

Chasing Life

NOV 8, 2022

What Promise Do Psychedelics Hold As Therapeutics?



Speakers

Nick, Janet, Dr. Sanjay Gupta, Dr. Meera Garcia, , MUSIC, TEASER

00:00:03

Nick So at the very beginning, it's almost any time that you have a procedure and they have to put you under anesthesia. So sort of that that drifting away feeling. And then for me, it was seeing not color. I saw a lot of the grays and blacks and whites, but it was almost like it was a paint can or if you had a few colors that swirled in together.

00:00:37

Janet I felt like I no longer had a body. Now I was kind of like weird parts, like I couldn't feel my teeth properly. And then I just felt like I was floating above everything. I still had thoughts and I could kind of guide it a little bit, but I didn't feel like I was connected to anything. I just felt like I was an observer in in life.

00:01:01

Dr. Sanjay Gupta Nick and Janet recently attended a ketamine assisted psychotherapy retreat, and they are describing their experiences.

00:01:09

Janet I felt like I was part of the ocean or sand. I could see where my essence was because that was slightly different color. However, I just was flowing with the tide, like I was just part of it, and that felt very relaxing and peaceful.

00:01:31

Nick You're seeing a lot of this fluid motion around me. That was more of a sense of, starting to think about where do I fit in the universe? So it started to get me contemplating some of them from a sensory standpoint. So it's almost like I'm this piece of matter and I fit in to this ever evolving, fluid world or universe.

00:01:56

Dr. Sanjay Gupta They are part of a growing number of people who are taking so-called psychedelics. You know them as ketamine, psilocybin, LSD, MDMA. The goal is to treat a wide range of mental health conditions, including depression, anxiety, addiction and PTSD. Now, most of the compounds are still tightly regulated by the USDEA, so the legal use of them is limited to research studies usually done at academic or medical centers. The anesthetic ketamine, though, at the moment is the only exception.

00:02:30

Dr. Meera Garcia Ketamine is a FDA approved medication. It has a wide range of uses at sub-anesthetic doses. It is really a great adjunct to psychotherapy, as well as modalities in which people can work through their traumas.

00:02:51

Dr. Sanjay Gupta That's Dr. Meera Garcia. She runs the Ketamine Assisted Therapy retreat that Nick and Janet attended.

00:02:58

Dr. Meera Garcia

You know, when you really think about ketamine and you think about other medicines in this space, is this a way we can use the experience that you have to be insightful and to really kind of see if you can reframe the events of our life in such a way that we can accept them, process them, and work past them.

00:03:19

Dr. Sanjay Gupta

After more than half a century of, quote, prohibition, research on psychedelics is making a big comeback, especially as treatment for a growing number of mental health issues. They've been described as opening the mind, dissolving the self, connecting people to something bigger, something universal, or a deeper truth. All of which might help those who are struggling to tackle their demons and begin to heal. So this episode, we're going to explore how distorting our senses with psychedelics might actually work both in the brain and in the mind to alleviate mental suffering. I'm Dr. Sanjay Gupta, CNN's chief medical correspondent. Fasten your seatbelt. It's time to start chasing life.

00:04:11

Dr. Sanjay Gupta

If you've been paying attention, then, you know, in the past few years, there seems to have been this explosion of interest in the world of psychedelics. And this is something that researchers have noted.

00:04:22

I would just say that really the public perception and the work that we're doing has shifted pretty profoundly over the last decade or so. When I started the work here at Hopkins in 2012, people were a little bit skeptical and maybe thought this was a little bit out there in terms of what we were studying. And all of a sudden in the last few years, this has become very much of a hot topic.

00:04:47

Dr. Sanjay Gupta

That's Albert Garcia Romero. He's a researcher at Johns Hopkins who is studying the potential of psilocybin, commonly known as magic mushrooms. He's studying this as a therapeutic to treat conditions such as depression and addiction.

00:05:01

Dr. Sanjay Gupta

What is the meaning of the word psychedelic? How do you describe or define that?

