

IN CONVERSATION WITH

Professor Michal Luntz

Professor Michal Luntz is an Otolologist and Cochlear Implant Surgeon, and Director of the Ear and Hearing Center in A.R.M, Assuta Tel Aviv, Israel. We caught up with her to hear about her life, her background, and her unique insight to life with a hearing loss.



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Hello! How are you keeping in these challenging times?

I am well, thank you. At the beginning of the 'COVID era' it was indeed very enigmatic; now the challenges are somewhat clearer. The need to minimise contact with other people presents us with various family, social and work challenges. At the clinic, communication with the hearing-impaired population is demanding indeed. Most patients do not use personal assistive listening devices, which could have been very helpful.

“For the first time, I felt I was a better ear surgeon than a volleyball player”

Can you tell us a bit about your background?

I was born in Israel and had a very typical Israeli childhood. I was the youngest of three. My mother was a head nurse at a maternity hospital and my father was initially an agriculturist. We had a vegetable farm. Even now in the autumn, I am afraid of too-early rain that might ruin the peanuts.

Later, when he was older, my father developed an advertising company which was very advanced for the time. Both my parents were free spirits who deeply believed in the importance of having an interest in what one is doing as a main job and through which one provides for the family.

I played volleyball since the age of 10. It was more than a hobby, and it is still one of my greatest pleasures to play with my eldest daughter.

Throughout my army service, I was an air evacuation instructor in the air force. During the training, we had a demonstration of the air crew qualification path for future aircraft pilots where their hearing is tested. The audiologist, who showed us how audiometry is performed for the flight course candidates, asked me to be the test case. It was during this incidental test that my hearing loss was discovered. After finishing my service, I studied Medicine at the University of Tel Aviv, and married my husband (Meir Kaminski, a basketball coach, and we now have three children.

A short time after starting my residency at Sapir Medical Center (University of Tel Aviv) I stopped to do one year of basic research at the research laboratory there (directed by Jacob Sade). The research was on the histology and the aeration function of the middle ear and the Eustachian tube. This year then paved the way for a surgeon-scientist career and it still is a very fulfilling choice for me. During my residency, I learned that surgical skills are hard to come by, and that actually it is very similar to the difficulty acquiring basic skills as a volleyball player. Following my residency, I moved to Sheba Medical Center

(University of Tel Aviv) for several years as an attending, where I hoped to further develop my surgical ability, but I still did not feel that my surgical skills in otology reached my technical skills in volleyball; especially because at that time there were great professional volleyball players freed from the Soviet Union and they played in our team. They made me understand what professionalism is. It pushed me to take a two-year otology fellowship at the University of Miami Ear Institute. Tom Balkany and Fred Telischi were my mentors and helped me to become a mature surgeon. For the first time, I felt I was a better ear surgeon than a volleyball player.

A short time after my return to Israel, I was appointed to chair the ENT department at Bnai Zion Medical Center (affiliated to the Technion, the Israel School of Technology in Haifa) where, together with Dr Talma Shpak, we established the cochlear implant programme for north Israel. Twelve years later, in 2009, together with two ENT colleagues - Prof Avi Hefetz, a Head and Neck Surgeon, and Prof Roi Landsberg, a Rhinologist - we established a private ENT and maxillofacial surgery centre named A.R.M group in Assuta Hospital in Tel Aviv. In 2018, after 21 years of service as a Chair in Haifa, I moved back to Tel Aviv to establish an Ear and Hearing Center as part of A.R.M. under the idea of a 'fast lane for hearing restoration'. The many years of direct work with hard of hearing and deaf individuals, most of whom are not or not optimally rehabilitated, led me to understand that many of them do not think they can function better hearing-wise. Working in Tel Aviv allows me also to be active in the directorate of BEKOL, the Israeli association for hearing impaired individuals. We work to promote the idea of 'the right to hear' for hard of hearing individuals and within public authorities and work establishments. Recently I was appointed as the President of the Israeli Society of Auditory Research, a society that includes all hearing and hearing research professions. Our mission is to link current hearing research outcomes and the

hearing-impaired population, so that hearing-impaired individuals will benefit in real time from the investments in hearing research.

