



### **Episode 38: Post-COVID Health Issues and Life After the Pandemic**

Benjamin Cohen:

This is “Hadassah on Call: New Frontiers in Medicine.” I'm your host Benjamin Cohen. In each episode of this podcast, we'll get an inside look at what goes on behind the scenes at one of Israel's premier medical centers. We'll travel to Jerusalem to meet up with the doctors and nurses at the Hadassah Medical Organization. From striving for peace for medicine to performing surgeries with robots, they're working on medical breakthroughs that are impacting people around the world. That's what Hadassah is all about, the power to heal our world together. From cornea transplants to developments in pediatric oncology, we'll learn about the latest cutting-edge research coming out of Hadassah Hospital. All of that, plus the inspiring stories of patients who have recovered from near-death experiences. Our appointment starts now. This is “Hadassah on Call.”

Benjamin Cohen:

Hello, everyone and welcome to the show. As we record this, we're seeing a spike in coronavirus cases around the world, and we're also learning about some often terrifying long-term complications for those who have recovered from COVID-19, everything from lung damage to mental health issues. On today's show, we'll be chatting with Dr. Neville Berkman, the Director of Hadassah's Institute of Pulmonology and head of its Adult and Invasive Pulmonology Unit. He's leading up a new multidisciplinary clinic at the Hadassah Medical Organization that treats patients suffering from COVID after-effects.

Benjamin Cohen:

Dr. Berkman, welcome to the “Hadassah on Call” podcast.

Dr. Neville Berkman:

Hi. Thank you for this opportunity to be part of the show.

Benjamin Cohen:

Before we talk about the clinic, if you can just tell us, explain why a pulmonologist like yourself has taken on this challenge.

Dr. Neville Berkman:

Yeah, so COVID is an extremely interesting and challenging issue for us all. And we're seeing, as is I know the case in almost all countries, we're seeing that it's not just an acute illness that you recover from and then forget about, but more and more we are faced with patients who have recovered from the acute phase and have got a whole range of different symptoms, problems, medical issues that are persisting for months after the acute illness. And we certainly saw the needs, and I say I think it's the same in most countries, to provide medical service or medical evaluation for patients who have symptoms that persist. As most of the patients who are admitted with COVID have at least, if not the only symptoms, but their major symptoms have been respiratory. I think most patients that actually need admission, it's because of respiratory issues, and that's why we've taken this on.

Dr. Neville Berkman:

So, of course, our initial focus was respiratory but whatever comes, and whatever comes is certainly not only respiratory. We've seen the whole range of different manifestations of symptoms and of signs post-COVID. And I say we've taken the role mainly as being of course looking at the respiratory issues, but also as being an initial evaluation for subsequent referrals to other disciplines – both medical and paramedical. So we're seeing patients who we're sending on to the cardiologist. We're seeing patients we're sending on to the neurologist. There are a lot of issues that are related to sleep disturbances, to mood disturbances, to memory disturbances. So a lot of those things, of course, we are sending on, as sitting in our clinics we have a multidisciplinary team. So we have a neuropsychologist who sits with us. We have people who are from rehab as well. We have people from occupational therapy sitting in with us in the clinic. So, again, we're just the first stop amongst many depending, of course, on what the patient's particular problems are.

Benyamin Cohen:

So just to clarify for our listeners, we're talking about patients who have survived COVID-19. They're still having lingering complications, whether that's prolonged coughing, digestive issues. You were saying neurological issues, fatigue. I read the other day in the paper a study about mental issues and memory and concentration issues. What is the proper terminology for this? Are these side effects? Are these after-effects? What would you call them?

Dr. Neville Berkman:

So yeah. All of the things you mentioned are things that we are seeing. The clinic is called a post-COVID clinic. The English have set up guidelines, national guidelines. They call it long-COVID, because it's not really post-COVID, because we think that the symptoms and the medical issues are still related to COVID. But we wait until patients are no longer virus positive. We prefer to see the patients at least a month after discharge from the hospital, after their viral status has become negative. So we're not talking about patients in the immediate acute phase of the illness, and we're seeing in between four to six weeks after that. A lot of the patients have still got respiratory symptoms as you say... cough, shortness of breath and the other issues, too.

