





# DUTY OR CHOICE Issue of vaccination or anti-vaccination of children

With certain parents there is a doubt related to the need of repeating vaccination doses. Pediatricians and immunologists, however, point out that measurable answer of anti-bodies is not developing with all the children after one dose, so the repeated dose or so-called buster dose will trigger such an answer with 100% children. It is the reason why vaccines are given several times, with the exception of BSG, which has a function to prevent hard forms of tuberculosis.

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World Health Organization estimates that two to three million lives are saved every year by immunization. Prevention of disease by vaccination represents the most economic, available intervention in health system. Common diseases of previous generations became rarer due to vaccination, while mass immunization programs proved successful in controlling or eradicating some of the diseases.

Currently, we have vaccines for preventing more than 20 deadly diseases. Before the mass campaign of vaccination eliminated all natural causes of variola in 1980, the disease jeopardized 60% of world population and caused death to one of four patients. Owing to vaccine, humanity eradicated this disease.

After initiating Global Initiative for Eradicating Poliomyelitis in 1998, WHO reported 99% of drop in cases of this disease. It is estimated that paralysis is prevented with 10 million people. Between 2000 and 2004, number of death cases caused by morbila dropped for 79% around the world. Unfortunately, eradication of this disease depends on the informing of the people.

### parent's experience

Routine immunization of early born babies is often delayed, many pediatricians think that the fractured immune system of the babies could significantly repress reactions to antigen vaccines and decrease protective effects of vaccination. Amid corona virus pandemic, vaccination system is lacking in its frequency. The current focus of medical staff is on pandemic but other medical needs must continuously be tendered.

**Nevenka Kapičić**, mother of two, appeals on parents to regularly vaccinate their children to create them precondition for healthy and happy future.

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"The world is showing us unambiguously how it looks without the vaccine. It is crazy to go back to the period of certain diseases eradicated by use of vaccine, to avoid benefits of medical advancement. It is also crazy to fall under the influence of anti-vaccine movement and not vaccinate your child–says Nevenka. According to her, the vaccination trend is dropping at world level, the same happening in the Balkans. Frequency of vaccination still has stable continuity which must be upheld. It is important to listen to the pediatrician in the matters of vaccination", stresses Nevenka.

"Child vaccination is not a personal matter, it is related to the whole community. If an anti-vaccine trend is rapidly growing, it will affect us all. It is not upon parent to bear such decisions on behalf of a child, who could feel on his skin hard diseases which could have been avoided by immunization protection", she points out.

Kapičić added that the state has a key role in vaccination of children in creating mechanism to promote vaccination. "It is the state that must create a legal framework for respecting vaccination system for benefit of the children and society and build an efficient system of punishment in cases of non-vaccination. Our mentality reacts to monetary punishments, not to suggestions and advices, so the system must use it for corrective behavior", says Kapičić.

Kapičić says that there is a smaller percentage of parents in dilemma weather to vaccinate their children and that obstruction comes from certain social media groups spreading anti-vaccine propaganda. The health system must react to it by education and other measures to narrow the space for dilemmas.

Same opinion shares Enis Eminović. He appeals on parent's consciousness to vaccinate children regularly and if they don't do it, to sanction them.

"Parents must have a clear picture that there are no scientific proofs connecting certain serious conditions with vaccination, but there are also no proofs that vaccines are utterly safe. In any case, there is no room for fear as side effects are rarer than complications from non-vaccination", says Enis Eminović.

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# Other side of story

A thirty-two old mother, who wanted anonymity, told us she regularly vaccinated her first child until the first 12 months, while it did not vaccinate the second child at all. Until March of 2012, she though vaccine was important and she did not question its efficiency, producer and containments.

"Why a healthy child would be injected with chemical substances without knowing reaction it might provoke, weather is there a gen factor triggered by vaccine causing consequences in further development. Let alone, to give something to children facing complications upon birth without knowing if it harms them or not. There are higher chances to having complications from vaccines than to having baby get TBC or hepatitis B. This is 21 century and life conditions have significantly improved ", she says.

Personal experiences of this mother who was vaccinated in the nineties are not the best one. It was war and no one dealt with vaccines. She remembers everybody had a wound after vaccine in IV or V grade which festered in months and caused temperature. In the beginning of 2013, after a month and a half from MMR vaccine, I noticed swelling in my child's right knee, left wrist and right-hand fingers. The child was too little, almost two years old, there was no diagnosis while medical results were fine.

"We've been through agony until a doctor from the Institute for Rheumatology from Belgrade appeared, who set a diagnosis to be a child arthritis which falls under autoimmune diseases. Medicine has no cure for it, it can only create state of remission. It has a rheumatic character and the diseased with this diagnosis often become invalids more or less in a period of ten days", says this mother.

She adds that her pregnancy was fine as well as birth. She gave birth near her 30<sup>th</sup> birthday. Her husband is of same age, both healthy with no serious diseases. Gen factor was ruled out, none of them suffered from rheum or arthritis in the family in the recent past.

As a parent, she started investigating about vaccine and it was the reason why she did not vaccinate her second child. If she becomes pregnant again, she will not vaccinate her third child.