Which of your achievements are you most proud of?

The most rewarding has been raising my three children and supporting my four nephews to become good and independent people.

I have been very fortunate to have acquired the professional skills of a physician, surgeon, scientist and teacher and to have interacted with wonderful patients and students throughout my career. I am also proud to have played a role in convincing the Israeli Ministry of Health to reimburse cochlear implantation for adults in full in 2006.

Can you share a little about your personal hearing journey?

It is difficult to differentiate between the life journey and the hearing journey. Until the incidental audiometry in which my hearing loss was discovered when I was 18, no one except Maayana, my closest friend since I was born, thought I had any hearing issue. Maayana thought we were supposed to be able to have routine conversations while each standing in our own back yards... I could not do that. There were over 100 metres between the houses. We were five or six years old. There were quite a few other opportunities that should have raised the suspicion that I had a hearing loss. But I related all misunderstandings to misunderstanding, poor quality loudspeakers, thinking no one really hears that well, teachers being incoherent or not preparing themselves for the classes, believing I became less smart, etc. I was always surprised when my classmates could learn from educational TV and radio, or could mimic what the mayors of the city said in their endless speeches at school ceremonies – I could only mimic their actions. But the idea that I actually could not hear well never crossed my mind. In the fifth grade I noticed that I couldn't remember what the teacher said in class, and I understood that I had to invest time at home. My other friend, Mena, knew how children were supposed to learn at home and study for exams so we did this together. I could not understand words of the songs that I liked, so I used to sit hours for and hours with the discs of these songs and listen carefully to their words. (In Hebrew of course, English was out of the question). I did not know how words in English were pronounced but I could write quite well. There were 40 pupils in each class, the teachers were not able to detect these things, and exams in English were all in writing, so my marks were good. Again, I had no clue about my hearing loss. Since kindergarten I knew I had to sit in front of the teacher 'if I want to be in business'. I took this insight with me for the rest of my school life. I used to make a decision about where to sit, depending on how much I wanted 'to be in business'.

As a child, I played piano for six years. I did not become a pianist but having this musical background probably helped me to be a better 'hearer' and paved my way through becoming hard of hearing and then a good cochlear implant user. I was about 18 years old when my hearing loss was incidentally diagnosed. We were told that this hearing loss, which was high tone mainly, was not going to influence my life, but I should not be exposed to loud music (I could not anyway), and that there was nothing to do about it. At that time there were no hearing aids for this type of hearing loss. Years later, just when I was ready to start my fellowship, I met an old and very famous otologist, who asked me about my hearing during a conference dinner, since I did not react properly to his jokes. His opinion was that I had to pray.

On the morning round of the first day of my residency I was asked a question which I misunderstood. It was funny. The senior doctor was about to tell a joke about a hearing misunderstanding in general, I came closer to him and asked him quietly if he could resist telling this joke. He said he could. Luckily (years after I finally heard the joke, it was indeed funny but certainly not needed



The Israeli women volleyball national team at the Palma de Mallorca European Spring Cup tournament, 1976.

under the circumstances). My path was full of such kinds of 'luck'. Since elementary school, whenever I managed to avoid a direct unexpected question, I always felt like it was luck. Actually, I was active in creating this kind of luck. I developed ways to avoid direct questions. One way was to raise my hand and try to answer the teacher's questions that were presented to the whole class whenever I 'understood' the question. I thought that being active during the lesson prevented the teachers from suspecting that I am not 'in business' and reduce their tendency to ask me direct questions. This strategy had social consequences. Once I understood the consequences, I looked for different strategies.