00:05:07

Yeah, so that's actually a neologism. It was a word that was coined in 1957 by Dr. Humphry Osmond, who is a British psychiatrist who ended up over here in North America, who was doing research with psychedelics and other drugs in the 1950s. You know, at the time, the common term was psychotomimetic. And so the way that these drugs are classified was that they were "mimicking a psychosis." And that was kind of how they were thought of. But Osmond was self-experimenting, taking these drugs himself, also giving them to patients, including some of the early work, treating people with alcoholism, using psychedelic treatments. And what he saw, both from his own experiences and experiences of other people who had these psychedelic drugs, was that their experiences were not always like psychosis, and oftentimes they were very profound, meaningful and even spiritual types of experiences that could happen that could have some benefit. And so that intrigued him and kind of got him into this little rap battle, if you will, in the 1950s with the contemporary author of the time, Aldous Huxley. And they were trying to come up with a better name for these drugs. And Osmond said, you know, he wrote this little rhyme to fathom how they're so angelic. Take a pinch of psychedelic. And so psychedelic was really coming from these two Greek words where the roots psyche, which, you know, is very common mind, soul in the Greek, you know, as a reader psychology. And then there's also the Delos part, which is really sort of uncover or to manifest what's already there.

00:06:50

Dr. Sanjay Gupta

I got to say, I had not heard that story, especially the poem and how that Neo-, neologisms sort of came about. That's that's really interesting. Mind manifesting sort of term in some ways is what the psychedelic means. What what qualifies then as a psychedelic?

00:07:09

Well, you know, there's a lot of back and forth in the field. From a pharmacological standpoint, psychedelics and what Osmond was talking about, where these specific types of drugs, the way that they work, is that they are agonists at the serotonin to a receptor. There's 14 different types of serotonin receptors in the mammalian brain. Serotonin two is a specific type. And we know that when a drug activates that, often it has these sort of mind altering properties that are psychedelic like. And then when we block that receptor, then people don't have those types of experiences with these drugs. So it's a mechanistic type of question, you know, that these psychedelic drugs are these specific serotonin to a agonists drugs, and they include things like LSD, psilocybin, mescaline, which is found in different cacti as well as DMT or dimethyl trip to me, which is found in ayahuasca. And so those are all what we call the classic psychedelics, I suppose, at this point. But more broadly speaking, you know, there's a lot of hallucinogenic types of drugs that create experiences that are psychedelic like and that are often sort of lumped in with the psychedelics, including cannabis, ecstasy or MDMA, ketamine. And each of those works a little bit differently in terms of mechanisms, and their effects are a little different as well. But they can have these types of psychedelic or, you know, mind manifesting experiences come about after people ingest them. So, you know, by that reasoning, I understand why people would consider them psychedelics in a loose way.

00:08:42

Dr. Sanjay Gupta

How how does a psychedelic impacts one's perception of the world and their senses?

00:08:50

Yeah, that's one of the big places that you see profound alterations in consciousness is that our perceptions and when you think of the psychedelic artwork in that time, you know, things like songs like Revolution Number Nine by the Beatles.

00:09:05

MUSIC

Number nine. (DISTORTED SOUNDS)

00:09:10

Which are sort of warped, an unusual sounding on purpose to sort of mimic some of these psychedelic effects or even the sort of paisley tie dye types of motifs that you see very commonly in that type of artwork from that era. It's really sort of trying to capture this property of shifting our perceptions so that what normally looks like is sitting still. Now, all of a sudden, it looks like it's moving. Something like a carpet or a leaf on a tree might look like it's breathing or moving around in a way that it's not actually the case when we're looking at it under the influence of a psychedelic. And then what we're hearing, too, you know, can be kind of stretched or truncated in time because it's also altering our time perception. And on top of all of these things, for some people, there's what we call synesthesia, which is then a melding or mixing of the different sensory modalities. So colors can taste like a certain way in your mind. You know, there's almost a sort of cross-talk between the different sensory parts of our brain. And so that's part of the psychedelic experience. Are these perceptual changes.

