

**ICanServe Foundation  
Silver Linings 2019  
Boosting Your Immune System**

**Location: PICC Room 8  
Speaker: Dr. Charles Edward Florendo  
Moderator: Christine Jacob-Sandejas**

**Moderator:** Please greet everybody a pleasant good morning. It's so nice to see some very familiar faces and before I introduce our speaker for today, do prepare your questions because we want this to be more interactive between you and of course our speaker this morning.

Our speaker for today is Dr. Charles Edward Florendo. Now, he is an expert in the Buteyko Method which is a treatment based on breathing exercises and lifestyle modifications. It is designed to optimize the oxygenation of the body cells at the cellular level by relaxing one's breathing and correcting hyperventilation. And just on a side note ano? I just met Doctor for the first time today and as you can see, he is so nice and slim and very healthy. Can you believe he lost weight just by this breathing method? Wow, right? I've got to talk to this doctor and of course he also helps a lot of athletes which is something very close to me.

He is a Certified Family Physician, medical adviser of the Buteyko Clinic International and author of the Breathing Into Better Health Program Manual. He has been practicing this Buteyko method for more than 10 years and has taught the Buteyko method to health care workers and patients in three continents which is North America, Africa, and Asia and he has combined these with his training in Family Medicine and Interventional Wellness to produce a program that focuses on safety and relaxation. He is also here to help us and teach us on how we can help boost our immune system. So without further ado, I'd like to call in Dr. Charles Florendo.

[Applause]

**Dr. Florendo:** Thank you Ms. Christine. It's an honor to see all of you here. Not everyone is able to get seats ano? Well, this is already the biggest venue we have and we can see that it's really overflowing. Just shows us how much people are interested to come by today. I'm sure you are going to find this program very, very interesting. I found it very interesting putting it up. We'll be focusing today, although there's so much to talk about in boosting one's immune system. It's a very, very big topic. It's not going to be enough to talk about in 45 minutes. Not even 2 hours will be enough no? So we'll try to keep it within the 45 minutes and for this particular segment, we're going to be focusing particularly on vitamin C and zinc. You may ask, "Doctor, we have so many other stuff like so many vitamins, many antioxidants. Why are we focusing on vitamin C and zinc?"

Well, that's because we only have 45 minutes. The other thing is it's something that has a lot of focus on. It has a lot of studies already, this one but I'll be more than happy to entertain your questions later. The lecture is called "Boosting the Immune System with Vitamin C and Zinc." So I have given lectures for a variety of companies and? Many of them, drug companies and I am affiliated with the Philippine Academy of Family Physicians. This is the national organization of family doctors in the Philippines. So that's my official designation as a member of the Philippine Academy of Family Physicians. Everything else, all the other companies, I am not an employee but they only ask me to give lectures for them. So what are we going to learn today? We are going to learn about the role of the immune system in cancer and prevention of infection. We are going to talk about what we call antibiotic resistance. Has anyone come across this term? Antibiotic resistance. We'll just touch upon it, very, very short. We are going to talk about boosting the immune system with vitamin C and zinc. We are going to talk about strategy by how we can reduce our use of antibiotics and some of the benefits the immune system will get if we boost the immune system, and of course the summary of what we are going to discuss. Alright.

I have first question, when I went through the topic for today... I said, hey maybe you might be interested to know how the immune system actually prevents cancer. So that's the immune system, actually have a role in cancer. You don't see it being discussed a lot of times. Well, to get to know this, let's get to know the immune system a little more para we can answer it.

First off, the body is like a castle. Just imagine your body is the castle. The castle protects the people inside if there are a lot of invaders, and all. They can't get inside the castle and that's the design of the castle, to protect the people inside. Let's see, how is a castle protected? Here you can see a cartoon showing a lot of different soldiers trying to attack the castle and what does the castle have? If the castle is your body, and these are the infectious agents, your body would be protected by strong high walls like this and strong closed doors. If this was your body, imagine this being your skin... and the [indiscernible] that protects your body from the outside. And then, you have specialized soldiers inside that they like to attack the invaders. And the invaders, the soldiers are specialized. You have archers, knights, you have the people of swords, you have people who are preparing the equipment. There are just different soldiers and they do different things. So your body is very similar to that.

You have two lines of defense: innate and the adaptive. The innate are like the strong walls and the adaptive is like the specialized soldiers. When we talk about the innate, we will be talking about the skin, the barriers and the one that is most significant for cancer is the natural killer cells. Meantime, in the adaptive we have what we call the T-Cells and the white blood cells (WBC). White blood cells I'm sure you always hear about that when you go to the doctor, they say "you know you have UTI look at your WBC". Ano'ng WBC, World Bank... no no no. White blood cells. Yung T-Cells medyo

bihira natin naririnig yan. So we have the natural killer cells and what do the natural killer cells look like? Well, in a drawing we can imagine, we can illustrate them to have like this: they have these two arms and they actually pick up on cells that don't have anything that correspond to the two arms. So it's like a lock-in key position. Lock-in key is like this: We have a key, it will only fit into the lock of your door. You used the wrong key, it doesn't fit in. Apparently, if normal cells would fit into their keys properly... to these two locks whereas tumor cell has already mutated, it locks one of the keys. So when the natural killer cells see, oh you'd lock one of the keys, you are an enemy and they will eat them up like this. Fagocytosis. They eat it. That's how they attack tumor cells.

Now, natural killer cells play an important role in the prevention of both early and metastatic cancer. Now let's talk about the second one, the WBC. Let's take a look at it. The T-Cells produce a chemical called the cytokines and these cytokines are attached to other cells and then these cells become specialized forms of soldiers. So kanina na-describe ko mayroon kang archer, mayroon kang taga-ram ng door, mayroon kang knights, mayroon kang swordsman 'di ba? More modern tayo, siguro Navy, Marines, all these things ano? And then ganito rin ito. So the T-Cells will create a chemical and then these different chemicals, ito I.L, Interleukins. These chemicals will tell these younger cells what they should become. So there's some sort of coordination. Honestly, kaming mga doctors, we didn't invent this stuff. We are just studying it and we have actually understood everything on it but we do know, there's some sort of coordination that the body tells it, "okay ikaw maging ganito ka". You'd become more archers, we need more of this ganyan diba. We need more of that 'di ba? So the body is the one that is able to coordinate it using these T-Cells. So the chemicals are known as cytokines. These are produced by the T-Cells particularly the T-Lymphocytes and they are critical to the efficacy of the immune system response.

