107 – Aged Garlic Extract for Cardiovascular Health

Transcript
Interview with Dr. Karin Ried
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Steve Lankford: Welcome back to Health Quest. I'm your host Steve Lankford. Thanks for joining me. I'm glad you're here. I have what I know is going to be a very interesting interview for you today. I'm going to be talking to Dr. Karin Ried. Dr. Ried is a research director of the National Institute of Integrative Medicine in Australia. She's been our guest once before. I talked to her after her initial study on aged garlic extract for high blood pressure. You can go back and listen to that interview. It's very interesting to hear the details of that particular study.

Well, she's going on to do some additional research with aged garlic extract. She's also been at the 2014 International Garlic Symposium where she presented these very studies that we're going to talk about today. It's in that capacity I'm very pleased to introduce to you once again Dr. Karin Ried. Dr. Ried, welcome back.

Dr. Karin Ried: Hello.

Steve Lankford: I so enjoyed our previous interview. It was so interesting. That, as far as I know, is the first study that you had done on aged garlic extract. Before we get into our topic though today, tell our listeners a little bit about the National Institute of Integrative Medicine. I noticed that you do a variety of studies on a variety of different food compounds. Tell us a little bit about what you do there.

Dr. Karin Ried: The institute itself is a clinic as well as research and education institute. I'm here in the capacity of furthering the research in nutritional medicine in particular is my area of interest. As you pointed out, I've done a couple of research projects in the past which touched upon nutritional food items. Garlic is top of the list but I've also done research on chocolates which is very popular and research on tomato extract. In my capacity as research director, I'm also looking after studies and trials which are going on here in the area of integrative medicine. That might be for example intravenous vitamin C for cancer treatment for example. We do evaluate what's going on in the clinic.

Steve Lankford: It's such interesting work because it's very different when you start applying nutritional compounds to different kinds of health challenges that people face. Tell us about your ongoing research with aged garlic extract. What were the studies that you've done since the last time we spoke?

Dr. Karin Ried: I've done some research on aged garlic extract and blood pressure in clinical trials but also meta-analyses. I have looked at the effect of garlic supplements on blood pressure. You always get answers when you do research but you also have the questions. That led into some clinical trial research. The studies I've done previously at the University of Adelaide found that aged garlic extract, or kyolic it's also called, is actually as beneficial as a standard blood pressure medication for high blood pressure reduction.

That was very encouraging and led into a trial I'm currently conducting looking at other cardiovascular health benefits of kyolic aged garlic extract. Not just blood pressure but also central blood pressure, arterial stiffness, and we're also looking into the cholesterol, homocysteine, platelet function and a couple of other blood markers. This trial is currently ongoing and we're hoping to have results available and published late this year or early next year.

Steve Lankford: That sounds very exciting. You listed quite a variety of different endpoints that you're measuring. This would indicate maybe a broader approach towards a cardiovascular research in general as opposed to one specific aspect? Do I understand that correctly?

Dr. Karin Ried: That's correct. You mentioned the garlic symposium before. We actually talked 2 days about nothing else than garlic and its health benefits. It does have a lot of additional health benefits other than blood pressure. I talked a little bit more about the effects from cholesterol because I did a meta-analysis on that. But there's also indication that it is working on blood stickiness or platelet function. We will have more answers about those specific other areas when we finish this trial.

Homocysteine is another very important marker for heart health as well as mental health, and there is some indication from previous research that kyolic aged garlic extract can influence this positively as well. It is not just working in one aspect of heart health but it also is very important for the immune system. Part of the garlic symposium was specifically targeted towards the immune enhancing capacities of garlic.

It's not new knowledge. It's just that we have to dig it up again and perhaps make it a bit more specific. We know what molecules in the garlic are active as well as perhaps what kind of garlic supplements you need to take. We can take about that a little bit more because that's also very interesting. There's differences between the aged garlic extract and raw garlic for example. To say simply, yes, it's working on several aspects of health.

Steve Lankford: Well, that's a lot of fertile ground for research as you say. You answered one question and it opens up the door for many others. That's what happens to me as I'm listening to you speak. In fact you gave that list of markers, I'm not sure if that's the right term, that you were going to be looking at in this study. I'm just wondering if you could go through that list again and perhaps as you mention each one, what's the significance of that particular marker and why is that something that you would be looking at in this kind of a study? Is that something we can do?