00:10:27

MUSIC

What is the status of research? Do we know what's happening in the brain? Are we able to image the brain or see inside the brain in a way that we couldn't before? And and what does that tell us?

00:10:37

Oh, yeah. There's been an explosion of really interesting research looking specifically because, you know, in the sixties and seventies when we did this, this type of research, when people were doing this with psychedelics, we didn't have that type of brain imaging tool box that we have now. For instance, work that my colleague here at Hopkins, Dr. Fred Barrett, has published, is that if you take a person, you give them one high dose of psilocybin and you scan their brain before that happens, and then you scan them a week later and their brain is acting different than before they got the drug. You come back a month later and you scan them again. Their brain is still acting differently and key regions like the anterior cingulate cortex, which is part of the default mode network, the amygdala, which is important for emotional processing. And those changes are also correlated with things like greater positive mood or lower negative mood that persist after the drug. Whatever the drug is doing, when people are under the influence, it continues to have a sort of reverberating signature that is also related to the types of therapeutic effects we're seeing, like reductions in depression.

00:11:44

MUSIC

We hear about psilocybin being used for depression and what is known as refractory depression, meaning people who have not responded to other medications. Ketamine, to me, has been described as something that can also have significant antidepressant effects and even was described to me and I'm curious your thoughts on this, but describe to me as a suicide rescue drug for someone who may be acutely suicidal. So even though they have these different mechanisms, the outcome in terms of what they may do for somebody at least with ketamine and psilocybin, for example, can be very similar, it sounds like.

00:12:22

Yes, absolutely. Ketamine has been shown to have rapid antidepressant effects, meaning that if you give a person ketamine who's got a severe depression or even a suicidality at the moment, you can see a change in that for the better and under 24 hours from Drug Administration. And it seems that that's also the case with psilocybin. At least we know that it has a rapid acting antidepressant effects. It hasn't been well-studied yet for suicidality, but that is under investigation soon to be. And so in terms of the therapeutic profile, it seems like they could work in similar ways. Ketamine has also been shown with supportive therapy to be very successful as a treatment for different types of addictions, including alcohol and cocaine dependence. We also know that both of those drugs, even though that they work differently on the surface level, do you have some overlap in terms of creating this sort of these neoplastic changes in the brain, specifically these growth of new connections in key areas like the prefrontal cortex? And when you see psilocybin or ketamine doing that, that starts to give us an idea of how do these drugs create persisting benefit even after the drug is long gone from the body?

00:13:38

Dr. Sanjay Gupta

Yeah, that's the part that sort of, was always very interesting to me when I read some of the initial trial results. People would have long lasting impact of taking, for example, psilocybin. They may have months of antidepressant benefit in those trials.

00:13:55

Yeah. And that's something that we found using psilocybin for treating depression and for treating addictions. People have these long lasting benefits that last months or up to a year or more, even after one or two doses of the drug. And that also seems to be a key difference between ketamine and psilocybin in that for some reason, the ketamine effects only seem to last so long. And usually antidepressant effects of ketamine are anywhere between seven and 14 days. And then people have to come back to get more with the psilocybin. There is a substantial proportion of people who continue to have antidepressant effects that go on. And why that is is still a bit of a mystery. But it is very interesting.

00:14:37

Dr. Sanjay Gupta

You know, I don't want to over or understate that point that you're making. I mean, that that that's what I think one of the things that really jumped out at me when I first started reading some of these trial results, keeping in mind that, you know, people who take antidepressants often do take them daily and there can be significant side effects. And the idea of taking something that you only need to take sporadically, you know, months as opposed to days in between doses. I know you said we don't know why the effects persist as long as they do with something like psilocybin. Do you have any guesses? I mean, I don't typically ask for guesses, but I'm just so curious as to why that would be. It seems to, to run counter to how we think about taking a substance and having, again, the body no longer produce that substance, you know? What do you think's going on here?