Benyamin Cohen:

Is this part of the virus itself?

Dr. Neville Berkman:

As is the case everywhere in the world, we're learning about this virus. Every day is a new surprise with this virus. And at least some of the manifestations are clearly related directly to the virus, not to the acute infection, but obviously to a reaction to the acute infection. Whether the reaction is some kind of aberrant or overactive immune response, we don't know.

Benjamin Cohen:

You mentioned this is a multidisciplinary clinic. Are you also treating if there are patients with psychological consequences of the disease, like perhaps PTSD or trauma or something like that?

Dr. Neville Berkman:

You know, we do expect that and we do see that. As I say, COVID is devastating in terms of the number of patients worldwide, but it's very new. So we're kind of learning or extrapolating from other similar issues. When our patients who are admitted with adult respiratory distress syndrome, which patients who have acute respiratory failure who've been admitted to the hospital, that's a disease that's well-known and we have tens of years of experience with it. And there are the other coronavirus illnesses, the MERS and SARS, which were in previous decades. All of those syndromes are associated with a PTSD kind of syndrome, and we expect the same with COVID. So I'm no expert in psychological issues, but we do have psychologists who are part of the multidisciplinary team, and we absolutely expect to see similar post-traumatic stress disorders in these patients as well.

Benjamin Cohen:

This clinic is at Hadassah. Can you just walk us through the clinic? How are you treating these patients? Are these basically outpatients they come for a visit and then they go home?

Dr. Neville Berkman:

Yes. So what we do is we contact patients who have been mainly patients who have been admitted. And you can ask, "What about patients who don't need admission? Do they have post-symptoms and complications as well?" And the answer is, "Absolutely yes." But we've chosen at least as a first phase to concentrate on the patients who are admitted. It seems that the more severe the initial illness, the more likely the patients are to have problems afterwards, certainly respiratory problems, but problems as a whole, and that's true for experience worldwide. And so what we do is contact the patients, get them to come in. I should say it's an ambulatory patient clinic. They come in between four to six weeks after admission. They are assessed. The initial assessment is by pulmonary physician that includes questionnaires that relate to specific respiratory issues, but also relate to other issues as well. So the questionnaires and the evaluation will include a neuropsychological evaluation. It will include a general functional evaluation. And it will include also an evaluation, either by a psychologist or by rehabilitation specialist as well. Not everybody gets the whole package, but that's what's included. And we then we'll either say to patients, "Okay. Well, you're doing okay and it's just a question of time," or we will then refer as appropriate.

Benjamin Cohen:

Now, from what you're hearing from your colleagues abroad and from reading scientific studies, are these after-effects different from one country to another?

Dr. Neville Berkman:

To be honest, I actually getting the impression that we're all in the same boat. And I think we're all trying to work out what's the best way to deal with these patients is. And I think we're all getting the impression that these symptoms and these complications are a lot more common than to... Well, certainly you don't see them after acute influenza or acute pneumonia. A lot of symptoms and a lot of complications here that are, to a certain extent, were not expected and certainly not catered for in the first waves in March. But I think they're going to be with us for a while. Obviously, the more the disease persists, the more waves we have, I think it's going to become a real part of their daily practice.

Benjamin Cohen:

You mentioned that people who had a more severe case of COVID tend to have more harsh after-effects. Are you seeing patients in the at-risk populations – the elderly, those with diabetes – are you seeing them with more lingering after-effects?

Dr. Neville Berkman:

So that's hard to answer, because, unfortunately, a lot of the more severe patients are patients who may die from acute illness or may have incapacitating issues and will find difficulty with coming into ambulatory clinic. But, having said that, there's no question that the patients who are most likely to have problems and the patients who we're seeing with the more severe problems are the at-risk groups, yes. So patients with pre-existing cardiac illness, diabetes as you say, kidney problems, chronic lung issues, those are the patients who are going to have and we've seen who have more severe issues.

Benjamin Cohen:

In the short time that you've started operating this multidisciplinary clinic for COVID after-effects, what are a couple takeaway lessons that you have learned?

