YOUNG LIVING TRAINING CD #75
"Nutrition and Your Health"
Anti-Inflammation Properties of Essential Oils
Dr. David Hill, Sue Chao

We welcome you to Training CD #75 from the 2005 Young Living Annual Convention, two very informative lectures, first by Dr. David Hill on nutrition and how it impacts your health, then Sue Chao will discuss the anti-inflammation properties of essential oils. And now, here is Steve Bentley, CFO of Young Living, to introduce Dr. David Hill.

Steve Bentley - Introducing Dr. David Hill

Our next speaker is someone who has been a convention favorite, Dr. David Hill. Dr. Hill seems to have a passion about *Young Living*, doesn't he? We are going to share that passion with him here for just a few minutes.

Dr. Hill is the Director of our *Young Life Research Clinic* and has great experience as a physician and as a healer there at the Clinic, and in teaching–so please join me in welcoming Dr. Hill.

Dr. David Hill - Kodo's to Marc Schreuder

Thank you! It's exciting to be here, and I think we should give a round of applause for everybody who has presented so far, for the amazing information they have shared with us.

A couple of different times in my lecturing at convention I have an individual that I like to point out and that I like to pick on just a little bit. I don't know where Marc is, but I would like to invite him to come up on stage for just a moment. Marc is an amazing individual, and I mean that sincerely. I appreciate everything that this man does and I want to tell you that when Dr. Hill has a question there are two people I go to–Gary Young and Marc Schreuder.

Were you not amazed by the research that he pre-sented to you that he and Gary had done? This is phenomenal information and I promise you if you will take hold of it, if you will learn to invest that into your lifestyle, it will change your life.

Statin Drugs and Cholesterol

I am going to talk with you this afternoon about something that hasn't really been discussed too much, but I am excited to share with you. We are going to talk about some things in a little bit of detail, but we are going to keep it very superficial as we go through it. Right now in this country nearly half the popula-tion is on some form of a statin drug. Statin drugs are for lowering cholesterol, and cholesterol plays such an important role in your body. It affects many functions of your body and we are going to spend a few minutes talking about that.

First, I want to talk to you about some statistical information. I hope you realize right now that you no longer are in the minority. Right now in this country things are changing. Not too long ago I had the opportunity to go to Vanderbilt University and I spent two to three days out there. One of the things that was discussed was natural medicine and the power that it is taking into the market place. These are some of the reasons that were given. I find them interesting:

A medical doctor thought that I should try it.

Medicine is just too expensive.

I wonder if natural medicine and allopathic medicine would mix.

Can Allopathic and Natural Concepts Mix?

We spent two days discussing that and I can tell you that it does not. There is no blending of those two. Make a commitment to do *Young Living*; make the commitment to take control of your life and control of your health. Statistically, 60% of America right now has said, "I no longer do allopathic medicine." That is amazing! That's up 15% from two years ago when it was at 45%.

Here is a list of all the universities around the country that have taken note of natural medicine and are either in the process of building natural medicine facilities or have built natural medicine facilities. Duke University just last month

programmed in a $20 million facility to learn and do what you are learning here today.

While I was there I was sitting next to a gentleman who happened to be a medical physician from Vanderbilt University and he leaned over to me and said, "It turns out I am now the minority!" That is really true.

What about Cholesterol?

Let's talk about some of the facts about cholesterol. First, cholesterol comes from dietary means. You could get all of the cholesterol you need without taking any into your diet. Your liver will synthesize more than enough cholesterol to meet all of your needs. One of the reasons why we have cholesterol is that it aids in membrane fluidity. you can have energy bursts. The other thing that is associated with fats and cholesterol is it offers protection against free radical damage. Marc spoke with you a lot about free radicals. Nicole Stevens was just up here talking with you about cancer, and cancer is an issue of scavenging or not enough scavenging taking place throughout your body because of free radical damage. It's mutation of cells, and one of the functions of fat is to help protect you in that process.