Certain types of T-Cells are very important for the maintenance of self-tolerance. Ano ba yung ibig sabihin ng self-tolerance? You might have heard of people na may ano, their own cells are attacking themselves. Yung tinatawag na autoimmune. Recently, we had one actress sinasabi siya has autoimmune disorder from which she went to Singapore. Makikilala ninyo kung sino yun ano, so mayroon daw. So the problem here is that there is a miscoordination so baka you might have heard, minsan... mababalitaan ninyo na during a military operation, yung fellow military ang nakapatay ng sundalo, ganon. So nagkakamali sila, nababaril din nila yung sarili nila and that can happen to us inside our body. It's happening everyday. Your cells are not just attacking invaders but they might actually being attacking your own cells. So if it attacks your joints, rheumatoid arthritis. If it attacks your other immune system, you'll get lupus. So these are problems that you will hear also, so because there is a big problem with the T-Cells or one of the big factors is the T-Cells are uncoordinated. They are doing things wrongly. So again, you have the the [indiscernible] roles, innate and adaptive, the two lines. Alright, innate natural killer cells and how do natural killer cells work? They have cell activity against particular target cells kaso for people who have breast cancer, there seems to be less activity ng mga natural killer cells. So nandyan sila but

hindi nila pinapansin yung mga breast cancer cells instead of attacking them and then when they do attack them, they are less effective. Parang hindi nila nakakain yung cells and then finally, in studies, have noted that when patients have cancer, the patients have lower natural killer cells activity, they were more likely to develop distant metastatic diseases. Really, the natural killer cells... we have to improve this.

The T-Cells naman they noted that for breast cancer patients, they would produce less cytokines. Kaya nga sabi ko yung, nagkaka-loko-loko na yung mga production ng white blood cells, iba-iba na yung napo-produce kasi there's less cytokines. And they noted that the micro-metastatic cells in bone marrows, usually they have depressed cytokine levels also. And then it seems to be that when the cytokine levels are medyo mali-mali ang production, it has a big role to play on the cause and the result of breast tumors. So pwede siyang cause, pwede siyang result. One problem is that, sabi nga we are not the ones who invented this, we are just studying it. So we are not sure yet if it's both cause, result, or baka one lang 'no? But it seems to be particularly affected on both sides. Now let's ask another question: so the question was, does the immune system have a function in preventing primary or relapsed breast cancer, what do you guys think? Yes, yes it does.

Alright. So next, the immune system cells in cytokines are released, or both implicated in the both primary and secondary prevention of breast cancer. That's basically what we discussed no? So the breast cancer prognosis seems to be related to the immune function system. So kapag mahina yung immune function niyo, you really have a bigger problem. What does the status of the immune system have in the prevention of infections? And can it help us heal faster from infections? This is a good question. Who says yes, please raise your hand. [Response] Oh, Ms. Christine says yes. Who says no? Who thinks it's not really related? Well, okay so buti walang no. Madalas kong nakikita when I watch TV, people keep emphasizing this thing ano? Again, yes.

The immune systems can lead to higher risk of infections and when you have immune systems na mahina, you also have slower recovery from infections. Now let's take a look, "Doc, how often are infections ba in the body?" Who here has never had UTI? You can raise your hand. Who here has never had pneumonia? 'di ba? Marami tayo. These are things that we've always, we really often have frequently... so let's take a look at this. This is information from the DOH. It tells us what are the top 10 diseases that we have. When we say morbidity, it means yung sakit. Ano yung mga nagkasakit. Hindi ito yung namatay, pag namatay mortality yun. Morbidity, ito lang yung pinakamaraming cause ng sakit in the Philippines. And you will see, the top three are all upper infection ng mga lungs and daanan ng hangin. So when you say bronchitis, dito yan yung papasok sa lungs. When you say pneumonia, ito sa lungs na talaga ito. When you say upper respiratory infection, medyo hindi namin alam kung nasaan pero it is somewhere up there. So inuubo, inuubo... pwedeng banda dito sa nose, pwedeng larynx, pwedeng halo halo. And then, you'll also notice that bandang baba, infections na naman ito... acute watery diarrhea. Most of the time infection yan. Influenza, viral. Urinary tract infection, TB, lahat yan infection. So out of the Top 10 you have 1, 2, 3,

4, 5, 6, 7... 7 out of the Top 10 and that includes the top three. Lahat infections. So how serious is this?

It's quite serious but ang good news diyan is if we know how to prevent the infections, how to recover faster. We can immediately reduce itong Top 10 'di ba? So let's take a look at it. Let's just focus on the respiratory tract infections kasi ito yung nasa Top 3. Anyway, ganoon naman eh, if you boost the immune system you will be able to bring down all of them, hindi lang yung nasa respiratory tract infections. So the thing is, ang respiratory tract infection is the most commonly seen one. Yung previous days naka-ilan na ako na ubo ang main problem. "Doc, inuubo ako, inuubo ako." How much does it cost to treat pneumonia? I have one patient ngayon nasa hospital, pneumonia. Can anyone guess? So this is a study that came out way back in, mga 2015 yata ito. And then what they did, they go around the different hospitals in Metro Manila and they started checking how much it costs to treat pneumonia. So they have here, yung pinakamura is ward bed sa hospital, government hospital and then yung pinakamurang gamot na pwedeng ibigay, pinaka-short na time, and then they went doon sa pinakamahal, suite room ng mahal na hospital and then pinakamahal na medicine. And then they checked how much it costs.

Sino ang nagka-pneumonia rito? Try to remember magkano hospital bill ninyo? Ang finding nila it's between 20,000 ito yung pinakamura pag government hospital tayo, ward bed, pinakamurang antibiotic. Ito yung pinakamahal, 71 to 74 but this was taken a few years ago. 2015, so four years ago. Ngayon I have a patient, ang running bill niya aabot, estimate ko aabot ng 80 with the antibiotic. Ang mahal kasi ng antibiotic ng pneumonia and buti kung pneumonia lang. Eh kung mayroon ka pang asthma, hypertension, that's why aakyat yung bill on this. In-explain ko nga sa kanya eh, you know ang running rate niya nasa bandang 50 lang but because you have asthma, we have to give anti-asthma. Because may hypertension ka, kaya aabot yan ng above 70. So ang mahal 'no? Pati ako, na aano ako dyan eh, nag sa-shrug ako eh. Medyo mahal siya. So we now have a problem with what we call antibiotic resistance.

What is antibiotic resistance? Ganito yan... ang kalaban natin, is a living creature, or living creatures, ang bacteria. Just imagine kung dito sa Pilipinas may mga rebelde. Pero let's just say na may rebels in one province, so the military attacks them. *Tadadadada*. Patay sila, ganyan ano? And then may mga nabuhay sa rebels and then they survived. The rebels are going to recruit more people. Pasok ka, dito ka. Magre-recruit na naman sila and then during their training, sasabihin nila doon sa mare-recruit nila, uy sir ganito... nakita namin kung paano lumaban yung military. Dito sila magpi-pwesto, ito yung gamit nila ganyan. So handa na sila... Next time umatake yung military, talo na yung military kasi alam nila ang gagawin unless the military will change its equipment and change their strategy but if they do exactly the same thing, matatalo sila because the rebels have already mastered. Alam na nila ang gagawin. That's how antibiotic resistance works. Our antibiotic start to figure out how the antibiotics work and pag nanganak ulit sila, kasi mabilis silang manganak eh. Hindi naman natin kayang ubusin lahat sila, may maiiwan. Pag nanganak na yan, yung mga

anak nila hindi na tatablan ng antibiotics. And this is a big problem now, kaya yung mga lumalapit sa akin, “Doc, anong antibiotics ko?”, don't muna. Don't muna, kasi the more we take antibiotics, the more they become resistant. And the more resistance we have, the more problems we are going to have in the distant future.