Dr. Neville Berkman:

So, first of all, as I say, I think that there are a very high proportion of patients who have got problems, and I think that the medical system has to acknowledge that and I think it's extremely important for us to set up multidisciplinary clinics to take care of these patients. I think it's too early for us to know how long these complications are going to exist or going to persist. I think that a fair number of the more severe patients are going to develop chronic respiratory issues, like asthma-like or fibrosis or scarring of the lungs. And we actually have no idea at this time as to how long these things will persist or how they should be treated. It's new for all of us.

Dr. Neville Berkman:

I think it's very important also that the medical community has to acknowledge that there are a lot of disability issues related to patients who've had COVID, and we have to learn what to do with these patients. And we're trying things like rehabilitation. We're trying things like occupational therapy. We have no idea at this point whether there is any benefit to be gained from drug therapy for these patients, with a vitamin therapy, vitamins and nutritional issues, whether these things will actually help these patients to recover more quickly. It's an absolute black box at this time.

Benjamin Cohen:

When we return, Dr. Berkman talks about pandemic fatigue. Plus, the best way to celebrate the holidays.

Dr. Neville Berkman:

Outside is much, much, much better than inside. The fewer people, the better. The masks and the 6-foot distancing.

Benyamin Cohen:

All that and much more after a quick break.

Benyamin Cohen:

It seems that news headlines about the coronavirus are changing each and every day. Keep up to date with everything that Hadassah Hospital is doing to help combat this deadly disease – from discovering ways to alleviate the symptoms of COVID-19 to being part of the global effort to develop a vaccine. To find out how we're dealing with the crisis, visit our website at [hadassah.org/covidupdates](https://hadassah.org/covidupdates). That's [hadassah.org/covidupdates](https://hadassah.org/covidupdates). We're posting frequently about how our doctors, nurses and researchers are working to fight the further spread of COVID-19. You can also follow Hadassah's latest coronavirus updates on our social media accounts on Facebook, Instagram and Twitter.

And now back to our conversation with Dr. Neville Berkman.

Benyamin Cohen:

Obviously, the best preventive measure is not to get the virus, to stay at home and not go out in public as much as possible. I know Israel has also seen a surge in cases and you guys had a lockdown recently. As an Israeli physician, how do you explain some of the non-compliance in Israel which brought about that second wave?

Dr. Neville Berkman:

I think we're seeing all over the world that people just are not compliant. Maybe they are in Japan and they certainly are in China with, I'm sure, a bit of support from the police and from authorities. But in most Western countries, and we're seeing it in Europe and we see it in the States and we're certainly in see it in Israel, people are getting on with their lives, and I think, to a certain extent, I find it quite... I wouldn't say disappointing... that young people cannot see that their behavior has repercussions for the older and maybe more frail elements in the communities.

Benyamin Cohen:

I think where I am in the States, among some people I've noticed some pandemic fatigue.

Dr. Neville Berkman:

Yeah, absolutely. And I think that that's true of older people as well. I think people who are stuck in homes for elderly are experiencing that as well. And I think for them, in many ways, it's even more difficult, because they're cut off from family, et cetera. Young people who would like to get on with their lives, student who can't study. I think you know there's this worldwide pandemic fatigue. No doubt about that at all.

Dr. Neville Berkman:

But, unfortunately, it looks like until we have a vaccine, we have some kind of effective therapy, I think we're all stuck in this boat, and I think we have to try and find ways to cope as best we can.

Benjamin Cohen:

So speaking of being stuck in this boat together, we all know about masks and social distancing. Some people take vitamin D or Tylenol, other. Are there are actual, practical preventative measures beyond masks and social distancing that you would recommend?

Dr. Neville Berkman:

So, yeah, masks and social distancing.

Benjamin Cohen:

Right. Right.

Dr. Neville Berkman:

They work. They just do work. I think that's really important to say again and again and again. I see patients with COVID every day. And the risk is, of course, from patients we do not know that they're positive when we see them. And if the patient's wearing the mask... I'm talking about patients who have not yet been diagnosed, but who will be diagnosed tomorrow, the next day, in three days' time. If they're wearing masks and I'm wearing a mask, that's fine. They don't transmit or the chance of transmitting the disease are decreased so substantially that it's not really an issue. So you cannot emphasize again, those measures are so important. Other than that, nothing has been proven so far. Patients who are vitamin D deficient, probably normalizing vitamin D may have some protective effect. Other than that, unfortunately, nothing that we know of yet. Nothing.

