

Nate Hegyi: There are routine doctor's appointments. Sure, those can be a *little* unpleasant.

But then there are things like MRIs and electrocardiograms. Fertility appointments. Visits where everything feels a little alien.

This was one of those appointments.

Kathy Kral: We were told to bring pictures or anything to have something in the room with us. So I brought pictures of my family and friends and so forth.

Nate Hegyi: That's Kathy Kral. A few years ago, she went to a special clinic just outside Washington D.C.

The room itself wasn't strange. No beeping machines, or medical posters on the wall. Just an average looking bed and a chair. It was comfortable. And then...

Kathy Kral: And then. Dr. Agarwal came in.

[MUX?]

He had ice cold water in a cup. And, um, the pills, in a nice container.

Nate Hegyi: Kathy took the pills with a gulp of water.

She laid down on the bed...

Kathy Kral: and I put on the headphones and the eyeshades. And...uh

And that's... when the appointment... really started.

Kathy Kral: waves. Tremendous waves, [underwater sounds] scary waves. And if you get in them, they'll they'll just throw you out of the water. They could break your neck or anything.

[waves ambi]

I decided to go into them. So I went into the waves...

[waves ambi]

But...but I was able to just float in them.

I didn't have to be afraid of them. And maybe they were the cancer.

[waves ambi]

The waves were probably the cancer. Okay, it's there. Alright.

[THEME MUX SWELL]

Psilocybin says it's okay. You don't have to worry.

[THEME MUX POST w WAVES AMBI]

<<NUTGRAF>>

Nate Hegyi: You're listening to Outside/In, I'm Nate Hegyi.

A few years ago, Kathy Kral was diagnosed with cancer. She was devastated, and afraid.

Then, someone suggested trying psilocybin, the psychedelic compound found in magic mushrooms. How did it go? To find out, producer Felix Poon visited Kathy, and the clinic that's studying whether psychedelics can help patients deal with cancer... and... life's greatest uncertainty.

Death.

[mux fade]

<<1ST HALF>>

[ding dong]

Kathy Kral: Welcome Felix! Come on in.

Felix Poon: Hi Kathleen! Thank you. I see the sign here, that's very thoughtful. The sign on your door says "welcome Felix."

Kathy Kral: Yeah! Looking forward to you.

Felix Poon: Kathy Kral is in her 80s. She lives in a suburban raised ranch home, her walls are decorated with paintings from around the world.

As we were setting up, I asked her the classic podcast sound-check question.

Felix Poon: I'll ask you a throw away question what did you have for breakfast this morning?

Kathy Kral: I had cheerios, and cherries. Ch- and ch-...what did you have for breakfast?

Felix Poon: I had cereal as well...

Kathy Kral: Ah

Felix Poon: Kathy had a habit of asking my questions back at me. It made me feel more at ease, and I felt a lot of warmth and positivity from her.

[MUX IN]

Which is why it was surprising to hear her tell me that she's been *negative* her whole life.

Kathy Kral: I see the bad things that happen. I see wars constantly, poverty, spiders, poison ivy. I see a kind of evil out there.

Kathy has always felt meek on the inside. Almost submissive even.

Kathy Kral: The world has a lot of people that know everything more than I do. And many of them are scary people. They will put me down. So I better be. I better be just quiet and and not make ripples anywhere

Part of this had to do with going to catholic schools.

But, Christian spirituality is a big part of who Kathy is. In her backyard she has this big garden, it's kind of more like a small private park.

Felix Poon: Do you come out here every morning.

Kathy Kral: Yes. I walk around, I pull out weeds and stuff like that.

and in the middle of it is a small statue of Mary, mother of Jesus. The statue is on a tree stump, and all around it are mushrooms. Not the psychedelic kind, just wild mushrooms, a kind of crust fungus, growing in a ring around Mary.

Kathy's lived all over the world – taught English in Turkey, got married in Thailand. Today she's retired, and living in Maryland.

But in 2019, Kathy suddenly started feeling really tired. She went to see a rheumatologist and got a bunch of tests done.