May mga tinatawag tayong super bugs ngayon. Marami sa India, marami sa US. Dito not so much but marami sa ibang bansa. Wala nang antibiotic tumatalab sa kanila, wala na. And we have a problem now kasi wala tayong bagong development ng antibiotics. The antibiotics were developed in the 1940s and ngayon ang hirap na kasing mag-develop ngayon ng mga bagong gamot due to regulations, due to whatever reason. Wala tayong ma-produce na bagong class so bagama't, yung sinabi ko sa inyong kwento, wala nang bagong equipment ang military ngayon... wala nang bagong strategy. So kung anong mayroon na lang, we are just working around it. So we have to prevent the bacteria from becoming resistant. Ang problem nito is that we are overusing the antibiotics. How do bacteria become resistant to antibiotics? Actually ito yung naikwento ko ngayon. One problem is the antibiotics are being used for stuff that doesn't need antibiotics. Sinisipon, mag a-antibiotics. Influenza virus, mag a-antibiotics. “Doc, bakit hindi kailangan ng antibiotics sa Influenza?” Ganito yan... Alam mo, just last night may daga sa room namin. Tama ba pupunta ako sa supermarket bibili ako ng Baygon? Mali. Kahit na ubusin ko lahat ng Baygon mula sa supermarket, hindi mamamatay yung daga. Tama? 'di ba, kasi hindi naman siya pang-daga. Ganoon. Ang Influenza is a virus... hindi po siya napapatay ng antibiotics.

Ang antibiotics is for bacteria. So kung viral ang problem niyo, avoid antibiotics. Ngayon some doctors, sometimes we are pressured. The mom wants us to give antibiotics, feeling namin hindi na babalik sa amin, so mabibigay namin... sometimes it's hard kasi right now viral siya and then yes, pwedeng mag-worsen. Pwedeng magkaroon ng bacterial infection. So instead of the patient complaining kung kanino or babalik sa amin, magbibigay na lang kami ng antibiotics. Pero hindi kailangan... just to be sure na lang na hindi siya mag-progress ganoon no? Kasi kung mahina yung immune system ng isang tao, pwedeng mag multiple infection siya. Ngayon viral lang and then in a few days, magiging bacterial. So it's very important that we strengthen the immune system para hindi mag-progress. Instead of giving antibiotics, let's strengthen the immune system. But 'yun nga, tao lang po tayo and we also have mga stuff that are outside of our control no? Minsan nape-pressure kami, yung magulang mismo gusto mag take 'di ba? There's some difficulty... mga ganyan.

Okay. Sore throat and sinusitis... most of the time hindi kailangan ng antibiotics but when we did our studies, we found that in Thailand for instance, 80% of the patients with respiratory tract infections, binibigyan ng antibiotics. Sa US 68%, sa China, presumed nila ang viral origin and yet, 97% of the children are being given antibiotics. So many of these children when they grow up, hindi na tumatalab yung mga mumurahing antibiotic. They need to use more expensive ones na. So these are some of the data that we have. In the Philippines, unfortunately we don't have the numbers. Why not use antibiotics for viral infections? Well as I have mentioned, it doesn't work

for viruses, it works for bacteria. Okay now, this is a chart of yung mga resistance rates natin. When I was in medical school, and noong fresh graduate ako there was this cheap antibiotic called cotrimoxazole. And we were using it left and right. Basta magka-UTI, ibibigay ko. Cotrimoxazole was quite effective. Who has recently received a prescription for cotrimoxazole? Anybody? Wala... Kasi itong chart na ito sa taas, this is the cotrimoxazole na it's been showing na yung mga bacteria become resistant to it, padami ng padami kaya upwards trend. Over the years, parami nang parami ang bacteria becoming resistant so hindi na siya ganoon ka effective after a while. Kaya ngayon wala nang nagbibigay or bihirang-bihira na lang ang nagbibigay niyan. On the bottom part or other antibiotics, and you notice dumadami na rin pataas pero ganyan so baka kung ito 2004, baka mga 2030 nandiyan na rin yan mataas na rin. So baka maubusan tayo, itong tatlo hindi na rin pwedeng gamitin in 30 years time. So kawawa yung mga children natin. Some of us, elderly na tayo by that time... yung iba children natin. They'll have a harder time. Okay. Another question, who has received chemotherapy? May friends na may, relatives na nag-chemo? Do antibiotics interfere with chemotherapy? Who thinks yes? Who thinks no?

Okay. Let's take a look at it. This was published in 2012 and it was talking about the common medications that interfere with chemotherapy drugs and ang sabi nila, "the medications that interfered with these cancer drugs include calcium channel blockers." These are for high blood. Sinong naka-amlodipine? That's calcium channel blockers. Certain antibiotics, antifungal medications, some steroids and proton pump inhibitors. Ang proton pump inhibitors, this is for acid reflux, hyperacidity. Sino sa inyo ang nagti-take ng Omeprazole? Esomeprazole? Pantoprazole? Basta may "azole" sa dulo. Azole... that's proton pump inhibitor. Yung calcium channel blockers, ano yung puno sa Baguio? Pine tree 'di ba? So may "pine" sa dulo. Amlodipine, Pilodipine... so lahat yan calcium. Mayroon pang ibang mga -pine eh pero yun lang kasi yung pinaka-common. But baka you are taking something na may "pine" sa dulo, chances are it's, ito yun. Kung mayroong "azole" sa dulo, ito yun. Very nice 'no.

When you talk about interfere, it doesn't necessarily mean na humihina. Pwedeng lumalakas. Pwedeng lumalakas 'yung gamot, so that means lumalakas 'yung side effect. Pwedeng humihina 'yung gamot. And pwede rin yung humihina yung antibiotic imbes na yung chemotherapy... basta maglalaban-laban sila diyan. So what we want to do is to prevent the antibiotic resistance. We want to reduce drug interactions and we want to lower the cost of treatment. And how do we do this? If we can reduce antibiotic use, we can do all of this. So I've been giving this lecture not for people, but doctors. Medyo iniba ko lang ng kaunti yung ibang slides. So I've been telling, giving this lecture to doctors around the Philippines regarding how to reduce the antibiotic resistance and reduce antibiotic use ano, through this.