In meetings when I am on the podium during a round table, I try to ask the colleagues at the table to write down the questions for me. This sometimes works; but not always. The colleagues on the podium often do not hear the questions either since typically the loudspeakers of lectures halls are directed towards the audience and not towards the podiums. Sometimes colleagues on podiums are older than me and have some age-related high tone loss.

The one condition set before my fellowship in the US was to renew the English exam which was part of the ECFMG certificate. Part of it was based on recorded voice. I passed it somehow immediately after medical school. But since then, my hearing had deteriorated. I already had hearing aids at that time, but they did not contribute to my ability to understand speech. On the contrary, I felt they decreased it. I looked for a special test for hearing impaired individuals but there was no such test. I failed the exam and so was unable to start my fellowship. Just before giving up the idea of pursuing the fellowship, I was told that there was an American senator who devoted much of his political career to fighting for people with disabilities: Bob Dole. I wrote him a letter, a modification of the letter I sent to the ECFMG test centre. In this letter I explained that I had passed the test in the past, but since then my hearing had deteriorated and that for me, a test that relies on hearing sentences presented as recorded voice is a formal hearing test (open set speech understanding test) and not an English test. To my surprise, his assistant called me at home one evening to let me know that instead of a recorded voice there would be a person in my test that will read the sentences aloud. On the date of the test they brought a nice, English speaking woman with a South African accent and a very high pitch and soft voice. They put me with her in a special room. She was instructed to read each sentence once and sit at the other end of the large table. To my surprise, building construction was going on

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outside. Again, I could not hear. This time I talked with the lady and explained that there is nothing wrong with my English, it is only my hearing. I asked her to stand closer to me, to speak louder and to repeat each sentence twice. She said she was not allowed to do that, but luckily she gave it a second thought and decided to break the rules. I passed the test and so could start my fellowship.

Although during the interview for the fellowship I told Tom Balkany that I am hard of hearing and I have hearing aids, I actually could not use them because they reduced my speech understanding. At the traditional end-of-year party, after the first year of my fellowship, the residents dedicated a small piece on how Michal's communication style looks. I was not aware of it at all until that moment. I laughed because it really was funny, and I was sweating because it was very embarrassing, yet I was grateful for having this important information. A mirror is helpful. Years after, I wondered why they did not tell me during that year (without the audience). There was plenty of time. My answer is that being very open about my hearing loss made them believe that their piece would not be embarrassing for me. Indeed, soon after the party, the audiologist, Diane Martinez-Cooper, asked me to bring my hearing aids and tested the threshold with and without them. The difference was 5dB along the frequency range. No wonder I had no benefit. During my next visit to Israel, I asked the hearing aid dispenser to refit my hearing aids, after which, benefit was finally achieved. Soon after I became an orthodox hearing aid user, hearing aids underwent a digital revolution and I was appointed as chairperson of the ENT department at Bnai Zion Medical Center (Technion, Israel School of technology in Haifa). As a chair, I had a clear advantage; I could set the 'communication style' in the department (no 'cross conversations' for example, or 'one at a time', 'first, listen', 'face-to-face conversations only' etc.) and all presenters during department meetings should either hand out printed material of what they intend to present or use a PowerPoint presentation. This communication style was convenient for everyone. The presenters had to prepare themselves well, to 'stand behind' their talks and to be very clear.

For me, the digital revolution in the hearing aid industry initially meant 'half digital' hearing aids; hearing aids for individuals like me whose hearing loss had a significant high tone loss component as well as directional and multichannel hearing aids. Hearing aids became more powerful and far more effective. Within a relatively short period, I used them all due to my hearing loss deteriorating further, and



Prof Luntz performing surgery.

faster, in the space of a few years. The FM system was a good solution for some time but necessitated detailed explanation to professionals who were not aware of this technology in an adult's hearing-impaired life. Most people were happy to incorporate and use the system, but the FM did create some embarrassments. Those rare moments of embarrassment demanded a 'deep breath'. Yet, those unpleasant moments led me to my first cochlear implantation. I thought that in order to ask other people to align with the communication style I need, I have to do everything possible to have the best hearing that I can have.