Kathy Kral: MRI, CT scan, X-rays, blood tests, everything.

She said, you are okay. There's just one small, little tiny, uh, enlarged lymph node in your groin. You could see a doctor or a gynecologist or, you know, someone like that if you want to.

It sounded like it wasn't a big deal. So...she put it off for a few months. But eventually she did see a surgeon, and the surgeon did a biopsy of her lymph node.

Kathy Kral: And I came back in a week and he said, Hmm, that is lymphoma.

And I said, Oh, lymphoma is cancer.

And in my mind, cancer meant death, suffering, terrible stuff.

Kathy had seen it personally – her Mom died of breast cancer decades ago.

And he said, don't worry, it's treatable. What does treatable mean? Does that mean curable? It doesn't, it means something else.

Kathy Kral: So, I was scared because I thought of the pain that would come with it. You know, My mother was in extreme pain.

She was an extremely outgoing, active person. And she could not walk. And you know, she just disintegrated. And I thought, well, that's probably what's going to happen to me.

[MUX]

Manish Agrawal: No one talked to us about what it feels like for a patient to be dying or for them to cry in front of you, or how do you handle that? That was just like you'd go in and tell the patient and then you'd walk out of the room or you'd try to comfort them for a little while. But there wasn't like a really way to process that.

This is Manish Agrawal. For almost twenty years, Manish worked at an oncology center in Maryland, treating people with cancer.

It's a tough job, and not just because of the hours. Cancer – like any serious illness – can leave patients feeling devastated, and depressed.

And there isn't much an oncologist can do about that.

to see the suffering of another and not be able to do anything. it eats away at you.

It wasn't until later in his career that Manish actually heard someone put this condition into words. It was such a revelation, it actually changed the trajectory of his life.

Manish Agrawal: I just couldn't believe that something actually existed that actually named it. It said, you know, death anxiety.

[MUX]

And I was like, oh, my gosh, somebody is actually calling it that. Like as an oncologist, you swam in it, but nobody ever talked about it. There was never a meeting, there was no abstract and people did not talk about this.

[MUX SWELLS AND FADES]

Kathy went through the motions to treat her cancer. First surgery.

But they found that the lymphoma had actually spread to her chest.

Which meant a round of chemo.

And then more chemo.

Kathy faced the possibility that she might die.

Kathy Kral: It was up and down. Up and down. Yeah. And, well, I got depressed.

[MUX]

Felix Poon: Meanwhile, Kathy started therapy sessions with a psychologist to do something about her growing depression. And eventually her psychologist mentioned something about a clinical study.

Kathy Kral: it's a study where we give you a pill and then you might see bright lights and things like that.

Oh, this sounds like LSD. And I come from the 1960s, and LSD is something very bad. I can't. I can't understand what you're saying.

And. And he told me it was um...it was psilocybin.

Felix Poon: Psilocybin is the mind-altering compound that's in psilocybe – a genus of fungi also known as “magic mushrooms”.

Scientists have speculated that these mushrooms evolved the chemical in order to fight off hungry insects...

but they wound up attracting humans in the process.

And they've been used for thousands of years. Aztec shamans used them in healing and divination rituals. They call them the “flesh of the gods” or “god’s mushroom.”

So, According to research on lab mice, these drugs mess with the part of the brain that processes what you see – the firing of neurons gets weak and their timing goes a little haywire - and so other parts of your brain start filling in the gaps.

It also relaxes the part of the brain that organizes and directs traffic. So all of a sudden, different parts of your brain that usually don't talk to each other? Start talking to each other. It becomes kind of a free for all.

Manish Agrawal: neurologically, you've laid down these tracks of the way you just go down the ski slope every time.

And psilocybin allows you to, like, zoom out in a way, put fresh powder down over that snow and give you the opportunity to maybe lay down a new track.

The clinical study that Kathy's therapist told her about was being run by Dr. Manish Agrawal,

After he found out about psilocybin, Manish quit his job and co-founded Sunstone Therapies so he could use psychedelics to treat the emotional suffering his cancer patients were swimming in all those years.