One of the ways we can do it is to give vaccines. Pneumococcal vaccines, itong dalawa. Kaya yan 13 and 23, yung mga type of strains that it will prevent. Maybe you can ask your doctor which one ang mas bagay sa inyo no? So mayroon yang mga indications. You have two pneumococcal vaccines available. Some people, they like influenza

vaccines yearly. I'm not a big fan of the flu vaccine but there are some people who are more indicated like yun nga, if you are under chemotherapy, medyo sickly or elderly no? Medyo mas indicated but for younger people, it's optional in the sense so may mga pros and cons yan. Maganda siguro ma-discuss ko if you should come over to the clinic pero you can decide whether you want it or not. Exposure to triggers: what are the stuff that cause respiratory tract infections? One is, 'pag na expose kayo sa may sakit parati. Parati kayong nasa lugar na parating madumi. And then, stress can really cause this one also. Counselling for smoking cessation. Anyone here who lives with a smoker? Ganyan. It's nice to be able to get them to talk about smoking na we can have them stop smoking. So dito, I was telling doctors na ang findings kasi nila, if a doctor talks to the smoker for just mga 5 to 10 minutes each time, ang nagki-quit ng smoking is like, I think 10%. It's not so big pero that is still ano. For every 100 patients who I see, mga ten nag i-stop. By just talking to them and paulit ulit lang, ganoon lang.

If you know how to really discuss it properly... kasi mahirap diyan, people become more resistant kapag inaaway. They start to stand-up and say, "Ako ito eh." They become more defiant, they become ano and it becomes more difficult. So smoking cessation, that will also help a lot. We have to find a way to do it properly.

Okay, so nutritional intake is our focus today particularly the nutrition aimed at improving our body's defenses. Not all nutrition has a lot of studies that show that it can really help improve the immune system. The one we are gonna focus on is sodium ascorbate and zinc. That's the one that has a lot of studies which I will present here. Your immune system is made up of different parts, different cells. Madaming cells and to be able to get them to work properly, we have to strengthen both sides. Yung sinabi natin kanina, innate and complementary. So innate, you have your skin and other barriers. Natural killer cells, you have the adaptive, which are antibodies and your T-cells. So again, nakita ninyo na ito kanina 'di ba? Yung innate and adaptive.

And you'll see, the vitamin C has a function in improving the innate system and has a function in improving the adaptive also. So it helps improve the skin in any cause of virus. It helps make the natural killer cells stronger. Zinc naman plays a big role in the adaptive immunity. This one helps also strengthen the skin in any cause of virus. In fact nga yung binabasa ko dito, Zinc daw helps making the skin thicker. Sabi ko baka nasobrahan ako kasi makapal mukha ko eh. Hindi, so yan it helps thicken the skin daw. Ito yung training ground ng ating mga white blood cells. Kung may anak kayong sumama sa PMA, iti-train yan and then somewhere along the line sasabihin, "O ikaw pang airforce ka, o ikaw pang marines ka," 'di ba ganoon? So dito, part of your body starts to produce yung mga sundalo ng katawan and then they start getting divided into the different types of soldiers. Iyan, and each of the soldiers have different functions.

I'll be honest; I don't memorize their functions ah? Kasi hindi naman ako immunologist eh. So I don't memorize their function. Makikita niyo ito when you do a complete blood count, yung test yung CBC. Nakaindicate iyang mga yan. You'll see that zinc is



part of it somewhere here. Yung vitamin C nandito, yung zinc nandito, yung vitamin c nandiyan... so kapag may kulang diyan na zinc and vitamin C, hindi napo-produce itong mga blood cells ng tama. May mga kulang and then sometimes they are less efficient. So ang vitamin C is a water-soluble vitamin and that's a type 1 nutrient. I forgot what type 1 means eh, sorry. It's used for the growth and repair and the production of collagen. So collagen is for your skin, kaya yung mga parating nagkaka-singaw, yung parating nasusugatan, this will help na yung gumaling mas mabilis yung wounds ninyo.

It helps in the iron absorption and it's reduced by cigarette smoking. So you might have heard some smokers say, "O basta mag-cigarette, mag vitamin C ako okay na 'no?" Alright. Question ko sa inyo, how much vitamin C does an orange have? Any answers? Any guess? Mark, mayroon ba tayong prize sa makakakuhang tao? Wala tayong prize eh. Ay, alam ko na... kung makakuha ng tama, will get a free glass of Nutribest doon sa likod. I will tell you na: 60-70 milligrams ang isang orange but there are issues to this. Unang una, this was taken from a book na yung author hindi Pilipino. So this is the orange sa lugar niya. Siguro sa US ito... Hindi ko alam kung anong libro din ito but yung author niyan, kung yung orange niyo galing doon. Kung ang orange niyo galing China, I don't know kasi ngayon maraming gagamit ng, iba yung fertilizer, iba yung kind ng orange diba? Number two, have you noticed na yung oranges parang mas matagal pa bago masira kaysa mangga? Ang weird no? Yung mangga natin dito mas mahal pa kaysa orange na foreign, bakit ganun no? So a lot of these may mga reasons yan, may mga nagsasabi sa akin na may ini-inject daw na some sort of something. The other one is a lot of the fruits that are coming from abroad are frozen. So they are frozen, they are brought over. Once they are frozen, most of the water-soluble vitamins are destroyed. So ang mga problem natin, baka junk food na lang din sila. Actually it is best to take in local fruits because they don't go through that process for both the nutritional, to help our farmers, and also for environmental reasons. Imagine ang ano niyan, ang freezing niyan and all takes so much carbon production diyan just to freeze it, just to ship it over ganyan. But this is something that happens 'no? So I don't really know if yung 60-70 na ito is true doon sa nabibili ninyong supermarket oranges. It might be true, it might be even more, it could be less. I don't know, I don't have a means to test it eh.

Okay, so what are the signs when kulang tayo ng vitamin C? You have problems with the hair, you have problems with the gums, always bleeding... hindi ka gumagaling ng husto. We have here a picture of the pirates from the movie "Pirates of the Carribean." A long time ago kasi yung mga sailors, they didn't have vitamin C. In fact, it caused them a lot of sickness, itong mga nandito and a lot of them actually died because sobrang kulang sila ng vitamin C. So si Magellan, he sailed with I think 280 sailors when he started. When he got here to the Philippines, ano na lang sila, less than 200. Ang daming namatay and most of them died because of vitamin C deficiency. Nag-improve sila when they started putting in more fruits on board later on. So that's why yung pirates, ang papangit din nila. Apparently because kulang ng vitamin C 'no?

But now let's take a look at, ano ba ang kinakain natin sa house? This is the most commonly consumed foods for age group 20 to 59. Rice, sugar, cooking oil. Ewan ko kung bakit cooking oil nandito eh. But hindi naman gumana ito, this came from the government eh. Ano ba nilalalaklak ba natin ang cooking oil? I don't know how they came up with cooking oil but cooking oil is there. None of these is rich in vitamin C, in fact even number 4 and number 5, kaunti yung vitamin C niyan no? Kaunti lang... so who among you here have taken in a rich source of vitamin C food this morning, for your breakfast? Okay, ito yung mga older than 60 years old... rice, sugar, coffee, instant coffee pa nga eh. Ganoon din. Later I'll discuss why coffee is even worst. What's the problem with coffee. Okay, ang problem natin is that we do have a deficiency... dito, yung mga nag-meet lang ng RENI. Ito yung nire-recommend amount of vitamin C per day, yung minimum. Yung sa 20 to 59 at saka itong 60 years old up, kaunti lang talaga yung nagmi-meet ng portion. Imagine that's almost 80% ang hindi nakakameet ng tamang amount of vitamin C. So chances are, dito ang daming hindi... kung 100 tayo dito mga 80 might be vitamin C deficient.