Different Types of Cholesterol

There are different types of cholesterol and we are all probably familiar with most of them. The ones that we are always familiar with are low-density lipo-proteins or LDL's and high-density lipoproteins or HDL's. We call that the "lowsy" low-density chroles-terol, or the "happy" high-density cholesterol. It's an easy way to remember it. Then we also have free-floating triglycerides associated in your system. Each one of them has a little different function. What's not on that list is a couple of other things–very low-density lipoproteins and another one called "lipopro-tein A." Lipoprotein A is a little bit different because sometimes low-density lipoprotein can get the job done (and I will explain what that is).

Lipoproteins

We can indigenously produce vitamin C within our body. Vitamin C (as you know) is a tremendous anti-oxidant and we have so much free

Remember the other day when Dr. Rodier was speaking and he talked with you about diabetes and he talked with you about the "lock and key" system? We will discuss that again just briefly, but it protects the membranes. Those membranes have to remain fluid, and that is one of the functions of cholesterol. That membrane is a lipid layer, meaning cholesterol layer. There are two of them associated with it.

Cholesterol stores energy in your body. It is not always a bad thing–you need long-term and short-term energy within your body, and cholesterol has the function of storing long-term energy within your body. When you have energy demands, cholesterol fat can be broken down and

radical activity in our body and we suffer so much in the diets that we don't maintain without our health, that we no longer have the ability in many cases to be able to protect ourselves against free radical damage. So we have a genetic mutation of a low-density lipoprotein, and it's called Lipoprotein A.

The best way to think about proteins is this: Lipo-proteins (low-density and high-density) are not cholesterol. Cholesterol comes into your body, either through dietary means or it comes into your body because it has been synthesized by the liver. We have to have a mechanism or a way to transport that throughout your body, and so we have an associated protein, either a low-density protein or a high-density protein. What determines the difference is that low-density protein has more fat than it does protein, because its purpose is (once cholesterol has been synthesized by the liver) to transport it to the cells. But the delivery system isn't perfect, and you saw some slides earlier that were shown by Marc where you saw the ravaging effects of sugar and inflamm-ation, and he mentioned just briefly some of the fatty deposits because the delivery system isn't perfect, meaning that there is a propensity for that cholesterol for many areas in the body–not just the cells. Some-times it deposits within the arteries and eventually that becomes what we know and understand to be arteriosclerotic plaque.

High-density Proteins

High-density is called that because high-density proteins have more protein than cholesterol. In a round about way you could say it's the same thing, it's the same lipoprotein that the low-density was–it's just that I dropped my load of cholesterol. Now I have more protein, and I'm heading back to the liver to start the whole process all over again, but on my way I am going to scavenge through some areas.

I am going to pass through the arterial system and if I happen to find any cholesterol in there, I am going to go ahead and attach myself to that, take it back to the liver to be gotten rid of. That's why high-density lipoproteins are so valuable to you.

I think it would be fair to say that there has been a lot of research come out recently that has said, "It's not all about cholesterol levels in association with heart disease"..and it isn't. There are many other factors that are associated and you have learned about a lot of them today, one being inflammation. Some of the best markers for inflammation are homocysteine levels and C-reactive protein levels, and there is a great correlation that's being drawn in particular between C-reactive protein and cholesterol, meaning that one equates to a pretty good marker for the other and what our risk factor is for heart disease.

Triglycerides Involved in Heart Disease

In this country I think it would be important for you to know that of the over one million people that died from heart disease, nearly half (or a little more than half) did not even have high cholesterol. So clearly, there are other processes involved.

Triglycerides, which was the last area we spoke about, are important and I will point this out in just a minute. Triglycerides are the fats that you take in from your diet and if we were to look right into this area you can see some of these white spots within the plasma. It's just an illustration of the triglycerides; they are called "kilomicrons." Dietary fat has to be dealt with. We lose our ability to deal with that when we do things like congest our liver and we have mal-absorption issues in the body, so triglycerides also can become a risk factor for heart disease.

Cholesterol can be an Effective Antioxidant

Cholesterol, when it's unoxidized, is a very effec-tive antioxidant. It's one of the scavengers that will allow you to maintain cardiovascular health. It's only when it becomes a free radical, when it becomes oxidized, that it damages health and becomes dangerous. It protects against atherosclerosis, and that's what's most important to remember.