Dr. Karin Ried: Normal clinical blood pressure is measured in the arms. You can also call is peripheral blood pressure. Probably everybody knows it's quite volatile so if you're a bit nervous it will go up. Hypertension is quite prominent that's why in our trials you always have to

make sure that people have had enough rest and got familiar with the actual research assistant who will measure the blood pressure. We don't measure it just once, we measure it a couple of times on different arms and there's different equipment. Then we can actually have a better understanding what the blood pressure is and not just the reaction to something new.

One of our equipment we have available for this trial is actually looking at what's going on inside the body, so the central blood pressure and arterial stiffness. This is actually much more important marker. If your arterial stiffness is very high, it means that blood travels with much greater speed through the body. It can therefore not take on as much oxygen. It will make the heart pump harder. You actually want very flexible arteries. This also influences the central blood pressure that means the blood pressure in your central artery.

That's what we are able to measure now with this non-invasive equipment we have. It's basically also attached to one of the arms but has a sophisticated computer program attached to it which then will look at the pulse wave velocity and also how the blood travels through the arteries. That will then calculate what your arterial stiffness is your central blood pressure. That is a much more accurate marker of what's really going on rather than looking at periphery. That's something new we're doing in this trial which we were unable to do before.

The other markers we're looking at, they're blood markers so we have to draw some blood. And platelet function … you can also look at what I call blood stickiness, how quickly the blood coagulates when you have bleeding. It's just an indication of what's going on inside your body as well. If your blood is very sticky, you can imagine that it's not as functional. Garlic has the capacity to actually reduce the stickiness.

Often it's said, "Oh, garlic might make the blood too thin," but that doesn't seem to be the case with kyolic aged garlic extract. It's a very important point. Raw garlic … so as you have raw garlic clove you might have toxicity effects that you can get your blood too thin, but with kyolic aged garlic extract that's not the case. It can only unstick the blood but it doesn't really thin it dangerously low.

There is some research done in the past with aged garlic extract with people who are actually on blood thinning medication like warfarin for example of Coumadin. There was no excess risk of bleeding. Kyolic aged garlic extract is therefore safe in this aspect. That is one of the blood markers we're looking at.

Then we're looking at cholesterol. Cholesterol is a very interesting subject to talk about because at the moment cholesterol is normally measured. the total cholesterol as well as HDL and LDL sections. However it doesn't really tell us how dangerous the levels are. The body actually needs cholesterol and needs it to make healthy membranes. For example in your brain you have a lot of cholesterol to make you think better. Then it needs it for making steroid hormones or the sex hormones for example, or steroid hormones to help with the vitamin D production. It is actually a very important molecule.

There is some evidence to suggest that HDL and LDL molecules are actually helping the immune system as well, mopping up some inflammation for example. This is what probably not quite well understood in the general population that when you have high cholesterol, it doesn't necessarily mean that you have to reduce it to get healthy. It's more to reduce the inflammation which causes cholesterol to become high.

The simple marker of total cholesterol and HDL and LDL is not really the perfect marker itself. What you really should look at is the number of cholesterol particles and the size of the LDL particles which has more of an indication of how bad inflammation is and why cholesterol is there. This sounds very complicated. We actually looked at cholesterol and how it is measured in a standard way just to have some baseline to look at. The meta-analysis I've done has also looked at that. As I said it's not as simple as reducing it makes everything better. It needs to be in a balance in some sort. That is another marker which is very interesting.

Now, I talked about the inflammatory markers. We do look at that as well in this trial. Homocysteine is a very interesting molecule as well. Homocysteine, if it's very high, can cause memory problems. My Alzheimer's and Dementia patients do would often find very high homocysteine levels. Brain health is very closely linked to cardiovascular health. That's why it makes sense in our trial that we look particularly at heart health to also look at the influence of garlic and homocysteine. There is some evidence from more a clinical trial as well as animal research that garlic potentially has the capacity to reduce homocysteine levels as well. We will find out more in this trial.

Steve Lankford: I'm very excited to hear all of that because I think our listeners are going to understand what it is that you were just describing. It suggests that something like aged garlic extract doesn't just exert its effects in one area. It offers its effects throughout the body. It's the body that uses the unique compounds of garlic. It can then exert its effect across a broad array of subtle, little changes which added together could be significant. That's my takeaway from what you just describe is that there are many little things and not so little things but many parts to the complex picture. If we can touch on some of these, perhaps many of these parts, then this would be good evidence that this is good adjunctive therapy.

