any it didn't contain any ephedrine. And this analysis was done by Food and Drug.

DR. PAGE: It sounds like we're talking about two different cases, but the one I'm thinking about there definitely was information in the records as to an existing cardiopathology of one to two weeks duration.

DR. KIMMEL: A lot of this, as well as the disagreements here points to the whole issue of the use of AERs for assessing causality and the lack of denominator data, and the lack of consideration of background risk you end up going in circles. And if you truly believe that something causes an outcome and you collect cases all of whom were exposed, you will believe there's an association, and you certainly could be right, but you also can be wrong and there are plenty of those examples where the AER system has not been accurate in terms of that.

So, I think part of the issue of the debate here is that you need other data.

DR. JONES: Thank you.

DR. KARCH: And the appearance of that association is somewhat flustered by selective literature citation. The person in the audience knew that I had responded to the case report pointing out

that description of the anatomic changes was inconsistent, but that never got included in the FDA literature summary.

DR. JONES: Dr. Salive, final comment or question.

DR. SALIVE: Well, I wanted to ask the cardiologists about given the natural history of disease and subclinical disease, you know, what is the role of the proposed, I guess, from your group labeling and how would it address people who are unaware of their own risk who have, you know, subclinical cardiac disease to prevent them from taking his product?

DR. KIMMEL: I assume that's me who is the cardiologist. A couple of things. First of all I think you have to determine whether there is in association and how strong that is and how many people it really affects? The concept of a susceptible population you can postulate for anything. You can postulate it for -- as we've talked about -- salt.

Number one, how big of a problem it is. Second, if you believe, as I can tell from the way that you're responding, that there it is a susceptible population who don't know, then the problem is what about all of the over-the-counter pseudoephedrine, what of the over-the-counter ephedrine, and why are they not

at equal risk from those products?

And I guess the issue is that we -- as you can see in our consensus statement we don't exclude the possibility that there is a susceptible population.

Again, "susceptible" means what happens when you take the ephedra, does your blood pressure go up, and by how much? In the small trials, now granted they're small, the heart rate goes up by 5 beats per minute. As a cardiologist I'll tell you, I wouldn't attribute anything to that even if you have significant coronary disease. The blood pressure goes up depending on the study or down.

It is possible that there's a susceptible person who has an exaggerated blood pressure response to these products and has underlying coronary disease and therefore or an exaggerated tachycardic response and therefore has an effect. I totally agree with that.

How many people there are, and who is at risk and, what is the risk, and is that risk different than the other products that are available, again, over-the-counter, that I can't answer. So I don't disagree with you, I'm just not sure, (a) how big the problem is, and how different it is between dietary supplements and other products.

DR. JONES: Thank you, Dr. Kimmel, and thank you to the panel put together by the Ephedra Education Council for bringing your conclusions, your analysis to us this afternoon.

We are ready for our break. We will reconvene at 3:30. If you are presenting in the abstract session or in the public comment session this afternoon, please be sure you are near the front so that you can come up as your time approaches and staff will assist you if need be.

Thank you very much. We will see you in about 10 minutes.

[Brief recess taken at 3:20 p.m.]

DR. JONES: Ms. Michal, if you would, as we've done with the others, identify yourself. For all the speakers today, identify yourself, and proceed now. Thank you.

MS. MICHAL: My name is Barbara Michal. I am the founder of the consumer organization Halt Ephedrine Abuse Today. I am grateful for this opportunity to come and address the panel and share information.

Just a little bit about myself. The source of funding for these efforts are my personal funds; the source of funding for my travel today was the Health and Human Services.

I founded Halt Ephedrine Abuse Today in 1997 after ephedrine killed my 24-year-old son, Christopher. I want to make it very clear that it was not a dietary supplement product that killed my son, it was a synthetic ephedrine product. But when I started researching ephedrine the first time and I discovered how dangerous this drug is, whether in its botanical or its synthetic form, I started this work.

The main purpose of HEAT is for consumer education. We have a survey on the Internet and the survey results are posted up here for you to see on the overhead. And this is just the tip of the iceberg. The surveys that we are receiving are: (1) only those who have Internet access, and (2) those who are actively seeking information on the Internet about ephedrine.

Now we have had over 800 responses in the last year and a half. For the purposes of this public meeting I have separated out only those responses that we have had that specifically address dietary supplements; and we've had 355. There have been more than that, but I have taken out those that did not have sufficient information to quantify in the survey results.

So, as you can see, our total number of

contacts that we've used here is 355. We have 26 percent male respondents, with 74 percent female respondents. You can see the age breakdown. The majority of our respondents are between 16 and 30 years old or 16 and 35.

Now, some of that may be due to technology, that the old respondents don't have access to computers or are not computer literate. And, again, also younger respondents don't have access to computers.