We could spend a lot of time talking about mono-unsaturated fatty acids, polyunsaturated fatty acids, saturated fatty acids–but I want you to understand something even more basic than that, and that is a SYS versus a trans formation. When you take a fat into your body (depending on what type of a fat it is) it may or can be already converted into either a SYS structure or a trans structure. All that means is a fancy way to say, "I have a propensity for double bonds in one place versus another." Either I have only one link, or I have two links on each side.

When we process our foods, the danger here is that we process them and we'll take things which are in a SYS formation (which is actually very healthy for you). For example, an omega 3 is a SYS formation–
canola oil, things like that–but when we hydrogenize it, when we process it, now it becomes a trans formation and that becomes very toxic to you. That now is a free radical!

Many Foods Contain Trans Fatty Acids

When you put that with a polyunsaturated fatty acid it becomes even worse, and the issue that you and I will face when we start talking about our diet and dealing with things like this, is that most of the foods which we have, have trans fatty acids that are polyunsaturated in the trans formation. This means that the foods you eat (by their very nature) are toxic to you. Because of the way you cook your foods you sometimes will convert that process from a SYS to a trans as well. The most important cause of free radical pathology is the excessive dietary fat consisting of processed, polyunsaturated fatty acids, (trans fatty acids) and we find them in our commercially prepared foods–margarine, cooking oil–oxidized cholesterol, and it's found in all of our foods.

What this really means to you (and we've talked just a little about this briefly already) is this represents the cellular membrane and it doesn't matter where this is, any cell will have a membrane.

This membrane is made up of some of these fats I am referring to. In this case we have an insulin receptor (which was explained to you the other day) and that's why I use this. We have a lock and key model, in that insulin must attach itself to this receptor on the cell wall.

What Happens during Oxidation?

When you have oxidation that takes place within your body, when you have that disruption of those fatty acids in a free radical way, this membrane becomes destroyed–and it can be any cell structure that will happen. When that happens it distorts this lock and key system, and this is a little bit about what Dr. Rodier was talking about the other day with you.

It distorts that system so that you can no longer uptake into the cells the things that you need, whether it's insulin or other metabolic activity in the cell, it won't happen because it can't happen.

Fats and Hormones

The other thing that fat does for you is that it produces hormones, and there are several different types of hormones that are produced within fat. We commonly call them the "steroidal hormones" or the sex hormones. These are the secondary trade hormones. We've got pregnenolone and progesterone and estrogen and testosterone. We've even got some link to DHEA as it comes out of the adrenal glands. These things become incredibly important to you because they modulate body function. If you (or if you know someone) that's having difficulty with this, remember that the problems occur when we become deficient, and our body responds by over-producing cholesterol.

Building a Cycle

Let me build a cycle for you. I just said that our body becomes deficient, whether it's deficient in hormones or it's deficient in enzymes. Our body will respond even when we have high amounts of toxicity associated with our body. The fat will be produced so as to be able to encapsulate. The liver can only deal with so much. Those of you who spent some time in the breakout sessions learned a little bit about that. And when the liver gets to the point where it can't function, fat is going to try to scavenge or remove some of those toxins.

This process becomes a peripheral loop–it never stops. My hormones are out of balance, so I need to produce more; I've got a lot of free radical damage in my body; I don't have enough antioxidant levels in my body, so I need to produce more cholesterol. I don't have the ability to metabolize the way that I want to; I'm not maintaining cellular structure the way that I want to–so I have to metabolize more cholesterol in my body.

The First Thing That Happens..

The worst of it is, you go to your doctor, and what is the first thing that happens? "Let's put you on some statin drugs." This is the class of drugs that is utilized more than any other drug in this country. Over 40 million prescriptions are given out in a year for choles-terol-lowering drugs, and you can see the damage that it causes. I am trying to react to a circumstance in the body (which I am not winning) and so the liver is trying desperately to synthesize cholesterol, not triglycerides. Triglycerides have a different function, remember. This is HDL and LDL as they combine with those lipoproteins. Because I am dysfunctional in the systems of the body, I am going to just produce more and more and more and more. I go to my doctor and he or she lowers that with a drug like Lipator. They work by having an inhibition of HMG CoEnzyme A reductase. We just blocked the synthesis. Now what happens? I stop the synthesis of cholesterol. What happens to free radical activity in the body when I do that? What happens to my hormone production in the body when I do that? What happens to my digestive processes, what happens to my metabolic processes? I lose my ability to function, but my cholesterol is low, so I am no longer at risk with heart disease.