So can vitamin C help prevent or reduce infections? Let's take a look at some studies. This is a study, so ang PubMed is like the Google for Medical Studies, ita-type namin sa PubMed and then lalabas yung mga hinahanap namin na studies. So this is a study that they did, it says 2013 it says Cochrane... so ang Cochrane, gagawin nila is instead of people ang pinag-aaralan, mga studies. Sabihin natin gumawa ka ng paper on something, ikaw gumawa ka ng paper, ikaw gumawa ka ng paper, instead of comparing yung mga patients, what we do is we compare the papers. Ano'ng masasabi ng paper na ito, ano'ng masasabi ng paper na ito and then we put them together. So what they found was when they put together all these papers, they found na umiikli yung time that people have colds by 8%. So 8%, significant na ba yun? Well if you have colds everyday, yeah. So 8% instead of 10 days nagiging 9 ganiyan, nare-reduce. And it also reduces the severity, yung how bad... gaano kalala yung sipon if they take vitamin C. Evidence is more for prevention of longer bouts of severe colds if you catch it rather than as treatments. So kung consistent mong tini-take yung vitamin C, it's more effective. What happens to vitamin C in our body during infections? Well this one is an observation study, napapansin lang nila na yung WBC, yung sinabi kong kanina mga sundalo, they usually contain 30 to 50% more vitamin C than the rest of the blood around them. Kapag nagkaroon ng infection, nauubos yung vitamin C tapos kumukonti yung mga sundalo by 25% and then yung mga naiwan na sundalo, hindi sila nakaka-attack nang mabuti. They use 25% of their ability. So kumonti na nga sila, miscoordinated pa. Doon sa sinabi kong mga cytokines, mga ganoon that's part of the reason.

Now let's talk about zinc. So zinc is over here sa periodic table natin and it's part of many enzyme. So marami siyang ginagawa sa katawan. Associated with insulin since it's of genetic materials, transport of vitamin A, wound healing also nandiyan, development of normal fetus. So marami siyang functions. It's part of many proteins and enzymes in your body and has a variety of effects in the immune system and nervous system. This one is a study that came out in 2013, the article that says that

Zinc keeps the immune system in check. The zinc actually helps keep the soldiers well coordinated bagamat kung sports tayo, medyo natataranta yung coach hindi nakakalaro ng mabuti yung team. Mali mali yung ginagawa. So if you have better zinc, the coach becomes better. Mas coordinated sila. So when zinc is depleted, we have reduced natural killer cell mediated cytotoxicity so hindi nga sila makapatay ng mga kalaban. You have reduced antibody mediated responses so mas kaunti yung in-attack nila and then reduced host-defense against pathogen tumors. Yun, 'di na sila as effective. Where do you get zinc? Ito yung some of the pictures ng mga zinc, high zinc food: protein containing foods, red meats, shellfish, and whole grains. Unfortunately, for those who like white meat, sinong nagwa-white meat ng chicken? Hindi po masyado... mahina po ang minerals ng white meat. Wala din yun masyadong iron. Ang dark meat mayroon eh... kaya nga siya dark because of all the iron and the minerals. White meat has less, no?

Again let's take a look at yung food list natin, wala na naman diyan yung mga zinc. Okay, let's go sa mga elderly, wala pa rin... and then ang zinc deficiency, mas less naman. Kanina almost 80 yung kulang ng vitamin C, ito naman mga 20... slightly above 20 ang may mga kulang. Ayan oh... so 21%, 20%, 21... so yung zinc deficiency, mga 1 is to 5. So magbilang tayo, 1, 2, 3, 4, 5... isa sa inyo kulang. 1, 2, 3, 4, 5 isa sa inyo kulang. So mas less naman yung zinc deficiency pero I'd like to point out that there is a difference between zinc deficiency and optimum levels. So you may not have a deficiency, meaning you don't have the symptoms ng kulang pero you still notice na medyo matagal pa yung paggaling nung balat. Medyo sickly parin, kaya so you don't have a deficiency but your levels are not optimum. If you want optimum levels, you need more the minimum amount. Bagamat yung mga anak natin gusto natin ang grade niya hindi naman 74.9 parati diba? We want them to have them a grade na mataas, ganoon din ito. Hindi naman sana pasang-awa yung ating nutrients. Better kung mas mataas than the pinakaminimum required.

Can zinc help, prevent, or reduce infections? Or antibiotic use? Who thinks yes? Well, yes na yan... dito naman tayo eh. So this one was published by another journal called the Clinical Nutrition Journal and it has started testing zinc supplementation, ano'ng effect niya sa mga elderly? Yan oh, cytokines, so ano'ng effect niya? So what they did is they went sa mga home for the elderly, and then they took note... they went out and they took out yung mga elderly who had a lot of zinc in their body saka yung wala, yung kulang. May cut-off yan eh, 70. Ito yung mga findings nila. Ang first question: ilan sa mga elderly ang nagkaroon ng upper respiratory tract infection in 1 year? Okay, yung maraming zinc sa katawan nila, 12. Yung kulang ng zinc, 24. So doble ang nagkasakit ng upper respiratory tract infection 'pag kulang ng zinc. Next question: ilan ang nag-tonsilitis at nagkaroon ng sipon, common cold? Yung mga maraming zinc... tonsilitis zero, common colds, 16. Ang kulang ng zinc, 8 ang tonsilitis and then yung kulang ng zinc 40 ang colds. 'di ba more than double? Ito zero nga yung isa. How about yung flu and fever? Zero lahat sa zinc group habang yung kulang ng zinc, 12 and 20. How many of them had one infection, two infections, three infections, four infections in one year? Tingnan mo ito, yung one infection sa zinc group, 29. Yung placebo group

52. Yung 2, 3, 4 infections, zero lahat sa zinc. Itong placebo group may 24, 8 and 4. Received antibiotics, how many got the antibiotics sa zinc group? 8 lang... placebo group, yung placebo yung walang zinc intake, 48. Ang laki ng difference 'di ba? So this shows us na after zinc supplementation, the incidence of infection was significantly lower and then ito naman, ito yung nursing homes. They went around different nursing homes and then they went to 33 nursing homes in Boston for one year. Participants, they checked them out. Yung kanina pala yung zinc lozenges. Ito pala yung may blood test lang. Chineeck lang nila sino yung kulang ng zinc, sino yung okay yung zinc and then tiningnan nila yung results and then tiningnan nila, incidence and number of days with pneumonia. So how many times sila nagka-pneumonia. Number of antibiotic prescriptions, number of days of antibiotic use, kung ilan ang namatay sa pneumonia. Tinitingnan nila. Incidence of pneumonia, those who have enough zinc in the blood, 0.25. Yung kulang ng zinc, 0.46. So almost double yung number of incidence of pneumonia yung kulang ng zinc.