The way he sees it - psilocybin makes the unconscious, conscious. Hallucinations aren't treated as random images and sounds. Instead they're old emotional traumas, bubbling to the surface.

Manish Agrawal: and it helps you become aware of those underlying mechanisms that makes you you and bringing awareness to them. They can dissolve and then you can be sort of who you are underneath all of that.

Felix Poon: These trips are meant to be an inward experience.

But patients aren't alone. For the entire trip, which lasts about 8 hours, they have a therapist sitting there to help them get through it.

Norma Stevens: the two biggest fears in doing this. People fear that they're going to go crazy or they fear they're going to die.

Felix Poon: This is Norma Stevens, Kathy's therapist at Sunstone.

And what we will tell them is if you feel like you're going to go crazy, go ahead and go crazy. If you feel like you're going to die, go ahead and die because it'll bring you to the next phase. You're not going to die physically. The medicine is safe. You are safe.

If you feel like you're going to die... go ahead and die.

That does NOT sound like a therapy session.... What It sounds like is a bad trip.

[mux]

Now, There's a stigma around psychedelics. In some cases, taking them can trigger what's called HPPD - Hallucinogen-persisting-perception-disorder:

Flashback hallucinations that can last for months, or even years after their trip has ended.

Then there are other horror stories - folks who lose touch with reality and jump off a building or walk in front of a bus.

[beat]

That stuff *has* happened.

But a lot of doctors today argue the stigma around psychedelics is overblown.

An annual survey of global drug use consistently finds mushrooms lead to some of the lowest rates of hospital visits compared to other drugs.

You're way more likely to hurt someone - or yourself - drinking booze than you are taking magic mushrooms.

Studies have also found [that psychedelics are not addictive in lab animals](#) – there were no withdrawal symptoms, and no signs of dependency (see [also](#)).

Norma Stevens: It's sort of like the Internet, anything powerful Internet, power, money, sex. It's like you can use it for good and it can be incredibly transformative or it can cause great harm.

[Mux swell and then fade]

Sunstone tries to manage all the risks...

And there's a big difference between doing mushrooms at, like, Burning Man, versus doing it in a doctor's office with a therapist.

But even with all that...it can still be really scary.

Norma Stevens: yeah, there are people that have some terrifying things that come up. Some are terrifying. Some are just, you know, terrifying. Some are very difficult things they don't want to look at.

Felix Poon: But after the fact, they all kind of grow or heal from it?

Norma Stevens: Yes because they'll they'll go through that, whatever that is their worst fear and realize, oh, I can handle this, or they get a bigger perspective on it. And then it it doesn't bother them. At the end.

Felix Poon: At the end.

Kathy Kral: let's see what it does, and we were told just accept anything that comes in. If you see a door open it and go in. If you see a monster, face him and and talk to him and ask him what he's doing there.

That's after a break, when Outside/In continues.

<<MIDROLL>>

Felix Poon: In the fall of 2020, Kathy Kral went into Sunstone Therapies. She got set up in a room with a bed and some chairs, and then Dr. Manish Agrawal came into the room.

Kathy Kral: It was almost like a sacrament, you know. And he said, Don't be afraid. Everything's going to be fine. Everything's going to go well. And, you know, here are the pills and here's the water.

Felix Poon: She took the pills.

Kathy Kral: and I put on the headphones and the eyeshades. And...uh

Kathy Kral: I lay down and there was some music coming in.

[CLASSICAL MUX]

Felix Poon: Mostly classical music, some tracks of bird and nature sounds, some meditation music.

Kathy Kral: then a chant came on

[CHANTING MUX IN]

and it was Om Shiva Naman. And all I knew of Shiva mistakenly was that Shiva was the devil.

Shiva is one of the principle deities of Hinduism – Kathy didn't know much about him, but she knew of his reputation as the destroyer.

Kathy Kral: And I thought, Why are they doing this to me? This is not my mind. This is the music that they're putting on. You know, I don't like this at all. So I grabbed the hand of the social worker.

She grabbed Norma's hand.