Is It Worth the Tradeoff?

What's really ironic about that is that the very systems we are trying to protect are the systems that were destroyed! Look at the side effects associated with Lipator–liver stress, kidney failure, increased free radical damage. The very drug that they are trying to give you to protect you is causing more damage, increased toxic level, decreased hormone production. It inhibits CoEnzyme Q-10, that's important to you because that is a very important enzyme for protection of cardiac function. It's also involved in the metabolic processes of the mitochondria at the cellular level for the respiratory chain. It increases the risk of cancer.

The question is, "Is it worth the tradeoff?" So what is it that you can do? I want to give you some very simple, easy, basic things that you can do to control your cholesterol.

Controlling Your Cholesterol

How many of you are either on Lipator or know somebody that is? Raise your hands. Look around you–do you see how that mechanism will not protect you? It will destroy your health–and this is not unique to statin drugs. This is the process with prescription drugs. We are exchanging one side effect for another, and it's because the philosophy is that "I treat the symptom rather than looking at the whole system and understanding the direct cause of those things." This is why natural medicine is powerful; this is why *Young Living* is powerful.

This is why Gary Young is an icon in this industry–because he understands this.

Diet and Exercise More Powerful than Drugs

This is an interesting statement that came out of *News Week* magazine. This is a release from Howard Lowene, M.D., Harvard School of Medicine, and he printed a whole article in the January 17th issue in which he talked about statin drugs being a powerful mechanism to control inflammation and control cholesterol levels in the body. But look at his final statement in the article: "But powerful as statins are, a healthy dose of exercise and the right foods are more powerful still." If that doesn't convince you, I don't know what will!

Protecting Your Body

Let me give you a couple of things that you can do to protect yourself. I haven't put everything on there, I forgot the *Rejuvenate Kit*, but along with that kit you are also going to do the *Cleansing Trio*. You must protect your liver and you must protect your bowel. They truly are the foundation of your health, and so you should be in a program regularly where you are cleansing your bowel. *ICP, ComforTone*–look at the enzymes, and we will talk a little bit about that. You are going to cleanse for a period of time and then you need to rebuild. Maintaining your health is not just always about cleansing–you have to take time to rebuild through some of that structure and that's why I put the *Rejuvenate Kit* up there. I know there are others things you can do to rebuild besides the *Rejuve-nate Kit*, but I also realize that there are many of you who are just looking for a point–where do I start? How do I do this? And this is where it's going to be.

Begin by Eliminating Acid in Your Body

Eliminate the acid in your body. You've heard Gary talk about that many times. Acid is the foundation for disease; acid is the foundation for inflammation; acid is the foundation for degradation within the body–and if you don't control the acid you are going to be ill, no matter what you do.

What are the ways you can control the acid? You know them, you know what they are. Stop eating foods that are high in acid content. Those of you who were in my class and others I think spoke about it, too. Stop drinking coffee–it's high in acid. I know that there are good things about it (according to the literature), but it's very high in acid. If you are suffering from some of these issues, it's not good for you. Stop eating chocolate. You learned some of those mechanisms. Stop eating foods that are high in acid, like red meats. Stop using a lot of dairy products.

Look for Anti-mucolytic Oils

Look to the oils that will create the anti-mucolytic action for you. Look at *Lemon* oil–any of the citrus oils would be good. *Oregano* is a very powerful antifungal oil. Look at other oils that you are fully aware of, too–*Myrrh* and *Lemon*. In the Clinic we use these two oils pretty routinely. We find them to be very powerful anti-mucolytic when used in combinat-tion. *Australian Blue* to support the immune system. *ImmuPro.* Why? Because it has beta glucans in it and you need that for digestive processes. You need your immune system to function. Also, it's the only product in the immune line that has the wolfberries in it. Have you learned the power that comes with some of that?