Duration of pneumonia, 3 days lang... 3.19 days lang yung sa may sapat na zinc sa dugo. Yung kulang yung zinc, almost 7, 6.8. So kung nagte-take kayo ng antibiotics, pwedeng 3 days na lang magaling na kayo if you have a lot of zinc. Number of new antibiotic prescriptions for pneumonia, yung maraming zinc 0.26, yung kulang ng zinc, 0.48. Days of antibiotic use for pneumonia, 2.5 pag maraming zinc and then 4.8 sa kulang, so almost double. So again 'no? Yung ginamit ng may antibiotics, the one taking a lot of zinc in the blood, wala pang 3 days ng antibiotics magaling na sila. The ones na kulang yung zinc, they have to take 5 days. So maganda diba? Nababawasan yung antibiotic use. Nabawasan yung number of pneumonia, kumonti yung antibiotic prescriptions, umikli yung time of pneumonia nila, and then umikli din yung antibiotic use, yung number of antibiotic days nila. Is that good news? That's good 'di ba? Yeah, maganda siya.

Alright. So zinc for the common cold, ito naman for the sipon 'no? These are very technical stuff, basta maraming test. Let's just take a look at the final conclusion: zinc administered within 24 hours of onset of symptoms reduced the duration and severity of the common cold in healthy people. When supplemented for at least 5 months, it reduces cold incidence, school absenteeism, and prescription of antibiotics in children. So kumonti yung use ng antibiotics ulit, kumonti yung colds. Less yung mga absences but this is again, mayroon silang ipinasok na supplemented for at least 5 months. So so far may study tayo na if you take it tuloy-tuloy for 5 months, huwag naman yung ngayon magti-take bukas hindi tapos kung gusto ko lang iti-take ganyan. Dapat 5 months para maging effective.

Does it work for less than 5 months? I don't know kasi ito yung sinabi sa study eh. So ang study was only for 5 months. So maybe you guys want to fund a study na less than five months, pwede din ano but 5 months is the one that was done there. Okay now if you combine vitamin C and zinc, will they work together? So you look at how they function, ito yung mga functions nila and you could see wala naman diyang nagaaway ano? They are both an antioxidant, ang interesting pa dito vitamin C helps pair

glutathione and helps regenerate vitamin E. So a lot of times ngayon 'di ba, ang daming talk about glutathione, about vitamin E, and yes vitamin C will help you in maintaining those nutrients. When they combined it, they found that it's better than placebo, so placebo means wala, it's not taking anything. When it's better than not taking anything for reducing nasal discharge over five days of treatment and then nawala din yung symptoms earlier with zinc and vitamin C.

Okay. So this is an overview of the different studies and there's a chart but alam mo ha, honestly when I was in medschool... I hated yung mga ganitong mga charts. I find it so boring eh, yung book na ganyan tapos may malaking chart imemorize ko yan so I just ano na... I summarized it for you guys. Okay, with vitamin C and zinc, it reduces the incidence of colds and pneumonia. There's less symptoms, there's quick release of symptoms and may reduce the use of antibiotics. That's nice 'di ba? Yes. So can vitamin C and zinc prevent or slow down cancer? Well... you are saying yes. Yes. So so far they found ito, when combined yung mga studies wala pang pinakita na vitamin C itself lang pero mayroon tayong supplementation, C, E, beta carotene, it can decrease cancer incidence or cancer mortality. Natatakbo sa ER, napasobra ng oyster sa buffet, I don't want to name the restaurant, baka alam niyo yung restaurant. Took a lot of oysters, na-ICU. So i'm not saying you don't take this. Ang problem is if you want to take in a lot of zinc and you take in sa red meat, sino dito ang red meat eaters? You will also take in a lot of the cholesterol 'no? A lot of the fat. If you want to take in with zinc, you're taking a lot of the risk of oysters also. Some of the dangers we have with these things. Vitamin C and zinc tablets, they are consistent. They are always 500milligrams vitamin C, 10 ang zinc ano provided na maganda yung quality nun kasi we have a lot of issues now. Mayroon dati bibili ako ng ascorbic acid Vitamin C, wala pang 1 month naninilaw siya with colors, I'd go to the pharmacist, bakit naninilaw? Sabi niya nag-oxidize lang yan pero safe yan. Eh 'di ngayon nung lumaki ako, kasi bata pa ako noon, ako yung kumukuha... nung lumaki na ako, zinc, teka? 'di ba antioxidant ang vitamin C eh di kapag nag-oxidize yun, eh di wala yung antioxidant niya... 'di ba? So vitamin C and zinc have a problem with a lot of stability issues. So not all the tablets are very stable actually. And then the drug companies they don't tell you that. But there are very stable formulations.

It is easy to purchase, easy to store, easy to consume. Cost of supplements, the vitamin C and zinc is actually one of the most affordable now, 7.50 lang yan no. Kasi marami pang ibang supplements that you can try. Doc, pwede ba yung mushroom extracts? Doc, pwede ba yung ganito, nabasa ko yung ganiyan. Yes but you will be... you check it out kung magkano. You go to a health store, gagastos ka thousands na eventually for all of these things. So this is one of the cheapest things that we can add on 'no? Multivitamins and mineral supplements, pwede rin. Ang mga multivitamins, we have problems with vitamin Bs particularly. Ang vitamin B, the vitamin B that we can buy in most of the drug stores, they are non-metulated. You look at it... ang example niya, hindi ko memorize yan, laging mahahaba pangalan niyan eh. Ang na-memorize ko lang is vitamin B12, ang pangalan niyan is Cyanocobalamin. Ang cyanocobalamin, kaya yan cyanocobalamin ang vitamin B12 diyan is cobalamin. Again, you talk about stability

hindi nila malagay sa tablet without the vitamin B12 getting destroyed... so ang ginawa ng mga chemists, they mixed it with cyanide kaya naging cyanocobalamin to make it stable. When your body takes it in, your liver identifies the cyanide and kicks it out nasasama yung vitamin B. So ang actual absorption mo ng cyanocobalamin is just very low. If you keep taking a lot of this formulation, you have a higher risk for liver problems. So we do have five patients na: "Doc mayroon akong fatty liver, 'di namin alam yung cause." It could be because of high dose of vitamin Bs. These are some of the risk of a lot of these vitamins. So far ang vitamin C and zinc have been very safe. If you want to increase the vitamin C, you go for vitamin C.