The total number of people reporting addiction or dependence is 26 percent. These are self-reported that they are dependent on these products, they experience withdrawal systems when they come off; 82 percent of the females who report addiction or dependence, 18 percent are males.

The reported adverse reactions that we are asking for, you can see the percentages and they are in declining value; rapid heartbeat 64 percent of respondents. And we do also get respondents from people who have no adverse reactions to ephedrine. I want to make it clear that I do not only include those who have adverse reactions. We get surveys from people saying, I love the stuff, it's working great, and I'm not having any adverse event reports.

As you can see from the numbers there are

very significant numbers of consumers who are reporting potentially very, very serious adverse events.

Now, in addressing the questions that are the specific focus of this meeting, question one, the association between the use of ephedrine dietary supplements and adverse effects when used as directed. The majority of these reports report that they are using the products according to label directions. There is also a significant problem in the industry with even pill to pill variability in the same bottle of the active ingredients.

Along with being founder of HEAT and doing this work on a voluntary basis, I am a paralegal and I work with an attorney in California and we prosecute civil litigation cases on ephedra injury, and we are handling quite a few cases right now and are in contact with attorneys across the country.

So through my work in my career and through my work in my mission I'm getting significant information and information from experts and consumers.

Question 3, the risks with the seriousness and severity as determined by age or sex, we have found that through the survey there is no specific age bracket where adverse events are more likely to occur. We are getting reports of adverse events and serious

adverse events from young to old, male and female. The reporting could be a gender thing that men will not report as often as women will, it could also be because of technology and women are more often ready to share information. So this may be why we're getting the breakdown as far as gender.

We do not check for ethnicity. We have no questions on our survey relating to ethnicity, so I cannot speak to that specific issue.

As far as the amount consumed across the population, the industry has been talking how many billions of servings. Initially in their testimony they have been talking, not here, but in other testimony, they have been talking amount consumed, and they have no way to know how much is consumed. The amount of product that has been sold, does that net out the product that's been thrown away; the product that is sitting on someone's shelf; the product that has been returned to the manufacturer for refund? That's a major question that needs to be addressed. They have no way to know how much of the product has been consumed compared to with how much that has been sold.

In using those products in combination with other stimulants, the industry does not have a standard formula for a weight loss product, or a standard

formula for a fitness enhancement product. These products run the gamut. Some may be only caffeine ephedrine and aspirin. Some products containing a whole cocktail of stimulants with caffeine, yohimbine, citrus ceratium, which is synephrine, green tea extract and the effect of aspirin combined with these products.

One of the adverse reactions to ephedrine can be body aches and headaches. Some of these products add aspirin or the herbal white willow bark to their product, and it does two things. One, it masks some of the adverse effects of ephedrine, the body aches, headaches; two, it is a blood thinner and it speeds delivery of the stimulant to the system.

Now, they have shown that caffeine, aspirin, ECA stack, ephedrine, caffeine, aspirin may be effective in weight loss, but I think it's an extremely dangerous combination. Talking about use of these products with the stress of exercise, and one study was mentioned where the duration of exercise was longer, that it seemed to increase stamina; yes, but again because of these effects with the aspirin in most of these fitness products, athletes are more often prone to push past their normal level of endurance and can do structural damage, muscle damage, cardiac damage, they're pushing their systems way beyond by using these

artificial stimulants.

There is also the issue of individual sensitivity and people don't know, I don't know if I'm sensitive to ephedrine. I know I'll never take it, but you don't know until you do take it and you suffer the adverse event, and they what? There's no way to know. And there are so many different --

With question number four, the outcomes affected by dosage. We're not finding that. Again, these reports, many of them, almost the major majority of them are taking them according to label directions, they are not abusing the drugs, they are not taking more or more often than they should be.

The dosages, again, there is no industry standard. AHPA can recommend the dosage amount, but in the ephedrine, there could the 8 milligrams per dose, there could be 12 milligrams per dose, there could be 25 milligrams per dose, or, if the industry, that particular manufacturer is not a member of AHPA there could be 30 or 40 milligrams per dose. And, again I have mentioned pill-to-pill variability in the same bottle. When you are working with botanicals there is always the variability because of soil conditions, weather conditions, processing and harvesting methods, storage methods, whether noxious weeds are weeded out

and separated out before processing.

How much -- whether it is a powder or whether it's reduced to down to an extract, there are so many different variables when you are working with botanicals. Whether there are pre-disposing health conditions, so many of the consuming public have undiagnosed asymptomatic health conditions that would be contraindicated to the use of ephedrine, and they don't know until it's too late.

Many, many, even bipolar, we are finding that they are finding that there are latent bipolar tendencies in some people that are a asymptomatic, the people take ephedrine, go into the mania, the mania phase is then untreated and they go into full-blown psychosis.