Support the endocrine system and hormonal balance. Use the *Super B's*. Why? Because of the folic acid. You need the folic acid for metabolism. Use *Utra Young +*. It has both DHEA and it also has l-dopa. *Thyromin* and *CardiaCare*–we talked a little bit about Co-Enzyme Q-10. It's found in both *Thyromin* and *CardioCare*. What I find interesting about that is we are talking about protecting your cardiac health (and you can use the *CardiaCare).* We were also talking about the thyroid and the endocrine system. Every single cell in your body is controlled in one way or another metabolically by the thyroid, and you have to give it some attention.

There's a wonder-ful way to do it.

Digestive Support

Support digestion–there's a brand new product for you, the *Royaldophilus*. We brought it back online and Gary changed the formula. He's got 11 different types of fluroidents associated with that. You should also be thinking about *Lypozyme* and *Carbozyme*. All of the enzymes would be wonderful in that mix. *Essentialzyme* is just a good all-round enzyme. *Detoxzyme*–when you are doing your cleansing, you should do it in conjunction with *Detoxzyme*.

Use the essential oils–*Lemongrass.* My Mother recently came to the Clinic–she was on Lipator. I got her off Lipator by doing these very things that I am sharing with you. She also uses *Lemon grass.*

There have been studies that will show that *Lemon grass* by itself will lower cholesterol levels and increase antioxidant levels within the body. You have learned so many wonderful ways you can do that. You are familiar with what the antioxidants are from a vitamin standpoint–it's A, it's C, it's E. When we start talking about a product from *Young Living,* there is nothing better than the *NingXia Red* and the *Berry Young Juice.* It's the highest antioxidant there is, and I am going to show you something that nobody even knows about yet. I am going to show you a little bit of research we did in the Clinic.

Research on Wolfberry Products

We took five different people–and I am going to show you three of them because the other two we put on some nationally known product and it didn't create any change, and we wouldn't want to drink those juices, but I can't say that! But we did take three people and we put them on a juice I will talk about, which is the *Berry Young Juice* and the *NingXia Red.* I want to show you some really interesting things:

We did complete metabolic panels. I looked at everything–we looked at hormones, we looked at blood count. I had two pages of metabolic panels that we looked at on every single person. They were not just lipid panels, we looked at liver enzymes, C-reactive protein, homocystiene levels. We looked at everything, and I want to isolate this one piece for you because this is significant.

Significant Results

Look at what the *Berry Young Juice* and the *Ning-Xia Red* will do. In total serum cholesterol in the three people we had on this–and granted it was a limited study, I will admit that–but you need to understand why, because it was incredibly expensive to do those panels. We spent nearly $20,000 over the last ten weeks just doing the panels to give you this informa-tion, and let me show you what we found:

Total cholesterol in ten weeks, drinking three ounces a day once a day: 22% reduction in total cholesterol! In subject B, 11% and in C, 13% reduction! You should be excited about that in conjunction with everything else you just learned, you should be coming out of your seats for that!

HDL–in one subject we had a little bit of a decrease. In the other two subjects, a 16% increase and a 17% increase doing nothing. They weren't doing any other supplements or anything else–only this juice. Look at LDL: a 15%, a 21% and a 23% reduction in LDL cholesterol lipoprotein in your body! C-reactive protein. These aren't huge numbers, but we don't always see huge fluctuations within that, but we had reductions in C-reactive protein! Yet another marker and indication for heart disease.

Homocystiene. We had one person who increased just slightly and we were going to call that "insignifi-cant" because it's so small, but we had a decrease of 9.9% and 3.1%. Triglycerides. We had a decrease of 8%, of 29%, of 37%–what does that tell you?

It means that here is truly, in the words of Gary or in the words of Marc, a super food. It is a complete product! Based on the information that you heard today, there is not a one of you who shouldn't be drinking that product every single day! Use some of the other protocols that I just presented to you.

Out of the interest in time I am going to close so that Gary has time to come and present to you what he would like to, but I want to share with you one final thought: "Far better it is to dare mighty things, to win glorious triumphs, even though checkered by failure, than to rank among those poor souls who neither enjoy nor suffer much because they live in the gray twilight that knows neither victory nor defeat."