Dr. Karin Ried: That's right. If we talk a little bit more about the effect of aged garlic extract on blood pressure, earlier research we found that it does have significant effects on high blood pressure but it doesn't lower normal blood pressure significantly. This is very important because it basically is a normalizer. That's the same with the platelet function or blood stickiness, it doesn't thin it to dangerous levels or drop the blood pressure to dangerous levels. It seems that it is balancing a lot of activities which are important for a healthy cardiovascular system.

Steve Lankford: You also recently did a meta-analysis on the effects of garlic and cholesterol. Do I understand that correctly?

Dr. Karin Ried: That's right, yes. I hope I didn't confuse too much but in this meta-analysis we looked at 39 primary trials. There were 2,300 people involved. We looked at the effect of garlic on

the standard markers because that's what we had data for, that is total cholesterol as well as low density lipoprotein or LDL cholesterol and HDL, the high density lipoprotein.

We found that garlic, if you put it all together in a meta-analysis, that garlic was able to lower total cholesterol as well as LDL cholesterol by about 10%. 10% is not a huge reduction but it's also important to say it lowered it by 10% in those individuals who have slightly elevated cholesterol levels, so a very similar picture to what it does with high blood pressure.

It doesn't lower necessarily the cholesterol in people who have normal levels but it was balancing it off in people where the cholesterol levels were slightly elevated but not too much. That's really important. If you have too low cholesterol levels, you actually increase your health risks again rather than improving them. You really need that balanced level which garlic seems to be able to provide.

With our meta-analysis, we also looked at, and in our discussion, what current standard cholesterol medication do. While they might be more effective in a sense of percentage lowering, they also have a lot of side effects. The most common cholesterol medication in the market there is called statins. Statins are usually not well tolerated by 70% of people if not more. It can lead to muscular pain, memory loss, sexual dysfunctions and even an increased risk of diabetes, if the statins are used in people where their cholesterol levels are only slightly elevated.

Saying that with the garlic we found that it can also help with balancing the cholesterol levels but it wouldn't do it in very excessive way. All these potential side effects from the statins like muscular pain, memory loss, sexual dysfunction, increased risk of diabetes –they're all due to the need of the body for cholesterol. If you take the cholesterol away completely then you will have those side effects. That's what the beauty is with the garlic product. It will stabilize the cholesterol components but it will not reduce it too low so that you run into those side effects.

Therefore with our meta-analysis we suggested that people with slightly elevated levels of cholesterol, it would be better to look at lifestyle—and proven natural heart health supplements, such as aged garlic extract, to use as a first option treatment ahead of frontline pharmaceutical medications like statins.

Steve Lankford: Well, there are very many people who are interested in doing exactly that. It's good to know that something like this can be effective for those of us who are perhaps borderline. It can be done safely it sounds like. In your meta-analysis, did you find any warnings or contraindications with the use of aged garlic extract?

Dr. Karin Ried: It doesn't seem to be a problem to a lot of people. There are some people in the population which might have a bit of gastrointestinal problems if they eat garlic or onions or leak or any sulphur-containing foods but these are only 4% of the population. There are hints that this might actually be due to a lack in vitamin B12 deficiency or molybdenum deficiency, so a mineral and vitamin deficiency.

People also have a little bit of gastrointestinal complaints if they have onions, so they could try to supplement their diet with vitamin B12 and molybdenum and see whether that actually improves their food tolerance. If that's the case then the garlic supplements wouldn't be of any harm. People sometimes say, "Oh, maybe garlic produces odor" but with the kyolic aged garlic extract actually is an odorless supplement. You wouldn't even if you burped something up, you wouldn't have the usual garlic smell which is more in the oil soluble phase than the water soluble phase which is basically the aged garlic extract.

Steve Lankford: In the studies overall, were the doses that people were using in the studies similar to what they would be using if they followed the label directions on a product that they purchased at the store?

Dr. Karin Ried: That is possible that it is directed on the label. We basically use 2 tablets of a high potency kyolic aged garlic extract formula. That is about 1.2 grams of aged garlic extract. In our studies, we always look at the active ingredients of what the concentration is of that. If the S-allylcysteine which is in aged garlic extract, you can standardize to. In our trials we used 1.2 milligrams of S-allylcysteine which is basically in the high potency garlic formulas in 2 tablets.