00:15:37

Yeah, there's two sides of the coin here. One is the biological mechanism is and what seems to be happening on the one hand is that there is a potential neuroplasticity effects of these drugs. But as a psychologist and someone who is very interested in altered states of consciousness and spirituality, the other side of this coin is the psychological side. And so when somebody has a very profoundly meaningful experience that can lead to big changes in their behavior, giving up, drinking, you know, changing something that they've been doing that may have been dysfunctional for many years. And so the way that I've seen it is that the type of experience that people can have under the influence of high dose psychedelics can be almost like a trauma in reverse. And so somebody has a big experience and afterwards they're continuing to have psychological benefits. They're continuing to see the world as interconnected sort of unitive field that they're a part of.

Dr. Sanjay Gupta 00:16:38 Janet and Nick, who you heard from earlier, had similar experiences.

00:16:42

Janet Everybody knows that they're you know, that they're not alone. But this deeper understanding or connection with a greater universe. You know, this medicine helps you realize that, there is, you are part of something, even if you can't see it right now.

00:17:06

Nick You know, it was a very, very much a sense of calmness and more mellow. I do think back to sort of the questions that I was thinking about during the journey, you know, what is my what is my place in the world?

00:17:27

Dr. Sanjay Gupta When we come back, more of my conversation with Albert on what is being called a psychedelic renaissance.

00:17:34

People are feeling like they're a little bit over some of the overmedication that's been happening and wanting to explore alternative methods. And so I think this represents that.

00:17:45

Dr. Sanjay Gupta But first, I'd love to get your help with something. We have an upcoming episode about smell and relationships. Do you find the people who you've been attracted to have also smelled particularly good, maybe even at unusual times, such as when they come home from the gym? Well, you might not be alone here. Record a voice memo, email it to ask Sanjay at CNN e-com or give us a call at 4703960832 and leave a message. You might hear it on an upcoming episode of the podcast.

00:18:25

Dr. Sanjay Gupta And now back to Chasing Life and my conversation with Albert Garcia-Romeu.

00:18:32

Dr. Sanjay Gupta You know, I've done a lot of reporting around cannabis. And one of the things that struck me was kind of this this sense that what is old is new again. I mean, at one point, cannabis used to be on the formulary as a as a medication that that that could be prescribed. And it was prescribed for all sorts of different things. So when we talk about cannabis, a lot of times people will say, well, this is these are new indications or, you know, new purposes as a medication. But that's actually not the case. It, there was a period of time, decades, where it went from being on the formulary, prescribed, to being heavily stigmatized and regulated. And now it's sort of emerging again. Is that a similar story with psychedelics?

00:19:20

Yeah. And actually, when I talk about this, I often use cannabis as a sort of entry point because I think people have a very good understanding of the sort of war on drugs and the stigma that surrounded cannabis for many years. You know, especially during my upbringing, you know, in the 1980s and 1990s, and then all of a sudden your grandmother's taking, you know, edibles or you're giving your dog CBD gummies that you can buy at the gas station or something. So there's been a really rapid change. And actually I think your work has been a big part of that, you know, in terms of shifting that public perception. So you see the same thing kind of happening with psychedelics now as well.

00:20:04

Dr. Sanjay Gupta What promise do psychedelics hold as medications and and as part of that? I think, you know, we always think about the risk reward proposition here. What do you think?

00:20:17

I think they have some really substantial potential for treating things like anxiety, depression, addictions. And we have a growing corpus of literature that kind of points to that therapeutic benefit with relatively low risk. Now that means, you know, we have to do that in a certain sort of controlled setting within a sort of therapeutic container. There's a lot of careful screening involved to make sure that we're not giving this to people who might have a condition that could be exacerbated by, you know, high dose psychedelics. But I think for a lot of people, this could be really helpful in a sort of medical or therapeutic setting.

00:20:56

Dr. Sanjay Gupta I want you to continue your thought, but who shouldn't get it, though? You said there are certain people who should not be taking these.