Benjamin Cohen:

I remember when the pandemic first started back in March, we were all, myself included, I would go to my mailbox with sterile gloves on. And when I'd get the groceries, I'd leave them in my garage for a day to decontaminate before I brought them in the house. But I think we know more now about how the virus spreads. Am I right or should I still be careful with the groceries?

Dr. Neville Berkman:

So I think that's a good point, an important point. There are a lot of studies that have been done now to look at how viable the virus stays, how long it stays alive in, for example, in certain surfaces, et cetera. But I think there's a big discrepancy between what you find in the laboratory and what you find in reality. I tell my patients all the time, and I really believe this, I think that the chances of getting the virus from touch or from objects is very tiny, if at all. I think the thing is to be careful of other people, not careful of objects. And I certainly don't think it makes any sense at this time to emphasize the things that you mentioned before, that being careful that what you touch, the gloves, the sterilizing things. I really think that there is a very minor effect at this time. Just unless you can sterilize your friends... I don't leave the groceries and the packets, et cetera, are an issue.

Benjamin Cohen:

In the States here, we're entering the holiday season, Thanksgiving. What are your suggestions about getting together? Are there safe ways to do this? Can we do a backyard barbecue or what would you suggest?

Dr. Neville Berkman:

Again, outside is much, much, much better than inside. The fewer people, the better. I do think that there's a price to pay for complete isolation. I think that people have, there's a psychological price to that. And I think certainly in the elderly there is a big, big issue. And I think we're not even starting to appreciate how much of a big issue that is. But I would say, yeah, if you know that people are healthy and you're outside and you've all got masks and you can keep six foot distance and you're less than 10 people, I think that barbecues outside are probably okay. But nothing is safe. That's for sure. You cannot say for sure that would be safe.

Dr. Neville Berkman:

I saw a patient recently, two or three days ago, who said he got COVID at his grandson's bris. And he said they were so careful to go according to the rules and everybody's with 10 people and they all had masks, et cetera. And every single person... It was actually the mother who had COVID, and every single one of the people at the brit got COVID. And that was in-

Benyamin Cohen:

The mother of the baby?

Dr. Neville Berkman:

Yes. Yes.

Benyamin Cohen:

Wow.

Dr. Neville Berkman:

Yes. Yes. And all 10 of the people who were there got the disease. That was inside, which is also, obviously, makes a big difference. So there is no certainty, but the steps that we all know and are familiar with, that's the way to go. And, again, you have to compromise if necessary, because we all have to live somehow and get on with our lives as best we can.

Benyamin Cohen:

How do you manage prevention in your own household?

Dr. Neville Berkman:

So it turns out actually that if you work with patients with COVID, I think you're far more aware of the importance of being careful with masks, et cetera. So, as I say, we're in contact with patients with COVID that we either know about or don't know about every day. I don't want to say anything that I'll regret afterwards, but thank God I haven't actually had a problem. I test about once a week, once every two weeks. And so far, we've been okay. I have a mother who's older, and I'm quite careful to see her as little as possible. But when I test negative, then I'll go and see her so that I can be more sure that the

chance of infecting her are lower. But I think I try as well to not leave her unattended, unseen and by herself.

Benyamin Cohen:

When we return, Dr. Berkman talks about the latest vaccine developments. Plus what a post-pandemic world might look like.

Dr. Neville Berkman:

I would like to believe that a year from now, maybe in two years from now, we will be able to look back and say that 2020 was this disaster, the year of COVID, and that's behind us. That's what I would like to believe.

Benyamin Cohen:

All that and much more after a quick break.