Steve Lankford: Yes, I'm familiar with those formulas. If you follow the label directions, it will give you the 1.2 grams of the extract. That means that all people need to do is take it according to the label directions, try it for a couple of months and see what happens. They might be pleasantly surprised.

Dr. Karin Ried: That's right.

Steve Lankford: Here's hoping and I looked so forward to the results of your next study. I'm anxious to hear those results and talk to you at that time because of course we all want to hear good results. We'll keep our fingers crossed. You were at this 2014 International Garlic Symposium. You presented some of the information that we just talked about on your studies, your meta-analysis. You heard a lot of other researchers as well talk about the garlic research that's going on around the world. As a garlic researcher, what's your opinion of this research and what's it suggesting to us?

Dr. Karin Ried: At the symposium, there were a lot of people who were looking into components of garlic and their genetic influences as well as some clinical trial researches. We always want to know not necessarily what is causing all that but what does it do to us. The immune function clinical trials are very interesting. It has been shown with the aged garlic extract that garlic actually did reduce the number of days and number of symptoms in cold and flu. Another trial has found that garlic powder was able to reduce the number of colds you actually have.

In the most recent research they also looked at the immune cells and found that garlic improves the white cell count as well as the natural blood cell count and some other immune system responsible molecules. So there is some molecular evidence why it is working on the immune system. That is very interesting. Garlic is a probiotic which basically means that it helps the good bacteria in your gastrointestinal system to drive

and helps to get rid of the bad ones. The gut basically makes up 80% of the immune system. If you keep that happy and healthy then you also influence your immune system positively.

Another interesting talk I remember was talking about the garlic odor molecules that we actually have in multiple organs not just in the nose. Odor receptors to the heart was one which had a lot of odor receptors, meaning that the garlic for it potentialy directly wire the volatile molecules can influence some of the organs. Not just indirectly wire within cell molecules but it can probably also directly influence it.

There were lots of people talking about all the different active molecules. Another advantage of taking a whole food supplement because there is not just one active ingredient in there but many different ones which all work differently on different things, so making this very unique supplement. There were some interesting talks about how the garlic molecules actually work on the genes. It can switch on and off immune stimulating genes and so on. There is lots of research done. It's all pointing towards a very interesting spectrum of activities which garlic can influence in the body.

Steve Lankford: Well, it's one of those age old foods that we've been eating as humans for a millennia. It's an important nutrient. It's been recognized for its health benefits for many, many years. Now, the science is able to look deeply into the plant and its extracts and its different compounds. We can start to understand why it has these wide ranging properties. It's very exciting and again I look forward to hearing the results of your research.

Well, Dr. Ried, we're very near the end of our time and I'd like to give you the last word. Is there anything that we didn't cover today that you would like to make sure that the listeners hear?

Dr. Karin Ried: We talked a lot about the effects of garlic on cholesterol because the main research I'm looking at is the blood pressure. I just might mention that there's lots of research done also on how does garlic actually influence blood pressure. There's multiple mechanisms suggested. What's interesting is that there's multiple molecules which are volatile like nitric oxide or hydrogen sulphide which are actually influencing the endothelium and the blood vessels and lead to vasodilation. There is molecular evidence why garlic works on blood pressure.

It's important to understand that, but on the other side, it's good to have the clinical trial data to see how it actually works with people. Most people tolerate the aged garlic extract very well. It's definitely worth trying. It might not work for everybody but for the majority of people we had good results.

Steve Lankford: That's the important thing. In every case, whether it be medicine or nutrition, every person has to find out what it is that works best for them. That's why we work with our practitioners. If you have a doctor, talk to your doctor about using kyolic aged garlic extract. There's a lot of research on it that should give him some confidence of its safety and its potential benefits.

Well, Dr. Karin Ried, I'd like to thank you so much for being my guest today here on Health Quest. As always, it's been most interesting. Thank you.

Dr. Karin Ried: Thank you very much.

Steve Lankford: I hope we get a chance to speak again after your research is revealed. Until then, I wish you the best.

Dr. Karin Ried: Bye-bye.

Steve Lankford: Bye. Take care.