00:21:03

The people that we would often screen out of these types of research studies for now anyways, have been people who have a personal or family history of psychotic illness or psychotic symptoms, and that could include things like having some of those delusional or disorganized thinking patterns. You know, people who are already maybe hardcore conspiracy theorists, for instance, or prone to seeing those types of connections or having unusual beliefs, or the other group of people that we try to tread carefully with is people who have bipolar mood, and specifically people, you know, who have had symptoms of manic episodes or mania in general. Because the idea is potentially when you give them a high dose psychedelic, you could set off a mania and then that could be difficult to manage and can be unsafe.

00:21:53

Dr. Sanjay Gupta

I think it's just, as as I was with cannabis, the thing that always struck me about cannabis is that you can't really overdose on cannabis, you know, I mean, I was talking about this at the same time. We were talking about a very significant opioid overdose issue in the country. And it always struck me that you got these two plants, you know, one one is the cannabis plant, one is the poppy plant. And one has become this this widely prescribed either through synthetic or plant based drug, the opioids. And the other is cannabis. One can kill you and does, you know, and the other one does not. I mean, you could have dysphoric experiences, but the idea of the overall safety of it, I think, was just it was important to point out when talking about that. How do you how do you describe that part of it? Let's say with psilocybin specifically, can you have a really bad outcome?

00:22:49

You can have a bad experience. Like you said, a dysphoric experience is very emotionally challenging, very frightening, anxiety provoking. But can you overdose on psilocybin, mushrooms the way that you could with, you know, taking too much opioids or too much benzodiazepines that your doctor could prescribe or even drinking too much alcohol, which you could go buy at the corner store, which could also cause you to overdose and die. No, I can't really think of many deaths in the literature there attributed to psilocybin that are not related to accidents where someone may have gotten disoriented, walked into traffic or something like that. And it's because the classic psychedelics, by and large, do not produce the sort of physiological toxicity that you get from drugs like opioids, benzodiazepines, cocaine, alcohol, you name it.

00:23:39

Dr. Sanjay Gupta

Albert, why do you think everyone's talking about this now? Why the sort of call it renewed interest? Because, again, this isn't the first time indigenous populations have been using this for ages. They've been prescribed for things like alcoholism in the past. Why the renewed interest over these last few years?

00:23:58

You know, I really like this quote from Max Planck, who's a quantum physicist, you know, and he was part of this revolution from sort of classic physics, Newtonian physics to quantum physics that happened in the beginning of the 20th century. And, you know, he said "science advances funeral by funeral." And what he meant by that is that the way that people were thinking last generation will eventually die out as those people are no longer in positions of great authority. And also, I think that what's been happening is that there's been a lot more exposure to things like psychiatric medications in generations these days than there were in generations beforehand. And so there are a lot of people who have been exposed to SSRI or other types of medications who don't love the side effects. People are feeling like they're a little bit over some of the overmedication that's been happening and wanting to explore alternative methods. And so I think this represents that.

00:24:58

Dr. Sanjay Gupta

When we started talking to some of our listeners about this topic, one of the things that came up or was this perception that this is these are expensive, this is something that is available for for people who are wealthier. I'm curious, when you do this research, how do you how do you stay cognizant of any socioeconomic or racial disparities when it comes to this sort of research?

00:25:27

Yeah, that's been a huge problem here. So there's a big disparity. Most of the studies that have been published have been 80% or more Caucasian. They generally tend to be more well-educated. They generally tend to have more associate, you know, higher socioeconomic status, including, you know, having just more discretionary income. And so those factors really do call into question the generalizability of our findings. But just in general, I think there is a perception around psychedelics as being white people drugs. You know, once this becomes an approved treatment, should that happen, then this is pretty resource intensive. We're talking about hours of therapy that takes a course over several months, you know, having the full day to be doing at one dosing session or maybe more of those. And that can be hard to come by for people who don't necessarily have the financial freedom to take the day off of work or to pay for multiple hours of therapy. If insurance covers this, that's going to be a big issue because that's going to lead, make or break, you know, accessibility of this.