I called Tom Balkany (I could still talk on the phone if the conversation was a little structured) and told him that I needed a cochlear implant. The implantation took place less than a month after that telephone conversation. Knowing the process (which included me personally having already operated on a few hundred cochlear implantations in our new centre in Haifa), and being acquainted with Tom Balkany's surgical ethics and skills together with his operating theatre staff and culture, ensured I entered the surgery very relaxed. I received my first implant seven years after I started to use hearing aids consistently, whilst still having significant residual hearing. On the day of switch-on, which was done by Annelle Hodges, there were the few moments of very funny sounds coming 'into my head', without my knowing the direction they came from. I made a telephone call to my Mum (who never thought I was "that deaf") and Talma Shpak, the Chief Audiologist in our centre in Haifa. Years after, they both remembered that I heard

well through the telephone, but I remember it was difficult. Now, having insisted on continued use of a contralateral hearing aid after unilateral implantation for my patients, this has served me too, as I knew it was beneficial. Cochlear implantation was a relief; for the first time probably, I heard whispers. There were other sounds: my father sighing (this guy never complained), led me to understand that he too had difficult thoughts passing through his mind sometimes. Also, ripples in the waves have sound. I had forgotten it, or maybe I never knew they did. I also understood that hearing is much easier than I thought.

For several years I used bimodal hearing. At that time, FM technology was not well functioning with bimodal hearing. It was cumbersome. I gave it up. Meantime my hearing in the HA-ear deteriorated. It took me longer to decide about the contralateral implantation. I thought I heard so well from the CI but it was not well enough. Now the demands for hearing increased since I was growing tired of insisting on a certain communication style from other people. The decision for the contralateral implantation also took longer because I was confused by the unclear information in the research. People were promoting the idea that the first implant is very beneficial but the second one less so... but actually, the body of data at that time referred to heterogenous groups of unilateral and bilateral users, and none referred specifically to people who were so deeply involved in demands of the hearing society. Retrospectively, the first cochlear implant was lifesaving. But once life is saved, it also needs to be lived as conveniently as possible. The second implant was a joy.

Life with hearing loss is indeed a journey. There are still challenges related to the fact that functional hearing with a cochlear implant is inferior to normal hearing. One of the unsolved challenges for me is the acoustic accessibility in professional meetings, both on podiums and within the audience. Many professionals still do not insist on using microphones when they stand up to comment in lecture halls. Acoustics in lecture halls in Israel, and globally, lags behind the currently available technology. The audio systems used in many of these rooms are old and not equipped with connections to personal assistive listening devices for hearing aid and cochlear implant users. Therefore, hearing aid and cochlear implant users are not fully

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involved in the content of the lectures. Also, when lecture halls are equipped with the required technology, the acoustic technicians there might not be aware of how to make it transmit the audio signal to the personal assistive listening devices of the members of the audience who are using hearing aids and cochlear implants, or of the importance of doing this.

Even forums that are well aware of the right of hearing-impaired people to have accessibility to the content delivered in the meetings, have not overcome this challenge yet. They use transcription instead. Transcription is effective for some hearing-impaired people but it is not sufficient, since the person who is making the transcription is usually not a professional on the topic of the meeting. Therefore, the transcription often won't accurately represent the content of the talk. As a result, for the professionals in the audience who are using hearing aids and cochlear implants, their exposure to the contents is limited. Accordingly, their possible contribution to the event is also limited.

It has been for many years now that I have been an advocate on this topic. But this 'self-advocating' is not always accepted well and some people see it as impolite behaviour of mine that 'disturbs the fluency of the discussion'. Sometimes I tend to give up but there is an internal debate in me; am I allowed to give up?!

How has this influenced your work?