Dina Kraft:

I'm Dina Kraft, the host of a podcast called "The Branch," which tells the stories of relationships between everyday Israelis and Palestinians, Jews, and Arabs. Amid conflict, entangled histories, stories of human connections and friendships can get lost. The mission of this podcast is to find them and bring them to you. In this season, I talk to artists, midwives, soccer teammates and environmentalists. All of them and many others, too, who work together in spite of the barriers between them. "The Branch" brings you stories of real people forging strong connections and having important conversations, even when it's complicated. Brought to you by Hadassah. Find us anywhere you listen to your podcasts or [Hadassah.org/thebranch](https://www.hadassah.org/thebranch).

Benyamin Cohen:

And now, back to our conversation with Dr. Neville Berkman.

Benyamin Cohen:

So looking towards the future, I want to talk now about the vaccine situation. I know at Hadassah, they're testing the Israeli vaccine. In the U.S., we have a lot of different companies that are advancing on late-stage trials. We just heard about how both the Pfizer and Moderna vaccines have seen a success rate over 90% in their respective trials. Can you update us on the current vaccine situation?

Dr. Neville Berkman:

At the moment, I would say the leading vaccines are the Moderna vaccine and the Pfizer vaccine that you just mentioned. AstraZeneca has also got a vaccine that's in a more progressive stage, in Phase 3 studies. So those are probably the vaccines that are the closest to being available. All of those vaccines, the vaccines that I mentioned, are in what we call Phase 3 studies. I think it's very important for people to understand that, under normal circumstances, it takes 15 years to go from initial phases to application for a vaccine.

Benyamin Cohen:

Wow.

Dr. Neville Berkman:

That's the average time taken, turnaround time. The mumps vaccine, I think, was probably the most rapidly developed vaccine and that took about five years. So all of the vaccines that we're talking about now, obviously, the time is much, much shorter than what medicine has known previously.

Dr. Neville Berkman:

So vaccines still have to go through phases. The first phase is initial, obviously, development in animals usually, followed by very small tests in healthy volunteers which is called a Phase 1 trial and then Phase 2 trials were also done usually in small groups. The Phase 2 trials is to try and determine which is the best dose to use and it's also they check safety, of course. Phase 3 trials are larger trials. Most of these vaccines are being done in multiple countries, up to 30,000 or so people in whom the vaccines are being tested. Those are Phase 3 trials. They, again, test both effectiveness of the vaccine, as well as safety. And then we go to options of clinical usage.

Dr. Neville Berkman:

So the vaccines that you mentioned, the Pfizer vaccine, the Moderna vaccine and the AstraZeneca vaccine, are all in progressive stages of the Phase 3 studies and they're showing both that they are effective and that they do seem to be safe. I think it's important to understand that safety at the moment for these vaccines can be assessed over months, and we do not know what will happen in a year or two years. So there are safety issues that, for practical reasons, are going to have to be, to certain extent, compromised.

Dr. Neville Berkman:

It looks like those vaccines, the Moderna vaccine and the Pfizer vaccine, will probably be available, I would say, in the first few months of 2021. There are a lot of issues relating as well to ability to then mass produce the vaccines and make them available to large numbers of people in large numbers of countries. So those are issues, logistic issues, which are also a major, major consideration.

Benyamin Cohen:

I was just reading about the Pfizer vaccine. It has to be kept at such a cold temperature that they don't even have freezers readily available, so Pfizer is making these briefcase-size freezers to be able to transport the vaccines.

Dr. Neville Berkman:

Yeah. So both the Moderna vaccine and the Pfizer vaccine are actually exceptional in that they're what are called RNA vaccines. It's an RNA virus. And these vaccines are pieces of RNA that are similar to the RNA of the virus itself. They are given and then the body will then produce an immune response, which is a mixed antibody and what we call a T-cell, which is what's called a cellular immune response to this RNA.

Dr. Neville Berkman:

Now, there are actually no vaccines that are of this type, so this is new for vaccine development as well. There are other companies that are developing vaccines that are either administered via viral vector it's called, or that are DNA vaccines that have actually been used in the past. But this RNA technology is

new. So that is also unknown to a certain extent, and it poses major difficulties in terms of how to make enough vaccine and, as you say, how to transport vaccines. So this all, it's a new game. It's a new game.

Benjamin Cohen:

Given what you just said, do you expect people to take the vaccine? There are people who are.... Like you said, they're afraid maybe it's untested, it needs more safety checks. What do you think's going to happen?