"Upon diagnosis set, I went searching as a parent how a child of almost two years old may get incurable disease? I was not aware it existed until we entered that vicious circle of hospitals, horror stories, diagnosis, children so ill not able to ever function in a normal way. It is strange that problems arose soon after vaccination", she adds.

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Doctors and pediatricians gave diplomatic answers that MMR may have been a trigger for her child's illness till the rest of life.

"It means that if I shoot you, you may or may not survive. Strange explanations but it was all they provided as professionals", says a disappointed mother. At that time, there was a silent, shy talk about damages of vaccines and its connections to autism. It made her read and learn more about containments of vaccines and side effects to make an informed decision in relation to her second child. People should read, inform themselves, observe their child before reaching a decision.

"I did not do it with my first child but did as others told me. Presently, official medicine and the state are ignoring us, my nine year old kid is left with us to face his illness", says angrily our commentator.

Our second anonymous collocutor opted for non-vaccination at one moment, although she did not have negative experience with the vaccines.

"We stopped with vaccinations learning that children in near surrounding faced consequences that can almost certainly be subscribed to vaccines – juvenile arthritis after MMR, temporary (two months) paralysis after OPV vaccine and diabetes after Hib vaccine. We ran into doctors and medical workers who tried to make us vaccinate our children and our friends who tried to impose their opinion about vaccination onto us. We remained firm in our decision", said this mother.

### Professional's opinion

"Today we find vaccination to be not only one of the greatest medical achievements, but one of the most important findings of our civilization. The main aim of vaccine is direct protection from certain microorganisms, namely diseases they cause, scope of vaccination expanded by discovery that vaccines can also protect non-vaccinated people by creating collective immunity, also known as protective herd effect or that certain vaccines can protect from other diseases but those they are primarily designed with so-called heterologous effects", said D.S., pediatrician and specialist in immunology. He points out that one of the continuously most efficient vaccines the one against madness, if a patient is not properly protected, death is certain.

Experts say that the newborn immune systems are unable to independently fight with infection, vaccination is key. Early vaccination is even more put forward as a global health priority. With newborn, BCG vaccines is routinely used and a vaccine against hepatitis B. Medical workers say BCG is one of the most used vaccines in the world, with over 3 billion of vaccinated people and proven high efficiency. Exception is with

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newborn babies, a consensus exists with the immunologist community that undeveloped immune system of these children would suppress antigen vaccines and reduce its protective effect.

Our collocutor says children receive too many vaccines at once. Moreover, before birth, children are in a sterile environment while the act of birth exposes them to microbes which usually reside in human organism. Nevertheless, a contact with certain pathogenic microbes before becoming one year old leads to hard consequences and high rate of mortality, characteristic for historical period before vaccine discovery. Calendar for vaccination is made of for immune constitution characteristic for a certain age, or based on level of risk from infectious danger.

With certain parents there is a doubt related to the need of repeating vaccination doses. Pediatricians and immunologists, however, point out that measurable answer of anti-bodies is not developing with all the children after one dose, so the repeated dose or so-called buster dose will trigger such an answer with 100% children. It is the reason why vaccines are given several times, with the exception of BSG, which has a function to prevent hard forms of tuberculosis.

It is important to stress out that level of anti-bodies in organism drops in time, therefore it is necessary to retake certain vaccines. Anti-tetanus protection at the age of 18, protects in the following ten years from this serious illness.

Pro-vaccination camp members say in half-joke that all opponents of mass vaccination are vaccinated themselves. The vaccines advanced in time. For example, in the past the vaccine against big cough caused high temperature often and other unwanted effects, while today it contains a weaken toxin of bacteria which causes this disease, without any unwanted effects.

Medical scientists say that in decades there are no diseases like rubella, diphtheria, morbila or big cough, to the extent that medical workers in the developing and developed countries never faced patients with these diseases, meaning the pathogen causer is not present in the environment or population. It is the immunity brought by vaccination which eliminates the causers before causing illness. Also, one can never rule out possibility of "import" of an infectious disease from other countries so there is always active supervision on Poliovirus for example. It would be irresponsible to consider causer of illnesses gone if the illness is not registered anymore. On the contrary, it is present but regular vaccination keeps it in check.

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## Between personal and collective security

It seems there are more reasons of supporting mass vaccination practice, as the risk from uncontrolled epidemics and spread of infectious diseases, increase of mortality rate with babies to unproven effect which vaccination may have with little percentage of population where rare unwanted effects appear. Moreover, the more members of human community become immune via mass vaccination the better the whole population is protected from infections. The more a bacteria is infectious (virulent), the higher is percentage of population to be covered by programs of vaccinations and immunizations.

Undoubtedly, there are persons with whom vaccine is contraindicated, as it is a case with any medicine. Yet, it seems difficult to accept an opinion that due to certain isolated cases and in this moment still unproven cases, one should risk health and life of its child and others. Nevertheless, solidarity and empathy towards victims of contraindicated vaccine reaction, lead us not to avoid vaccines but to have society, media, WHO, exert pressure on pharmaceutical industry to question transparently such cases and do everything to make new vaccines technologically advanced and safe for all.

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