers to thoughts about dying. Can be active (thoughts of killing yourself) or passive (wishes to die accidentally or naturally)

## How does it feel?

**Active ideation:** Hatred and anger at the self for being bad or shameful.

**Passive ideation:** A longing to be released from pain.



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# Suicidal Crisis

“A suicidal crisis is a temporary state that occurs in response to overwhelming stress, and which is associated with seemingly unbearable and unendurable emotional and/or physical pain. This pain is perceived by the suicidal person as being so severe, permanent and all-encompassing that there is no practical solution to resolving it other than suicide.” [Rhode Island Student Assistance Services](#)

**How does it feel? TK**



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# Chronic Suicidal Ideation

“The pattern of chronic suicidal thoughts is similar to that of a person with any other kind of chronic condition: For some people, there are flare-ups where the condition is far worse than normal, and then the symptoms subside, but only temporarily. And for other people, the symptoms never subside. Those people live with their symptoms – in this case, suicidal thoughts – every day.” [Speaking of Suicide](#)

## How does it feel?

- Deadness and inability to feel positive emotion
- Thought and action slow or impossible
- Memory gaps



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# How are these related?

Most people with suicidal ideation (chronic or not) will never attempt suicide. This is an important and hopeful fact for sufferers to know.

However, 29% of people with SI will attempt suicide at some point in their lives. [Cross-National Prevalence and Risk Factors for Suicidal Ideation, Plans, and Attempts](#)

That is what NotToday aims to prevent.



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# Neurobiology of Suicidal Ideation States

What are the physiological causes underlying the affective and behavioral features?

- Dorsal Vagal Parasympathetic Nervous System Activation
  - Psychomotor Retardation
  - Dissociation



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# Polyvagal Theory

The vagus nerve is the longest and most complex of the 12 pairs of cranial nerves that emanate from the brain. It transmits information to or from the surface of the brain to tissues and organs elsewhere in the body. [Medical News Today](#)

Porges' Polyvagal Theory describes how the branches of the vagus nerve, primarily the dorsal and ventral, control responses to stressors and trauma. The more familiar "fight or flight" response refers to sympathetic nervous system activation, while the vagus nerve is part of the parasympathetic nervous system.



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# Polyvagal Theory

**Ventral vagal nerve activation** is seen in stress responses that involve social behaviors (“tend and befriend”) and in normal, non-stressed functioning.

**Dorsal vagal nerve activation** produces “shutdown” response in situations where escape is impossible and there is no action to take to avert death or injury. This is the “playing possum” phenomenon.



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# How Does Dorsal Vagal Nerve Activation Feel?

- Emotionally, it feels like dissociation, numbness, dizziness, hopelessness, shame, a sense of feeling trapped, out of body, disconnected from the world
- Decreased heart rate, blood pressure, facial expressions, sexual and immune response systems
- Difficulty getting words out
- Brain has decreased metabolism and this causes a loss of body awareness, limp limbs, decreased ability to think clearly, and decreased ability to lay down narrative memories

[Psychiatry and Psychotherapy Podcast](#)



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# Psychomotor Retardation

A slowing-down of thought and a reduction of physical movements in an individual, characteristic of major depressive disorder, other mental illnesses, and the effects of some drugs such as benzodiazepines.



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# Examples of Psychomotor Retardation

- Unaccountable difficulty in carrying out what are usually considered "automatic" or "mundane" self-care tasks for healthy people (i.e., without depressive illness) such as taking a shower, dressing, self-grooming, cooking, brushing one's teeth and exercising.
- Physical difficulty performing activities which normally would require little thought or effort such as walking up a flight of stairs, getting out of bed
- Activities usually requiring little mental effort can become challenging. Balancing one's checkbook, making a shopping list or making decisions about mundane tasks (such as deciding what errands need to be done) are often difficult.

[Wikipedia](#)



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# Dissociation

Dissociation is a disconnection between a person's thoughts, memories, feelings, actions or sense of who he or she is. This is a normal process that everyone has experienced. Examples of mild, common dissociation include daydreaming, highway hypnosis or "getting lost" in a book or movie, all of which involve "losing touch" with awareness of one's immediate surroundings.