Kathy Kral: to let her know that something's wrong. And finally, it ended

[CHANTING MUX FADE OUT / LOW DRONE IN]

Kathy Kral: then blackness. Not all those colors of LSD. Just blackness. And I thought, what does blackness mean? And it seemed to go on for a long, long time. And apparently you can't tell time when when you have psilocybin. So I don't know how long it was, but it seemed forever.

[LOW DRONE FADE OUT / [Rachmaninov Piano Concerto Number 2](#) IN]

Kathy Kral: And then some beautiful music came on. Really lovely music.

Kathy Kral: Beautiful music. Beautiful. And it came into me. And besides, the music came a golden light. Just as golden as can be and bright as can be after all this darkness. And then in as the music is playing, there is Mary,

Kathy Kral: and she's looking at me and she does not speak, but I understand better than I have ever understood anything in any language that she's holding a baby and she says,

this baby, I'm going to take care of this baby. You do not have to worry anymore, just forget- she's saying it, but without words. Don't worry. Don't be concerned. I'm in control. I'm taking care of it. You're okay. You're really okay.

Then that vision ended, and then she had a vision of her ancestors.

Kathy Kral: I tend to think about my ancestors coming from Poland and Lithuania. They were just serfs, you know, horrid life, horrid life. You know? And there, I'm seeing each of them getting married

[MUX IN – [Paul De Bra: Vivaldi's L'estro Armonico Concerto No. 8, RV 522](#)]

having a wonderful wedding, dancing, singing. Happy.

Huh? How could the ancestors be happy? They lived in a terrible time. And I read these books about what it was like, you know, with the, the different armies going through.

So. Okay. They're happy, huh? So there is happiness. There is joy in life, even when they're in in really, really bad situations. They can they can be okay.

Okay. Alright.

for a while, there's nothingness. Nothingness again, the blackness.

[SHORT SILENCE – THEN WAVES]

And then waves. Tremendous waves, scary waves. And I, like to be in the water. I like to go in the ocean. But those waves were terrible. They were so scary.

And then I decided to go into them.

So I went into the waves.

But, but I was able to just float in them, and it was no big deal. So, then I had to try to figure out what are the waves?

[WAVES FADE OUT]

Kathy Kral: I think the waves were probably the cancer. And, you know, there was a scariness fear and then, okay, it's there. All right. Psilocybin says, it's okay. You don't have to worry.

Felix Poon: Eventually towards the end of her session, the chanting with Shiva came back on

[MUX – SHIVA TAPE]

and Shiva reappeared to Kathy.

Kathy Kral: I confronted Shiva and I said, What are you doing here? What do you want from me? And Shiva said, I wanted to tell you that you are as bad as I am.

Kathy Kral: And I said.

Kathy Kral: Thank you very much.

Kathy Kral: And then afterward I was telling my son about the thing and he said, You know, Shiva doesn't just destroy but rebirths. And so it's like the compost pile. And so Shiva doesn't just destroy, but she brings forth something better.

[MUX LONG]

Felix Poon: All told, Kathy's trip lasted about 8 hours. Towards the end, her legs started cramping, so she got up to move around.

Kathy Kral: And that was the end.

But it wasn't the end.

In the study Kathy was in– out of the 30 participants in the study, [80% had a significant reduction in depression. And half were no longer depressed](#) at all. These results were pretty persistent even two years after their sessions.¹

For Kathy, she's feeling better too. One change she's noticed is feeling more connected to everything, and everyone around her. She even swears that the trees in her yard are waving to her, saying hello when they're blowing in the wind.

But there are other changes that's harder for Kathy to put her finger on.

It's not always easy to interpret hallucinations – Kathy has to tease out the meaning from them and figure out what to take away from all of it?

Felix Poon: Like, Kathy's vision of Mary, the mother of Jesus: her original theory was that the baby she was holding, was a baby Kathy miscarried decades ago. And that Mary was telling Kathy to let go of her feelings of guilt, and inadequacy.

¹ In some studies, participants feel relief from their symptoms [for up to a month](#), and in other studies [up to a year](#).

But she sounded skeptical of this, even as she was telling it to me.