"Paano yun Doc, mayroon akong isang multivitamins sabi kumpleto daw A hanggang ganito, andiyan." Eh di kung ganoon, totoo pero ang vitamin C mo dito 60milligrams lang dito, 50 lang ang liit. Tapos you may need to add separate tablet if you really want to increase vitamin C. Okay, ito yung tinatawag na anti-nutrients. When I was young, I kept hearing from my parents na if you eat a lot of broccoli, eat a lot of cabbage, eat a lot of lettuce, you can end up with goiter daw. Who has heard of this? Or sinong naging victim niyan 'no? Okay, ang reason niyan... that time they didn't know why it was. So they did a lot of studies and they found itong mga gulay na ito, they contain itong tinatawag na glycosolates. And what glycosolates does is they prevent your absorption of iodine. And so if you take in up of this, you are not going to be able to absorb iodine and you'll develop goiter. Iyan. Ganyan ka serious. These are what we call anti-nutrients. And we do have patients, vegetarians who end up having goiter because of this particular anti-nutrient. Ngayon ang problem niyo is, ang spinach and broccoli, they also inhibit minerals absorption particularly zinc and iron. Ang mga tea, coffee and wine drinkers, ganoon din they have the flavonoid tinnitus naman and they reduce the absorption of iron and zinc. Sino dito ang mahilig mag-kape? So kung hindi na kayo nagti-take in masyado ng anything rich in zinc, mahilig pa kayo mag kape, iba-block pa ng kape yun. So ngayon ang hilig-hilig natin sa Starbucks, and you didn't know wala namang zinc diyan... so expect zinc deficiency. So you may need to take in something to help improve your zinc intake.

Okay, so in summary ano? Let's build your body's defenses using vitamin C and zinc. They can strengthen the two parts of your immune system known as your innate and adaptive. They can help protect you against infection and cancer. They can reduce the number of infections if you improve your immune system as shown by your studies a while ago. They can reduce the intake of antibiotics, 'no? As shown kanina 'di ba yung mga studies, kumonti yung antibiotic intake, kumonti yung number of days taken. So they can slow down or hopefully, they will slow down antibiotic resistance. They will reduce the drug interaction from antibiotic use and vitamin C and zinc must be taken by the body. It is not produced by the body. So kahit ilang beses kayong mag-exercise, kung ano'ng gawin ninyong program. Kahit na yung tinuturo kong breathing program, hindi po dadami ang vitamin C and zinc ninyo because of that. You have to take it in and it's quite inexpensive 'no? Compared to other combination, medyo okay siya. So this is boosting the immune system with vitamin C and zinc. I'm Dr. Charles Florendo, umabot ba tayong 45 minutes? Sakto lang, sakto lang.

[Applause]

**Moderator:** Okay, before I let him go and I'd like to ask our audience, if you have any questions now is really the time for you to be able to have your own specific questions for Doc.

**Question #1:** Good morning. I've been using vitamin C for years now. That's 2000 mgs. a day but a doctor, some doctors actually and some users are advising me not to continue it because according to them, our human body can only accept 500 mgs. of vitamin C a day, is this true?

**Speaker:** Okay, now my first comment ano? I'll be honest, I'll be ano lang muna sa inyo. Kami doktor lang po kami, tao lang po kami. Hindi po kami Diyos or anything, so we don't know everything in the world and pati kami mga doctors, we tend to disagree with each other. So mayroon nga kami sa ospital namin, dalawang doktor nagsapakan talaga sa hallway. Kasi iba talaga, sapakan talaga nagkapikunan na kasi magkakaiba din kami ng opinions. Ganyan, that's also important to do our own research and all and yes, not all doctors will agree or say the same thing. Ang vitamin C, ang first problem natin diyan is how much does your body need? So far vitamin C has a unique absorption pattern among all the vitamins. Ganito ang vitamin C absorption, the more you take the less in percentage you'll get to absorb. So let me clarify that, let's say if I take 100 mgs., I absorb 99% of it. If I take 500, magiging 90% na lang. If I take 1000 mgs., magiging 80%. These are just figures I am making up no? I don't have the exact figures so the higher you start taking, the less the percentage you start to absorb at that time. Tumataas pa rin pero parang yung curve niya medyo kumokonti yung amount. So what I advise to you is kung 2,000 ka, you divide it into 4 doses para mas mataas ang absorption mo.

1,000 - 1,000 o kaya 500, 500, 500, 500 para mas mataas ang absorption. Huwag ninyong i-one take na ganyan. Secondly, iba-iba tayo. Iba-iba yung intestines natin. Yung intestines ko magkaiba nung sayo no? And a lot of the things that absorption is highly dependent on the ability of your intestines to absorb and unfortunately, we don't know how much you are able to absorb. So yung 500s hulaan lang yan. Pwedeng you might be absorbing more than I am baka pwedeng less. So the ability for you to absorb is also different. So maraming mga factors yan and a lot of the factors, we don't know what they are.

**Follow Up:** Does it have liability in our body like having gastritis?

**Speaker:** Okay. That is dependent per person. There are some people who are more susceptible to mga gastritis or some who aren't but we do have a question kanina when we are reviewing it, the differences of vitamin C. Yung ascorbic acid and sodium ascorbate... we also have calcium ascorbate no?

**Follow Up:** Tapos may alkaline pa.

**Speaker:** The alkaline is sodium ascorbate and... Basically ganito yan, in 1911 or 1912 something like that, vitamin C was synthesized in the laboratories. It was the very first vitamin that was synthesized and what they found is they were able to synthesize it as ascorbic acid. And then people have [Indiscernible] kasi acidic yun, if they combine it with something they can make it into an alkaline form. So kaya naging sodium ascorbate, calcium ascorbate and yun, yung mga rose hip extracts. Now, we have people who swear na ang sodium ascorbate hindi sila sumasakit ang tiyan, ascorbic acid sumasakit. But sa mga studies when we have yung mga big studies na ganun, inconclusive. There are some studies that say, okay siya. There are some studies that says parang wala naman. Kasi the main problem here is actually a per person basis. Not everyone is the same, so you have to look at it kung sinisikmura ka ba ganyan and all and sometimes, it's not actually the vitamin C that's causing it. There's some people kahit anong i-take nilang tablets sumasakit eh. It's not really the vitamin C itself and then also, other thing we have to look at is ang tablet mo is not all vitamins. Yun yung sinasabi ko may mga stability issues yan, so halimbawa bumili ka ng bareta, 'di ba yung mga bareta na bar. Is that all soap? No. 80% chalk yan, 20% lang yung soap niyan kasi may pampatigas yan eh. May pampabango sila, may pampakulay. Ganoon din yung tablets mo, mayroon silang may pampakulay, may pampatigas, may pampaano... and so sometimes, nagre-react tayo doon sa mga additives. So sometimes you change brand okay na. O so may mga nagco-comment sa akin, "Doc, why are generics exactly the same?" Magkakaiba yung additives and a lot of those additives actually is the one that's causing the problem.

**Follow Up:** Okay. So in terms of mega-dosing, it's okay to do as long as you spread it and space it out throughout the day?