My message to you is this: "**Dare mighty things. Make a commitment to experience glorious things, even though as you go through this**

process you will be checkered by failure. If you will commit to this process, you will have success and you will be healthy." Thank you.

Steve Bentley - Introducing Sue Chao

Thank you, Dr. Hill. I am going to welcome our next speaker. Sue Chao is absolutely wonderful. She is an experienced scientist and researcher who was associated with the Chinese Academy of Sciences, as well as with many universities here in the United States. Sue has been with us for many years, and more importantly to us, you know Sue as a passionate believer in wolfberries in our products in *Young Living* and in quality, so please help me in bringing out and welcoming Sue Chao.

Sue Chao - This Year's Research

Good morning, everybody. This year my research project is entitled *Anti-inflammation Properties of Essential Oils*, so I am going to talk about current marketing for anti-inflammatory agents.

I also want to talk about what is inflammation and what causes inflammation in human bodies. What are the indicators of the inflammation and the experimental design and procedure. Finally, what are the results and the conclusion.

Anti-inflammatory Drugs

First of all, I will talk about current marketing for anti-inflammatory agents. Current marketing of anti-inflammatory medicines is experiencing a great impact from the recent events announced about anti-inflammatory drugs we call NSAIDS, which were found to increase the risk of heart attacks of the patients who take the medicine for a relatively long period. Probably everybody knows about Aspirin and Ibuprofen. More currently, there are some new drugs like Viox and Celebrex –those are quite efficient as pain killers, but in the laboratory they have found out that if you are using those drugs for a relatively long period they will cause you a heart attack. If you are using Aspirin and Ibuprofen for a long time, then a side effect will cause stomach bleeding.

If you read the newspaper quite often you can see the law suits for those kind of drugs. Yesterday I found this newspaper in the hotel, *USA Today,* telling about a gentleman of 65 years of age who took Viox for half a year and then he died, so the heart attack has resulted in a law suit about that.

Because of those side effects in this area of anti-inflammatory drugs, there and more and more people and physicians who are paying attention to looking at alternatives. Of course, they are especially looking for herbs and other natural products.

Essential Oils Play Important Role

I will say that the essential oils will potentially play a very important role in this field because of the nature of the essential oil itself. Their molecular structure can allow them to go through your skin and from your tissue and your cell level, so they can have a great effect.

About Inflammation

What is inflammation? Inflammation is the body's way to signal that something is wrong in your body. It is caused sometimes by physically cutting yourself and some bacterial infection or viral infection gets into your body, and that will increase your blood flow and increase recruiting those immune cells so the body can try to solve the problem by itself. During the 19th century, Dr. Rudolph Petrol said that if you find a reddish swelling and pain and heat, that means that inflammation has set in. If you cut yourself somewhere on your body, you can see that. It turns red and there is swelling and sometimes pain, and if you touch it you feel heat.

However, you cannot see inside your body, so how do you know you have inflammation? You need some indicator to find out. What is the chemical or mole-cular level of the indicator? Normally, we will see the PG-1, PG-2 and reactive oxygen species, like hydrogen dioxide and super oxide and reactive nitrogen species like nitric dioxide.

Nitric Oxide Used in Research

I picked the indicator to do my research as nitric oxide. I chose this because nitric oxide plays a very important role in the inflammatory process due to its release from macrophage activity by substance, such as lipo polysacararides. We simplify it by calling it LPS. Side effects of the nitric oxide causes inflam-mation and tissue damage, so the material can inhibit excessive nitric oxide and have a potential property of inflammation. This is the basic theory behind my experiment.

Another reason I chose nitric oxide as my indicator to test essential oil is that it is relatively simple. I can do it a little bit easier. Here is my experimental design. I used the LPS and I extracted it from a bacterial cell wall and I used them to stimulate the macrophage cell which we call 264.7, that is an immu cell. When the LPS triggers the macrophage to react, then they will produce nitric oxide. If the nitric oxide produces too much excess, then the body has inflammation and the tissue is damaged.