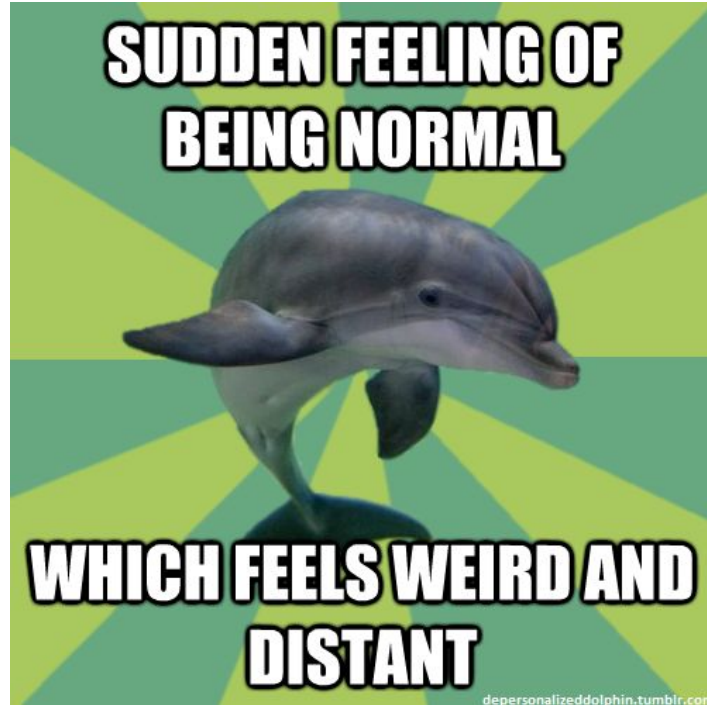
During a traumatic experience such as an accident, disaster or crime victimization, dissociation can help a person tolerate what might otherwise be too difficult to bear. In situations like these, a person may dissociate the memory of the place, circumstances or feelings about of the overwhelming event, mentally escaping from the fear, pain and horror. This may make it difficult to later remember the details of the experience, as reported by many disaster and accident survivors.

[Psychiatry.org](https://www.psychiatry.org)



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# What Does Dissociation Feel Like?



# What Does Dissociation Feel Like?

- Every so often, you suddenly feel like you “reboot.”
- You have no sense of what your inner world felt like before the reboot.
- You can remember that general events happened, but it doesn't feel like you subjectively experienced them.
- You are disoriented. Memories of specific details of your most recent daily life are gone.
- You are disoriented about who you are as a person, what your character traits and desires are.
- You feel like you “lost your place” in the throughline of your life.
- You feel frustrated because whatever you might have been trying to achieve before the break (self-care plans like exercise, attempts to be more productive, specific projects) has to be started over, because you dropped it while you were mentally absent (in a dorsal vagal activation state).



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# Causes of Chronic Suicidal Ideation

- PTSD from a particular incident
- C-PTSD from prolonged childhood neglect and/or abuse
- Schizophrenia, Bipolar Disorder, Major Depressive Disorder
- Personality disorders
- Developmental trauma:

“Developmental trauma occurs...before the onset of conscious verbal thought at age two or three. And, it's pre-cognitive, pre-verbal, and can't be recalled. Yet it floods the in utero brain and body with stress chemicals and at birth, stress on baby and mother makes attachment difficult or impossible. Traumatic dysregulation of cells harms development of the brain, nervous system, and body itself--from scratch.” [ACES Connection](#)



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# How Does Chronic Suicidal Ideation Develop?

It has to do with memory: in particular, **implicit memory**, which is the kind that encodes things that become second nature (the proverbial “riding a bike”).

Implicit memory is thought to begin during the 3rd trimester of pregnancy, and is the memory system where infants lay down their maps of their senses, motor control, and also, their understanding of their relational world.



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# How Does Chronic Suicidal Ideation Develop?

Implicit memory is acquired slowly, over many repetitions. It can't be "remembered" consciously. It becomes reality, our construction of the world. (Things like "My feet are at the end of my legs;" "Gravity always works" etc.)

Implicit memory is the most difficult to unlearn or change, and the last form of memory to be lost in dementia.



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# How Does Chronic Suicidal Ideation Develop?

The relational component of implicit memory that is encoded in infancy (0-8 months) provides a template for future relationships, structuring our feelings and actions in response to other people.

If early caregivers can't consistently respond to an infant's distress, two broad sets of facts will be stored.

- "Nobody cares/nobody responds"
- "I'm not important/I don't matter"

Rational thought can't alter these as they can't be recalled consciously.