Dr. Neville Berkman:

Yeah, I think that is also not going to be such a simple issue. I think it would be more straightforward for the people who would be considered to be higher risk, so people who are medical staff, the elderly who are either at high risk for being infected or at high risk for complications if they do get infected. For them, the risk-benefit for getting a vaccine that's new would certainly, I think, be on the side of benefit greater than risk. For young people, where we know that even if they get the disease, the likelihood of having problems with the disease are much lower, the benefit-risk is very different. So we'll have to see whether people will be prepared, will be happy to take the vaccine, despite the fact that it's going to have been around only four months. I would hope that people will go ahead once there's some indication that the vaccine, and even if the indication is indication of six months or twelve months, that the vaccine is safe. I would hope that people would go ahead and take the vaccine.

Benjamin Cohen:

So let's flash forward a few months and let's say people get the vaccine. So if I get the vaccine on a Wednesday afternoon, can I go back and do my normal life starting on Thursday morning or is that not how it works?

Dr. Neville Berkman:

So some of the vaccines actually are two-dose. Some of them are one dose. Most of them are two doses. The ones we mentioned before, the Moderna and the Pfizer vaccine, which seem to be, as I say, furthest forward in terms of development, they're both two-dose vaccines. You need to take two doses with approximately a month between the two doses. For some of the vaccines, there are some side effects, I would say, that have been noticed in terms of malaise, muscle pains, a bit of temperature, the day after. So some of them you need to be combined with giving paracetamol or Tylenol the day after the vaccine.

Dr. Neville Berkman:

We would expect the protective effects to only be after second dose for the maximal protective effect. Do we think that you would have any other problems other than this, like flu-like illness the day after vaccine? At least up until now, that's not been seen. So it seems, as you say, maybe the day afterwards, you'd have to take it easy, but two days after the vaccine, you should be able to carry on as usual.

Benjamin Cohen:

So when people say we have to live with this virus for the long term, because we are for a while, let's just say all of 2021, going to be living in a world where some people have taken the vaccine and some people have not yet taken the vaccine. So you're saying, though, someone who has taken the vaccine, that it would be safe for that person to move about the world, or should we still be wearing masks and maybe move more like what they do in Asian countries where wearing masks are more normal?

Dr. Neville Berkman:

These are unknowns. I think that issues like, "Are we going to be able to get on a plane and travel as we did before? Are people going to be able to go on holidays like they did before? Are you going to limit where you go on holiday?" These are all issues that are completely new for all of us everywhere. I would like to believe that a year from now, maybe two years from now, we would be able to return to normality, and I would like to believe that normality as we knew it a year ago. That's what I would like to believe. But every day is full of new surprises, so we don't know. We don't know.

Dr. Neville Berkman:

I'm optimistic. I think that if the vaccines become available and, of course, a lot of is, as I say, logistic issues, money issues. Are we going to be able to get this vaccine to large populations in China and India and in Africa, et cetera. We know these are obviously unknowns. But, I say again, I would like to believe that a year from now, maybe two years from now, we would be able to look back and say that 2020 was this disaster, the year of COVID and that's behind us. That's what I would like to believe.

Dr. Neville Berkman:

As I'm sure you're aware, there are new mutations of the virus appearing. I'm sure you've seen that in animals. So we do not know. I do think that we are likely to develop or to encounter similar things in the future. The viruses like this I'm sure are going to crop up again in 10 years or 15 years or 20 years. So in some ways, I think it is going to be accompanying us in future years. But this particular COVID, I would hope in a year, two years' time, we'll be able to say it was bad memories. So that may be a bit optimistic.

Benyamin Cohen:

You've obviously been a doctor for a while, and I'm curious what has been your experience treating these patients with COVID-19 in this intense period? How does that compare and contrast to the years of experience treating patients prior to this, those with severe lung problems, for example?

