

# THE FUTURE OF HEALTH | NOW 2012

## Dr. Daniel Siegel Using MindSight to Reverse Brain Age

*The following is taken from **The Future of Health Now** interview conducted by Ann Wixon with Dr. Daniel Siegel, executive director of the Mindsight Institute.*

*We have compiled the best, most valuable and easily applicable content from this amazing interview so you can begin to implement positive changes today, as you strive to live a happier and healthier life now and in the future.*

### Who is Dr. Daniel Siegel?



I received my medical degree from Harvard University and completed my post-graduate medical education at UCLA with training in pediatrics and child, adolescent, and adult psychiatry. I served as a National Institute of Mental Health Research Fellow at UCLA, studying family interactions with an emphasis on how attachment experiences influence emotions, behavior, autobiographical memory, and narrative.

I am currently a clinical professor of psychiatry at the UCLA School of Medicine, on the faculty of the Center for Culture, Brain, and Development and the co-director of the Mindful Awareness Research Center. An award-winning educator, I'm a fellow of the American Psychiatric Association and recipient of several honorary fellowships.

I am also the Executive Director of the Mindsight Institute, an educational organization that offers online learning and in-person lectures that focus on how the development of mindsight by individuals, families, and communities can be enhanced by examining the interface of human relationships and basic biological processes.

My book, *Mindsight: The New Science of Personal Transformation* offers an in-depth exploration of the power of the mind to integrate the brain and promote wellbeing, and my new book on parenting, *The Whole-Brain Child: 12 Revolutionary Strategies to Nurture Your Child's Developing Mind*, was released on October 4, 2011.

I have been invited to lecture for the King of Thailand, Pope John Paul II, His Holiness the Dalai Lama, Google University, and TEDx.

## **What is Mindsight?**

- Mindsight is the way we see our minds and the minds of others.
- It's a process that allows you to look inside yourself to know your feelings and thoughts, as well as to gain the skills to understand, with empathy and compassion, what's going on inside of someone else.
- Mindsight is a term I made up a long time ago because some professors of mine didn't seem to have those skills, and they treated people like objects, so I thought of this word just to say, "Be careful."
- When people don't have mindsight, you have to be really aware of it so you don't get mistreated or use them as a bad role model.

## **Mindsight Affects Your Health**

- The way you develop the ability to focus your mind can change the way your brain is functioning and even change the physical structure of your brain.
- When you learn how to do this in a positive way, you can create more health in your nervous system, brain, and immune system.
- You can even affect parts of your genetic machinery, the parts of each cell that control the way the cell functions.
- Studies show that how you function in your mind, how you focus your mind and focus attention, can actually change the molecules that regulate the expression of genes, the way genes are activated.
- If you tend to think in negative ways and react a lot with a fight or flee response, you're creating stress in your system.
- The prolonged secretion of all sorts of substances including cortisol, the stress hormone, into your system can have negative effects on the way your bodily organs function, and in even the way your brain functions.
- There are very learnable skills to help you move from stress to calmness and from confusion to clarity.
- These are things you can use in daily life, practices that actually train you to have healthier relationships with other people and with yourself.
- Our brains continue to change throughout the lifespan.
- The key is to learn how to use the focus of your attention—this thing we're calling mindsight—to focus the mind on itself and to focus the mind on other people's minds so that you get a better relationship with yourself with other people.
- This ability to be kinder to yourself, more compassionate to yourself, more emphatic with other people changes the structure of the brain regardless of your earlier background.

- Therefore, as an adult, you can undo many of the challenges that a lot of people have had to face in their younger lives.
- It is a kind of food for the soul, for your mind, your psyche.

## Brain Myths

One myth is that your temperament is something that you have and can never ever be changed at all. There is a way of learning to sense your inner world that can allow your temperament to still exist. But instead of being a prison that you're trapped in, it becomes something that's more amusing. So while that temperament may persist, it doesn't have to manifest itself in your life exactly the same way.

The perfect example is shyness. About 10% of the population reacts intensely to new things by withdrawing. Whereas other kids either are kind of interested in new things, and other kids are really drawn to approach new things.

Jerry Kagan, a professor of psychology, showed that depending on how parents parent a child with shyness, they can go from being a shy young child to actually losing the external manifestations of their shyness when they get to be in late adolescence.