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# How Does Chronic Suicidal Ideation Develop?

The early encoding of these “facts” lays the groundwork for later suicidal thoughts. How?

Normally, people deal with emotional pain in four basic ways:

- Stop what is causing it.
- Get others to help us stop what is causing it.
- If it can't be stopped, manage the emotion ourselves or with help.
- Wait it out.

In most adult situations, emotional pain can be satisfactorily diminished, escaped from, or will reduce with time.



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# How Does Chronic Suicidal Ideation Develop?

What about the person who from 0-8 months encoded “nobody cares” and “I am not important” as “facts”?

When they experience intense emotional pain as adults, their unconscious response will be according to that implicit memory of how they experienced pain as an unresponded-to infant:

- The pain is unbearable
- The pain is endless (infants have no conception of past or future)
- No one will help



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# How Does Chronic Suicidal Ideation Develop?

What possible solution is there to a pain which is unbearable, endless, and without recourse? The only escape is death.

“When others try to understand why the patient feels that suicide is the only way to relieve the pain, they fail, as it makes no sense to them. They know that as an adult, the patient can act to reduce pain, or use mental strategies to diminish or contextualize suffering, or know that time is likely to heal their hurt.”

*Chronic suicidal thoughts and implicit memory: Hypothesis and practical implications, Dr. Nicholas Bendit, M.D.*



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# Why Some Aspects of NotToday's Design May Seem Counterintuitive

“Anyone trying to help does not realize that the patient is in the grip of an implicit memory system that says that there is nothing they or anyone else can do. If the helper tries to argue that there are things that can be done, it will seem like they are not in touch with what the patient is facing, and that they do not understand the patient’s plight.

“Furthermore, if the helper tries to undermine suicidal plans, the patient is likely to feel that their one way of escaping unbearable and eternal pain is being stripped away. The patient then feels increasingly alienated, which reinforces the original implicit memory, that there is no one who can help. Suicidal urges are likely to be strengthened.” [Bendit](#)



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# Why Some Aspects of NotToday's Design May Seem Counterintuitive

This is why NotToday does *not* seek to stop people from having suicidal ideation or to introduce more positive thoughts.

Its purpose is to provide a tool to help the sufferer achieve one of the healthy responses to pain: “wait it out.”

“Maintaining suicide as an option becomes a kind of identity, a way of defining oneself outside the boundaries of the living world. Yet paradoxically, keeping the exit door open can allow people to bide their time and remain alive while awaiting a change of fortune.” [Half in Love with Death: Managing the Chronically Suicidal Patient, Dr. Joel Paris, M.D.](#)



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# Movement From Suicidal Ideation to Suicidal Crisis

Since we know that 29% of people with chronic suicidal ideation will go on to make a suicide attempt at some point in their lifespan, it is important to understand the process by which this happens so we can attempt to design features around it.



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# Movement from Suicidal Ideation to Suicidal Crisis

From the abstract of a paper by NotToday advisor Dr E David Klonsky and Alexis M. May of the University of British Columbia.

...an “ideation to action” framework should guide suicide theory, research, and prevention. From this perspective, (a) the development of suicide ideation and (b) the progression from ideation to suicide attempts are distinct processes with distinct explanations.

*The Three-Step Theory: A New Theory of Suicide Rooted in the “Ideation-to-Action” Framework*



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# The Three-Step Theory

## STEP ONE: DEVELOPMENT OF SUICIDAL IDEATION

Presence of extreme pain

Hopelessness that pain will improve

## STEP TWO: TRANSITION FROM MODERATE TO STRONG IDEATION

If “connectedness” (to people, goals, or values) is absent, or lower than the level of the pain, ideation will advance from moderate to strong.



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# The Three-Step Theory

## STEP THREE: PROGRESSION FROM STRONG IDEATION TO ATTEMPTS

Dependent on the individual's capability to make an attempt. Factors determining capability:

- Acquired: An individual's habituation to pain, fear, and death through exposure to life experiences such as physical abuse, nonsuicidal self-injury, the suicide of a family member or friend, combat training, or other exposure to painful or provocative events
- Dispositional: Genetic variables such as pain sensitivity, blood phobia, squeamishness
- Practical: knowledge and access to lethal means

*The Three-Step Theory: A New Theory of Suicide Rooted in the "Ideation-to-Action" Framework*



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