This is a hard question. It is nice to believe that the same 'me' with normal hearing could do better. But I do not really think so. I can't remember a career decision which was actively influenced by knowing I am hard of hearing. Also, for many years I did not think my hearing loss was a real issue, and then when I understood that it was, my career path was already chosen. I can rationalise choices and relate them to the hearing loss, but it would not be truthful.

Since many of my patients are hearing impaired to some extent, I know they might not understand my explanations during the visit, especially before surgery. I therefore try to produce a clear letter at the end of the visit. Sometimes I write what I say during the visit on the computer screen. Before surgery I equip them with a written explanation of their surgery which I keep editing based on previous patients' misunderstanding. A clinic visit probably takes a little more time.

Daily work is influenced by the hearing loss to some extent. All that is written in textbooks about the behaviour of hard of hearing individuals probably applies to me, but it is hard to see it in myself. Sometimes I need to listen more than once in order to be sure I have understood things properly, and

if I think there will be no time or opportunity to listen more than once, I try to ask for an explanation from someone around. But if there is no one around I need to ask directly and in a firm way. Sometimes it is not pleasant, for other people or for me. On the phone I know I sound more intense than most people, especially when I do not have the proper interphase between the implant processors and the telephone and I need to speak directly using the telephone itself. I can hear well but it demands an effort and one cannot be and cannot sound 'cool' when making an effort. Again, Mr Luck is here; most telephone conversations are no longer needed. Most people text instead.

In the operating theatre I ask the staff to cooperate with my hearing loss and align with the communication style I need, as well as to be focused in order to allow me to be comfortable. I am very grateful to the nurses and the anaesthetists I work with. Maybe this is an opportunity to thank my colleagues and students that have always been very cooperative, otherwise, how could I actually make it?! I do not take it for granted.

Do you have a memorable mentor or trainer who influenced your career?

My career was influenced by mentors, colleagues, and students who later became my colleagues. The mentors were Jacob Sade, Tom Balkany, and Fred Telischi. Each one of them contributed tremendously to my understanding in the field of otology. Tom Balkany and Fred Telischi dedicated time and thought in order to turn me into a mature otologic surgeon. Tom Balkany was the one who also showed me how to deliver information to deaf and severely hearing-impaired patients, and not to confuse nodding and understanding. Annelle Hodges's respect and dedication to her implanted patients were beyond what I thought existed. The opportunity to watch her working with implantees was a lesson for life. She was the one who switched on my implants years later. Talma Shpak is my audiologist co-worker. Together we established the Ear and Hearing Program at Bnai Zion where we took care of thousands of individuals with hearing loss and cochlear implantees over the years. Some of what we learnt together is included in our published research.

Last but not least, the two audiologists, Talma Shpak and Mira Berlin, keep influencing my career by being available whenever I need an audiologic consultation regarding a complex cochlear implant patient. And what is even more important perhaps, is their availability when

maintenance of my own implants is needed. It is actually very rare, as implant technology is very close to perfection, but without their help I cannot function.

What are your plans for the future?

My plans have always been the same more or less: to spend as much time with my family as I can; to find ways to simplify and shorten the practical and emotional path for my patients towards hearing restoration; to find the secret of how to diminish repeated surgeries for retraction pocket cholesteatoma recreation; to publish all my half-written papers; to help improve acoustic accessibility for hard of hearing individuals; but also to spend time on nonprofessional activities. Many otologic surgeons have similar plans.

What advice would you give to a young colleague starting out in their career?

There are so many good pieces of advice. Assuming you are referring to a young ENT specialist who plans to become an otologist, I would say, choose an active yet pleasant otologic centre for a two-year clinical fellowship where the mentors are known for being committed to the surgical education of their fellows. The key to beginning a fruitful career in otology is to be comfortable in surgery as early as possible. This place should also have a strong audiology department and I recommend every student in otology spend as much time as possible there. Clinical research is important since it is a 'self-quality control process' that allows one to verify decisions, to be acquainted with one's own surgical outcomes and to improve them. The rest is time, dedication, focus and love of the profession.

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