Another myth is that the brain stops growing after your adolescence or even after your childhood, and that's just not true. The brain not only continues to change its connections throughout the lifespan, there are certain areas in the brain where you have new brain cells that are actually growing.

The third myth is this whole mind and brain business. Some people think that the brain and its activity is the only source of the mind. That's not true. You can use the mind to change the function and structure of the brain.

The mind is dependent on the brain, but the mind also comes about through relationships. When you develop the ability to pay attention, you can change the structure of the brain by the focus of attention of the mind.

The brain is always evolving across the lifespan, and you can develop your mind to keep your brain younger. You can even change the very enzymes that support the chromosomes in your cells that keep your cells living longer called telomerase. We now have that study that's available that shows that if you develop the ability to have "mindful attention" through mindfulness meditation, you can actually support the enzyme that helps telomeres, the ends of chromosomes, maintain themselves.

## Understanding Emotions

- The limbic system in the brain developed about 200 million years ago.
- The limbic regions of the brain are involved in a number of different functions that we refer to as “emotional.”
- One of them is called “appraisal,” and appraisal means that this area of the brain is evaluating the significance of something going on either inside of us or outside of us. It orients your attention.
- The next layer of emotion is not only to orient attention, but to help you evaluate it as good or bad.
- Next, it elaborates on the goodness or badness as an appraisal and it gives you a feeling of context based on prior experience.
- It creates intentions, and then it drives behavior and reevaluates itself.
- The limbic area embeds traumas from our lives and we get an emotional reaction in this whole sequence that sometimes we have to heal.
- That can be from these higher cortical areas that actually send soothing inhibitory fibers down to the lower limbic areas to allow us to have emotional healing.

## Defining the Mind

- I think there's an agreement that the word “mind” refers to emotions. People would also include thoughts and attitudes, memories, beliefs, intentions.
- Also included under “mind” is awareness or consciousness, and these are things that are a way of knowing.
- The third aspect of mind includes something called “subjective experience.”
- We each have a unique inner quality, a texture to what we're experiencing in that moment that we would call “subjectivity.”
- About 97% of mental health professionals around the planet, including myself, have never had a single lecture that defined what the mind is.
- If you can't define the mind, you can't define a healthy mind.
- I use a definition of mind that I offered up to a group of 40 scientists that I'd gathered in 1992.
- What's the connection between the mind and the brain?
- The brain is a hundred billion neurons that interconnect with each other in a spider web like fashion inside the skull, connected to the whole body, connected to the immune system, the bloodstream, the endocrine system. It has the support of glial cells, which are in the trillions, and it has so many synaptic connections connecting the neurons that those are in the trillions and a number of firing patterns that are calculated to be 10 times 10 a million times.
- When it came to defining the mind, we had different definitions.
- A neuroscientist might say the mind is just the activity of the brain.

- An anthropologist would say the mind is something we study in culture and that we look for, as a process, that's in the way we communicate with each other and across the generations.
- Every different discipline of science had a different description.
- I came up with a definition everyone agreed on.
- The mind can be defined as an embodied and relational process that regulates the flow of energy and information.
- Embodied in the sense that it is connected to the brain and the entire body.
- It's a relational process, a sharing of energy and information.
- There's something called "an emergent process" that arises from the interaction of elements of a system.
- Complex systems have something called "self-organization." What self-organization does is it regulates.
- Energy and information flows when it's regulating.
- For physicists, energy is the capacity to do stuff.
- Energy is what a relationship and what the nervous system run on.
- When you look to understand your mind, you have to understand your nervous system and your whole body, and you have to understand your relationships.
- Everything that's regulatory has two aspects: monitor and modify.
- Using mindsight techniques, you learn to monitor and modify.
- This gives you choice and freedom.
- If people take the time and develop the skill, you have the freedom not to just repeat the past, but to awaken your mind so you have a choice and can make a change.

## Using Mindsight

- Need to stabilize a person's ability to perceive energy and information flow in the body and relationships with more stability so that they could see with more depth, clarity, and richness.
- A healthy mind is not only stabilized in monitoring, but it can modify energy and information flow towards integration.
- Integration is defined as the linkage of differentiated parts.
- A healthy relationship requires two people honor each other's differences. That's the differentiation part.
- But in addition to that, we want to cultivate compassion and connection. That's the linkage.
- When you're integrated, just like a choir, you're in harmony.
- When you're not integrated, you go to chaos or rigidity.
- If you turn to the diagnostic and statistical manual of mental disorders, you can open that book to any page and you'll find that any symptom of any syndrome is an example of chaos, rigidity, or both.
- When integration is present, you have harmonious functioning.