Essential Oils Used in Tests

I use the essential oil to react with those nitric oxides to see whether or not they will work. If the essential oil has the anti-inflammation property, then it would decrease the amount of nitric oxide in your body. Here is the procedure: I load that immu cell because it is very commonly used in scientific laboratories they are using this kind of cell line to do inflammation testing. I used the LPS to add to the reaction of the cell and then I added essential oil. After adding that, then I add the resistance agent. That agent can react with the produced nitric oxide to change the color.

If the color changes we can use the special photometer to read it. After I read it I can calculate it.

You can see that they are under the microscope. The bottle is the media to make a culture of those cells. The green bottle here is LPS which I added, and finally I added the essential oil. The culture remained over night at 37 degrees and the incubator with carbon dioxide was at 5%. The next day I tested the culture. (There was a narrative here that could not be under-stood nor put into correct terminology).

Colors Indicate Weaker or Stronger Effects

They have an active control; they have a positive control. You can see that I rounded this and it is a yellow color, but in the reaction area they are turning pink. The darker the pink indicates that the oil action on the anti-inflammatory property is weaker. If it is lighter, the oils will be stronger.

After that you go to the machine, the special photometer to read it, then you have to date it, and then calculate it. That comprises the whole process. After that, I screened all *Young Living's* 77 single oils that they market and this is all the data. All the data I repeated three times, so those are mean value data in here. The "6" is the top one. They can inhibit nitric oxide produced in that cell line. They are *Oregano* and the percentage is from 18% to 23%.

If you wanted to say this method is mature or not mature, you need to quantitative it. Especially in Europe they have a long history of doing alternative medicine using the essential oils. Dr. Penole's book tells you this oil has anti-inflammation; they give you plus, plus, plus (3+ or 4+ or 2+ or 1+). Those are not really quantitative. So if you really want to say something scientifically about them being anti-inflammatory you need to tell about the number and about the quantitative results.

Preliminary Results

Here are my preliminary results about our essential oil and their anti-inflammation properties to inhibit the nitric oxide. This chemical, corticosteral, is a well known inhibitor of nitric oxide, so I used it as another standard to compare how good our essential oils are. I used a -7 micromal concentration; I used a -8 micromal concentration and you can see that the pure chemical stuff was inhibited by 19.3.

Here is a group that inhibits about mid level. They can inhibit nitric oxide, so you can see those oils. But when we go back to our general table showing the 77 single essential oils, I put them in ordered from the least to the highest and all the essential oils show nitric oxide to be inhibited. Those six, those twelve–they are at a relatively high level.

Another thing is that everything is dependent upon the concentration, so when you are using the essential oils, you need to pay attention to how much will be best for yourself.

Level of Concentration Used

For my experiment here I tried to set up the type of LPS concentration I would use and what kind of con-centration of oils I would use. So I used *Frankincense* and used three different kinds of dilution, -5, -6, -7 and I also used three different kinds of concentrations of LPS, 2 nanograms per ml., 5 namograms per ml, and 10 nanograms per ml. In the indications for this group I used 10 to -5 dilution of our pure oil and then against the LPS 2 nanograms per ml worked well, so I used this group for data to do the testing for all 77 single oils. When

using essential oils you need to pay key attention to what oil you use, what the major components are, and also the concentration. The con-centration can vary by different people, so you will try what is best on your body.

Conclusive Results

In conclusion, for the 77 essential oils we found that six essential oils had high levels of inhibition for nitric oxide production, ranging from 18% to 23%, and 12 essential oils had an intermediate level of inhibition of nitric oxide production, ranging from 14% to 17%.

A second conclusion is that the anti-inflammatory property of essential oil is dose-dependant, so I needed to go to chemistry to find out what the components were, what the molecular levels were, and which essential oils are really working on that inflammation. I have already found very good scientists to do the next step about the chemistry at the molecular level and then we will know which oils are really working on the inflammation area. Almost any disease is started from inflammation– from cancer to heart attacks to simply cutting yourself. If you can find the oils that work on certain things, then you will be much more healthy.

Narrator:

Thank you, Sue, and thank you for being with us on Training Tape #75.

KEY WORDS AND PHRASES USED IN YL TRAINING CD #75 INCLUDING REFERRAL PAGES

YOUNG LIVING ESSENTIAL OILS AND PRODUCTS MENTIONED IN TRAINING CD #75

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