Dr. Neville Berkman:

I think the first few months when COVID was completely new, I think that there was certainly a learning curve, a lot of... I don't like to call it mistakes... but a learning curve in terms of knowing how to manage the patients with severe disease. Initially, we did not understand the importance of, for example, the predisposition for increased blood clotting, the importance of giving anticoagulants for patients that had severe COVID. I think we learnt that it's better not to ventilate the patients too quickly. So those lessons have been learned, and I think that it has had implications in terms of the number of patients who died from acute COVID.

Dr. Neville Berkman:

But I think we still have too many patients who we actually cannot help, unfortunately, who've got very severe disease and who are dying in intensive care. I think that's the experience of most intensive care in most countries. So although we've learnt, we still got a lot of patients who we're losing on the way. And I think we shouldn't forget that, because, as the disease becomes more of a chronic issue, you kind of say, "Well, okay. We're learning to live with it," and we're still forgetting that this substantial number of patients who are dying on a day-to-day basis in intensive care.

Dr. Neville Berkman:

And I think it's very, very, very important to understand, this comes back to the point that we started from, that there are as it probably long-term important health repercussions for these patients. That's not just if you've survived through the intensive care or if you've not had acute problems that you've had to be admitted for, you can forget about the virus. There are these more ongoing issues that we're only probably going to understand how significant they are in the next year or two or five.

Benyamin Cohen:

How have the last eight months impacted you personally?

Dr. Neville Berkman:

Well, I think all of us are working much more intensively than previously. I think long hours, a lot of unknowns. It's very difficult also to have lost the interaction, personal interaction, with colleagues that we would have had before. Now all our conferences are now, of course, remote conferences. And that's something that we've had to get used to and I think is difficult. But thank God we're getting on with it and we're learning more. In medicine there's always something new every day and something more interesting every day. I think this virus continues to be extremely interesting, extremely challenging – both from a treating patients point of view and from a scientific point of view. Medicine is always dynamic and interesting and exciting and challenging, and we just like to try and find ways to help the patients. That's what we would like to believe.

Benyamin Cohen:

You mentioned a minute ago that you're an optimist at heart. I wonder, has your on-the-ground experience with COVID made you more hopeful or less hopeful about humanity and the human condition?

Dr. Neville Berkman:

There's two sides, of course. To be honest, I actually find the behavior of people who are not prepared to put on masks who say, "Well, this is not really a problem," or "It's not my problem," I find that really very, very... I'm not even sure what the word is... disappointing. That is really something that I find hard to deal with. But the way that the medical and I think the scientific community worldwide has rallied has been remarkable. I think that the number of scientific advances and understanding of this virus in such a short time has been extraordinary. But on the other hand, the virus is still surprising us from day to day, and I think there's so many open questions. Despite the amount of money and the amount of research that's going into it, we still don't understand a lot of that green basic things about the virus. So a bit of both.

Benyamin Cohen:

Is there anything I did not ask you that I should have asked you?

Dr. Neville Berkman:

To be honest, I think that COVID, you could talk about COVID and think about COVID for days without exhausting the issues. So I think there are a lot of things. One of the things which I find remarkable that we don't understand is why the death rate from the virus is so different in different countries, why the virus behaves so differently over time. I think, for example, the number... For example, in the States, the death rate in initial phases was much higher than it is now. Why some people spread the virus more than others? Why some people seem to be immune? These are all issues that we do not understand,

which I think are extremely, extremely interesting. In terms of the behavior of the virus, there are issues that I like to think about and discuss that I think we don't know about. Those issues are, in my opinion, extremely interesting.

Benyamin Cohen:

Yeah. Well, okay. Dr. Berkman, I know you're busy at the hospital. I did not hear any alarms or anything going off during our interview, so I guess that's a positive sign. But I really appreciate you taking the time to chat with us today to tell us about this new multidisciplinary clinic. It's fascinating and, hopefully, Hadassah will have a lot of success with that. It will be interesting to take a look at that in the months ahead.

Dr. Neville Berkman:

Okay. Well, thank you very much. And, yeah, I hope we'll all get over this and get over this well and healthy, and we can talk about what was rather than what is a major medical issue at the moment. Thank you very much.

Benyamin Cohen:

Thank you so much for your time. I appreciate it.

Dr. Neville Berkman:

Nice to speak to you. Be well.

Benyamin Cohen:

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