- When integration is absent, you have the chaos and rigidity that are described in all of these disorders.
- We teach people to stabilize how they see the mind and then allow them to move their energy and information flow, whether it's in their body or in their relationships, towards integration.
- What we found over and over again is that you can empower people to take a life that's full of stress and anxiety, full of fears, even depression, and allow them to become empowered to integrate their lives and literally change the course of how their development unfolds.
- The choosing is the point.
- The lower areas of the brain have, in many ways, an ancient history of either fight, flight, or freeze deep in the brainstem. That's about 300 million years old.
- As a cortical adult in the higher part of the brain, you can change that behavior.
- These lower, hundreds of millions-year-old circuits related to your own history as a child, they can take over often.
- I call that the "low road."
- When you are in a disintegrated state, your higher cortex is not communicating with the lower limbic area, the lower brainstem.
- The disintegrated state is sometimes unavoidable.
- The key is to make a repair.
- By repairing your own mind, you say, "Well, that was not right what I just did, I think I'll do it in a different way next time."
- All human beings are prone to becoming disintegrated.
- The key is to notice when you've done that, to really try to learn from it, make a repair, and then try to lessen how often they happen, how intensely they happen.

## Insights from the Dalai Lama

At a meeting about the scientific understanding of compassion, I was on a panel the first morning of the first day of a five-day event. We had about 150,000 people come to the whole event.

On this first morning of the first day, we were laying out the scientific groundwork for His Holiness the Dalai Lama to understand what we know, from a scientific point of view, about compassion.

Various branches of science point to a finding that there is circuitry in the brain, just behind the forehead, that's responsible for empathy and compassion. When we are threatened, those circuits can be shut off. Additionally, when we see someone who is not similar to us, those circuits are also more likely to be turned off.

The problem in our modern society is that we live in an incredibly interconnected world of people not similar to us, and yet we need to increase the amount of compassion we have toward

all sorts of people if we're going to survive. Since we all share the same planet earth, we need to find a way to collaborate to keep our home alive, to keep our species alive.

Hearing this, the Dalai Lama suggested that some kind of meditative practice could help you move from what he called “near compassion,” that is, loving your mom and loving your family and loving your friends, to what he called more “universal or extended compassion.”

That needs a special kind of training that doesn't come naturally from being raised in a loving home. So he suggested we come up with a scientific approach to making the world more compassionate because he and his colleagues in the religious world, in his view anyway, have not done a very good job of making it a more compassionate world.

A year and a half later, I was on another panel with him in Vancouver, I said, if you are willing to equate integration as health, then when health is impaired, you have chaos or rigidity, and when health is present, you get harmony. If integration is health, then integration would be what we move towards to create health.

At the same time, integration made visible is what compassion and love and kindness are all about. So, by promoting health as integration, you actually will get a more compassionate world.

Everything I've been doing since then has been trying to empower people to realize they can understand what the mind is and they can move their lives toward integration. By taking “time-in” practices, we not only develop more health through integration, we can develop a kinder and more compassionate world.

## **Taking “Time In”**

- It is essential to take “time in,” where you focus on the internal world, not just always being drawn to external things.
- When you do this, you can show that the brain actually responds by improving the immune system.
- It improves certain structures in the brain itself that help balance your emotions.
- It allows you to actually feel more equilibrium in life.
- When you take time in and you develop this practice of really calming the mind and stabilizing your internal world, all sorts of physiological benefits unfold and improve your health.
- In the end, kindness is the key.
- A lot of people beat up on themselves.
- That kind of harsh, inner critic, which is found in a lot of us, creates a lot of physiological stress. The good news is you don't have to stay with that.
- There is a way of actually learning with these mindfulness skills to see the inner nature of the mind and then restructure it.
- The mind is not fixed in the way it started out. You can change it as life goes by.