**Speaker:** Well you have to define mega-dosing, you have to define it. Yung 2000 mgs. that's not mega-dosing.

**Follow Up:** So is there such a thing as mega-dosing or the maximum?

**Speaker:** I've been attending these groups that actually sell yung mga vitamin C... ang mega-dosing sa kanila is yung 500 mgs. nila is like one box three times a day. So one box is more than 100 tablets. Ganoon yung mega dosing nila. Talagang 100 tablets a day, 200 tablets a day yun talaga mega dosing nila. Okay, first... if you will consider that ha? I am not recommending it yet kasi it's not my specialty. I don't have the experience dealing with mega-dosing but ito ang first ko, don't use this for mega-dosing. Don't use ang combination. Kasi you have zinc, the zinc will overdose. Ang zinc may overdose yan... ang vitamin C wala pang finding. Wala pa naman kaming nakikitang real problem with overdosing ng vitamin C. I think ang zinc mayroon.

**Moderator:** So with vitamin C we just end up urinating, we just pee it out.



**Speaker:** In theory. Yes, in theory.

**Moderator:** Yung zinc? If we do end up overdosing, effects would be?

**Speaker:** Zinc marami. Unang-una is mapapalitan yung taste ninyo. Magiging metallic. Yeah, nausea, stomach pain ganyan and then the immune system also starts to go down pag sumusobra. How did we know kung sobra? Well yung magchi-change yung taste and all and then usually ang zinc, kasi ang zinc ang maximum nito... ang FDA approved is 40. Kaya nga sabi ko 4 tablets of this a day, eksakto pala mari-reach niyo yung 40 mgs. At 40 barely can make it the overdose but ang pinaka, pinakamaganda talaga is you have an assay of your blood to test how much vitamins you really need and if we can really determine how much we need, that test... there are two companies offering it, three, ay two... two here in the Philippines that offering it. So they are biochemical tests on the blood. We have it what we call Nutrival, kasama yung Unilab actually has; one of their arms is doing that. That's one... the other one is [Indiscernible 01:01:20] and then you need a doctor who will be able to interpret this. So I have a bit of training on that and I was also using it.

**Moderator:** Any other questions? I assume we have a full house here, okay there you go. We'd focus on one.

**Question #2:** About the calamansi, I've heard some people would take it early in the morning like they start with four pieces or certain number of pieces and something to do with alkaline, I just want to know your...

**Moderator:** So with the calamansi be like a lemon that lot of people does take it in the morning...

**Question #2:** Is it also good to do that or it depends on the body?

**Speaker:** Yeah, I hear lot of people doing it. Okay daw siya. Honestly I don't know how it works. I hear a lot of theories but I haven't actually figured out which of the theories will really work on the calamansi but I don't see any reason why not to try it. You try it, kung sumasakit tiyan mo, then stop kasi alam mo ang maganda diyan is you can experiment with your body naman eh. You are not going to die trying it out. So if it feels good for you, then go on 'no? I have a patient, they came from other doctors and then tinanggihan sila because they wanted to do mega-dosing. They came to me and sabi ko, sige you can try but ano lang muna... susubaybayan ko kayo. Let's do these tests and after 1 month, 2 months let's recheck yung cancer ano mo para we can see if it's really... ano yung ano. Para it's not going to be too late if we find problems no? So subaybayan lang. You can do these things and then tingnan niyo lang. Honestly, I don't really know much about how it works but yes, in fact there is a famous religious commentator iyan yung ina-advocate niya, yung calamansi every morning. After they got it nagiging okay din yung sipon nila, ganyan.

**Moderator:** Okay. Any other questions?

**Question #3:** [inaudible due to very poor audio]

**Speaker:** Vitamin C drips, yeah it's just the same as taking vitamin C into your body but...

**Moderator:** So it's like a mega-dosing?

**Speaker:** Hindi, 1000 mgs. pa rin yung mga binibigay eh. It is still 1000. It's more expensive, it's more expensive. Now we do have this thing called first pass effect no? The first pass effect is when you take it in, you take the tablet in... a lot of the tablet is destroyed by the acid in your stomach and then the absorption of your intestine kaya medyo nagbabago and then the other one is as soon as it is absorbed, dadaan siya sa liver, ipao-process sa liver. The liver can get rid of as much as 25% of your vitamin. Yung drip doesn't have that problem. That's why the drips have that...

**Moderator:** Better absorption...

**Speaker:** Yes. The absorption is the advantage pero it's more expensive. So if you increase this, you just take in 2,000 na lang a day it's still cheaper than having the drip, and then masakit pa yun.

**Moderator:** There you go. Another question?

**Question #4:** Just wanted to ask. If you are having colds and cough, do you increase the vitamin C intake and the zinc immediately?

**Speaker:** Sa studies that were shown a while ago, that I presented. In one of the studies, they started giving zinc when nagkaroon ng colds, nag-cough and then nag-shorten when they started. So yes, you can increase. Ako personally pag prescription ko is itinataas ko siya ng 2 tablets to 3 tablets a day kung nagkaroon siya ng ubo, sipon but the findings have, it's most effective if you take it for long periods of time. 5 months, 6 months... tuloy-tuloy. It's more effective but yes, it can shorten. I usually increase the dosage ng vitamin C and zinc kasi nga eh, nadi-deplete yung vitamin C sa white blood cells, yung zinc din nadi-deplete.

**Moderator:** Yeah. Unfortunately, we are out of time and we could talk about this all day so if you do have any other questions, you can feel free to speak with doctor later on.

**Speaker:** I'll just present a short... 30 seconds. So I was earlier presented 'no? Someone who treats hyperventilation, and I just like to show you my program. In the Philippines I call it the Breathing Help Workshop. So the Breathing Help, I'll teach you how to correct your breathing and it's very effective for those with asthma,

hyperacidity, snoring. Yung mga hyperventilation, yung umaakyat ng hagdan kinakapos ng hinihinga. Namamanhid yung mga kamay, that could be hyperventilation and it is developed on the Russian developed Buteyco method. So if any of you have heard of Buteyco method, you can look it up and what it's based on. So if you use this, you will learn how to use it to reduce your drug use, improve sleep, it can increase blood pressure. So mayroon na akong mga bumalik na fit to work. Their doctors are going to tell me, ang dami niyang gamot nag-fit to work sila kasi they were able to correct the breathing. It can help you reduce your appetite and reduce anxiety kasi ang anxiety is very much related sa hyperventilation and reduce hyperventilation and improve it no? Ang kasama sa program ko may lectures ako, demonstrations, practice time. I give you a handbook na may binder, one month personal coaching for the program. Ayan, so again it's called the breathing help program. You can look at me up sa Facebook page ko: Breathing Expert. So for those interested you can come over. It's available... ginagamit ko ito sa, my clinic is at Mary Chiles Hospital in Manila and at Megamall, Living Life Well, you can also visit there.

**Moderator:** And also before you leave, you do have 5 minutes before you go to the next lecture. Feel free to pick up your lunch and then you can come back here for the next session. Thank you so much and enjoy the rest of your day, thank you.

**Speaker:** Thank you so much, you've been a very good crowd!