Kathy Kral: I didn't have that concept before the psilocybin unless it was deep, deep down inside of me.

Felix Poon: It's like I could see on Kathy's face, the gears working in her mind.

Kathy Kral: I cannot quite understand. I don't know. I do believe there is a spiritual realm that perhaps she was an agent in the spiritual realm when we started the study, they said, make an intention.

And I said, I want to see the face of God. And I think that that might have been the face of God.

Realize who you are. Kathleen, you're you're an okay person. And I want you to know that. And you didn't realize that before, but you better know it.

[MUX SWELL]

Felix Poon: Kathy's 81 now. She still has cancer, but she's on a new drug that should keep it from spreading further. She's tired a lot of the time. But Overall, she's doing pretty well.

Kathy Kral: pain and death. I really was afraid of. But now I'm not afraid of it.

Felix Poon: Yeah. And so when you were afraid of death originally, what part of it were you afraid of? Because for me, when I when I think about death, the thing that scares me is more the idea that I won't exist anymore,

So I'm curious for you, are you afraid of that non-existing part? Are you afraid of the pain in the moment? What part of it were you afraid of?

Kathy Kral: *Not being able to do all the things that I want to do beforehand, get all the things done, tell all the people what I want to tell them, umm...*

Felix Poon: *what were some of the things you hadn't done yet that you wanted to do?*

Kathy Kral: *Clean up my emails.*

Felix Poon: *Those never get cleaned.*

Kathy Kral: *But I'm not afraid of of what you're saying you're afraid of. I have a feeling that I will be aware of what's going on in the world with my grandchildren and children.*

And there's that connection that's still there, whether I'm beyond or on this side. So, um.

Felix Poon: *Yeah. What do you think it's like after death? What is there?*

Kathy Kral: *What do you think?*

Felix Poon: *I....*

I mostly think that there's nothing. However, I do believe in a higher power that But I don't think that I will continue existing. Like I don't think my I don't think there's a individual soul that will continue to exist in some kind of

afterlife. It's almost like a like a like a returning, a drop of water to the ocean. Does the drop still exist anymore? Not really. Does the water itself still exist? It sure does. Where is it? I can't.

Kathy Kral: *That's interesting because I kind of connect with that.*

And I think that that, that situation with with Mary gave me an idea that I'll be different.

I won't just be this this I won't be this body. And I won't just be my mind, but I'll be something. Maybe more. That has more understanding. More, more love, more, more of all those good qualities. But I don't know what it is.

But I...yeah, I I think, you know, when I die, I don't I don't know what I'll be or who I'll be, but I think it'll be superior to what I am now and that I like.

Kathy Kral: *Hmm.*

Kathy Kral: *I'm going to get there before you do, Felix. I'm going to send you a message.*

Felix Poon: *I'll be looking forward to it.*

[ENDING MUX IN]

<<CREDITS>>

Nate Hegyi: **If you'd like to see pictures of Kathy, and the statue of Mary she has in her garden, you can visit our website at outsideinradio.org.**

And while you're there, be sure to sign up for our newsletter. It comes out every other Friday – and this week, Felix shares the story of another patient, and his psilocybin trip was just as poignant as Kathy's. If you miss it in your inbox, you can find an archive of all our past issues on our website. Again, that's outsideinradio.org. Be sure to check it out.

Nate Hegyi: This episode was produced, reported, and mixed by Felix Poon.

It was edited by Taylor Quimby with help from Rebecca Lavoie, Justine Paradis, Jeongyoon Han, and me, Nate Hegyi.

Rebecca Lavoie is our Executive Producer

Special thanks to Evan Craig, Heather Honstein (HAWN-steen), Kathryn Tucker, Erinn Baldeshwiler (BALL-duh-SHWY-ler), and Zane Bader (BAY-der).

Music for this episode was by Blue Dot Sessions, the Warsaw National Philharmonic Orchestra, Rand Aldo, Hanna Lindgren (LIND-grin), Paul De Bra, and Pawan (PAH-wuhn) Krishna.

Outside/In is a production of New Hampshire Public Radio