- A time-in practice literally trains your mind to monitor what's happening inside your body.
- You can feel when your hot buttons are getting pushed, when you're moving to the edge of getting disintegrated, when you're about to go down the low road.
- When you're down there, it's hard to use these skills, but they help you get back to the high road where you're more integrated, and you can go back and make a repair.
- Do time-in practices every day.
- When you develop more presence of moment-to-moment experience and don't get swept up by judgment, the immune system improves, your heart and cardiovascular system improve.
- The enzyme that keeps your telomeres healthy is enhanced.
- Empathy's improved.
- You have a left shift in your brain, which means you would approach rather than withdraw from challenging situations.
- You develop basically a kindness toward yourself and others.
- The mind is both embodied and it's relational.
- A time-in practice is how you can use the mind to keep your body and your relationships healthy.

## **Time-In Practices**

- Make sure you have a comfortable chair or if you prefer, sit on the floor, even resting flat with your back on the floor, that's fine.
- Even though you'll be sitting still, you want to be comfortable.
- If you're in a chair, sit with your back straight and uncross your legs and have both feet flat on the floor.
- Since this is a practice that will require you focusing attention, you're going to be the one to monitor the state of your alertness.
- If you find you're getting sleepy and you've had your eyes closed, you can do this with your eyes open.
- If you find that you're getting sleepy even with your eyes open, you can do this whole process standing up.
- I would not do this process when you're driving a car or riding a bicycle or something like that.
- With your eyes open, let your attention go to the middle of whatever room you're sitting in or space you're in now.
- Let your attention go to the far wall, distant from the middle.
- Now, let your attention come back to about the middle of the room.
- Now, bring your attention to about book-reading distance, as if you held a book in your hand.
- Notice how you can determine where your attention goes.

- For this breath practice, what I'd invite you to do now is let your attention find the sensation of the breath at the level of your nostrils.
- Just let the sensation of the air as it comes in and goes out of the nostrils feel awareness.
- [Pause]
- Notice that you can let your attention go to the level of the chest.
- As you just let the sensation of the chest as it rises and falls, feel awareness.
- [Pause]
- Now, notice too how you can let your attention move downward to the level of the abdomen.
- Notice as your belly moves out and in, it follows the air as it comes into the lung and then escapes the lung.
- Just let this outward and inward movement of the abdomen feel awareness.
- [Pause]
- Now, for this breath awareness practice, wherever you feel the breath most naturally, the very relaxing belly breathing, if it's the abdomen moving in and out or sensing the chest rising and falling, or sensing the breath at the level of the nostrils, or even the whole body breathing, just let that be the focus of attention.
- The mind is like the ocean where deep beneath the surface of the ocean, it's calm and it's clear.
- Just going beneath the surface allows you to notice, whatever conditions are at the surface, whether they're flat or choppy waves or even a full storm, deep beneath the surface, it remains calm and clear.
- Just sensing the breath brings you beneath the surface of the mind, where from this deep place beneath the surface, it's possible to just notice whatever conditions are at the surface, whatever brainwaves that are your feelings or thoughts, your memories or images, your hopes, your dreams.
- From deep beneath the surface of the mind, it's possible to just notice, whatever is going on at the surface, from a place of tranquility, stability, and clarity.
- For this breath awareness practice, here are the basic instructions.
- Focus attention on the sensation of the breath.
- As time goes by, you may notice that you've become distracted. The attention is no longer on the breath, but rather is on a thought, or a memory, or a feeling.
- When this happens, lovingly and gently take note that the distraction is taking you away and refocus attention on the breath.
- In breath, out breath; in breath, out breath.
- Another distraction may come, and when you notice that distraction, just lovingly and gently let the distraction go and refocus your attention on the breath.
- Just like exercising a muscle, we tighten the muscle as we focus on the breath, we relax the muscle as the distraction happens on its own.
- Your refocused attention is the tightening of the muscle. It's building the muscle of the mind.
- Near the end of the practice, take a deep and intentional breath.
- As we get ready to let this breath awareness practice come to a close, know that you can always come back and do this on a regular basis.

- You can find the strength and clarity as it builds and builds with this time-in practice.
- When you're ready, you can let your eyes go open if they're closed, and we'll bring this breath awareness practice to an end.

## **Final Thoughts**

- This is a way we can empower ourselves to create more compassion and more kindness inside and out.
- Together, we can make a huge change for now and for the generations to come.

## **Resources**

- Dr. Daniel Amen interview
- Anat Baniel interview
- Dr. Cynthia Green interview
- Dr. Niel Fiore interview

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