00:26:35

Dr. Sanjay Gupta

So when you put it all together, Albert, hype versus harm, harm versus hope, all of that. What do you think is the future of psychedelic life saving? An easy question for last hour. I'd look into your crystal ball. What if we talk in a few years? What do you think the conversation will be like?

00:26:58

You know, what I hope to see is a couple of things, you know, on the medical front. I hope to see enough evidence gathered and enough high quality studies conducted to show that, yes, they're safe, yes, they're effective if that's the case. And then leading to, you know, rescheduling, which would allow for people to access these as treatments and hopefully something that people can actually afford and get access to in a not very restrictive manner. So, yeah, I think that, you know, medical approval will be, I think, really crucial. And I think it's kind of one of the main end points. A lot of the research that we're doing, hopefully that would also open the door to making it easier to do more research and understand these drugs better and create new and better treatments.

00:27:49

Dr. Sanjay Gupta

This is a provocative topic for a lot of people. I've been talking to my family members, even telling them that I was going to be speaking to you about this. And everyone has thoughts and opinions on this, you know, for sure. So but I putting on my neuroscience hat humbly for a second, I have always been struck by what I think is just an obvious hypocrisy with regard to some of these substances. Alcohol in many ways is kind of a sledgehammer to the brain compared to compared to cannabis. I mean, it what it does to the brain, both short term and long term compared to cannabis. I mean, it's really striking opioids, as you mentioned, the poppy plant has led to, you know, I mean, who knows how many people have died as a result of this? I'm glad there are people like you doing the research, because I think you would agree that ultimately the evidence is important. It's important for people to have if we want to treat these substances like potential therapeutics, they have to be given the respect of a potential therapeutic. And, you know, having the evidence, having the data, I think is really important, so. Albert, thank you. I was really looking forward to this and it did not disappoint, so I appreciate it. You taught me a lot.

00:29:06

Oh, this is great. I really enjoyed chatting with you. I guess I really appreciate your work. Just published a big paper on cannabis patients and how they're getting benefits from their own use of medical cannabis. And many of them cited your your work specifically in opening them to the possibility of that. You know what? Hey, maybe this isn't something that's so dangerous. I think by bringing public awareness to this and especially doing it in a balanced way, it's really helpful to educate the public.

00:29:35

Dr. Sanjay Gupta

You know, what Albert was saying there at the end of our interview. Really did mean a lot to me. It was humbling, in fact. But I got to tell you, the reporting on cannabis was also something of a personal journey that I think I had to go on for myself. I needed to be convinced. I was worried that too much of the conversation around cannabis was getting misinterpreted. And honestly, I felt the same way approaching the topic. People were often using the discussions as ladders to advance their own agendas. But I have the benefit of having this, this podcast, where I get to talk to you, the listener. Where we get to bring in people who are doing the research, where we get to collect real knowledge around these substances, where we get to lean into the nuance and we try to be honest and transparent about hype versus hope, about harm versus help. I'm going to be keeping a close eye on these studies because the promise they hold to potentially help so many people in their struggles with these mental health conditions. To me, that's very powerful, especially during these times when so many people are struggling.

00:30:44

Dr. Sanjay Gupta

And we're going to be back next Tuesday with an episode about neurogastronomy.

00:30:50

TEASER

We're saying, instead of trying to change your flavor perception, we have to find a way to have our cake and eat it, too. Pun intended.

00:31:00

Dr. Sanjay Gupta

You're going to want to sink your teeth into this one. Thanks for listening.

00:31:10

Dr. Sanjay Gupta

Chasing Life is a production of CNN audio. Our podcast is produced by Emily Liu. Grace Walker. Xavier Lopez, Eryn Mathewson and Andrea Kane. Our intern is Amber Alesawy. Haley Thomas is our senior producer and Abbie Fentress Swanson is our executive producer. Tommy Bazarian is our engineer. And a special thanks to Ben Tinker, Amanda Sealey and Nadia Kunnang of CNN Health.