Duration of exposure, we've had people who have reported serious adverse reactions taking one pill; we've had people reporting they've had no reactions after taking it for years. There is no duration of use that is safe, there is no dosage amounts that is safe.

My biggest question in all of this, in all the regulation, and all of the lobbying, and all of the arguments, and all of the scientific studies, how high does the body count have to go? The deaths are

continuing, the strokes are continuing, the cardiac arrests are continuing, the public has a perception, we have been well taken care of by the FDA for many years, and the public has the perception that if it's over-the-counter it's safe and FDA has approved it. This is not true with the dietary supplements. The burden is on the FDA to go to product-by-product and prove that these are unsafe.

The consuming public is also operating under the misconception in the myth that all natural equals safe because of the hype of the industry. Well, cocaine is all natural, marijuana is all natural, hemlock is all natural. All natural does not equal safe. And ephedrine is not a food, it is a drug; a very powerful cardiovascular and central nervous system stimulant that has no place in over-the-counter products and especially no place in unregulated herbal products.

There is one other issue that I have with the industry's advertising about increased energy. Energy comes from the efficient use of fuel which is food. What these people who are using ephedrine are experiencing this artificial stimulation which in fact depletes natural energy reserves. And when the ephedrine wears off, they have a down, the euphoria

comes off, they have a down, they experience this, they take more to bring themselves back up again. This is not energy. This is artificial stimulation, and it is the total fraud to call what comes the effects of ephedrine energy.

As far as the adverse events reports that the industry has been studying and the clinical experts here have been studying, I want to find out from the industry how many adverse event reports they've had and whether they have reported them to the FDA and whether they have subjected their own adverse event reports to the kind of scrutiny that these adverse event reports have been subjected to. And that's a major question that I think needs to be addressed.

We know that there are adverse events reports being reported to the industry, to the manufacturers. And with the 30 percent of the responding industry, people to the AHPA survey how many of them were the top three or four manufacturers and how many of them actually came across with adverse event reports?

We have some other comments that I just want to share with you that have come from the survey from consumers. These are just comments from ordinary Joe Q. Public and Jean Q. Public, people who find the web site, people who fill out the survey. I have been in

touch with these people some by phone, some by Internet, some I have not been in touch with. But these are comments that we receive: "It's a shame what we will try to lose a few pounds. I took someone's word that it was not dangerous. I'm very shocked." "A friend and colleague of mine died yesterday, he just turned 40. He was a weightlifter and he was extremely health-conscious and seemingly very healthy. I heard secondhand the doctors found ephedrine in his system following a massive stroke last week."

"I tried" and I have deleted product names but product names are in my survey. "I tried this product for two weeks. I've been off it for three weeks now and I'm still trembling and nervous. I can't concentrate at work and I'm very nervous when I drive. It has subsided considerably in the last week, but it is still affecting my work. I have talked to a couple of doctors who have no real remedy for getting this stuff out of my system and bringing me back to normalcy."

"I'm very interested in your findings of using this awful drug. I have been taking this product for over a year now and had suffered several mini strokes. Then I went to hospital for a test and suffered stroke. I think is all because of the herb,

since the test came out that nothing was wrong with me, and now I have no feeling in my right hand, weakness on my entire right side due to the CVA I suffered. I want to make sure this stuff comes off the shelves fast. I am mad that our government lets this drug/herb be sold in Wal-Mart as well as on the malls across the country."

Another one, "I've been searching the web for information on withdraw symptoms associated with ma huang. I quit taking a product -- like product, a product named Life Product two weeks ago, one that they compare it to. After taking it for three months as the label claimed was safe, I did lose weight but I haven't felt normal since I stopped taking the product --

DR. JONES: Please wrap up.

MS. MICHAL: I'm sorry.

DR. JONES: You're out of time, please wrap up.

MS. MICHAL: I wanted to let you know that I have surveys here, direct surveys, 39-year-old woman, acute kidney failure, 40-year-old woman, primary pulmonary hypertension. The only cure is lung transplant. A 28-year-old woman, tingling sensations that sound to me like a precursor of stroke, but, of course, I'm not a medical expert.

Here is a 29-year-old male, hospitalized for irregular heart beat and high blood pressure.

We are getting reports like this and the lawsuits that I have seen from other attorneys and the lawsuits that we're handling in our office show that there is a very significant public health issue here.

Thank you very much.

DR. JONES: Thank you, Ms. Michal.

[Applause.]

DR. JONES: We are open for questions from the panel, if any?

DR. SALIVE: Marcel Salive, NIH.

Do you encourage that people who respond to your Internet survey to report their adverse events and if so, to where?

MS. MICHAL: Absolutely to the FDA. I encourage every survey respondent to report to the FDA. Whether they do or not is another thing. But I do encourage them to absolutely.

My intention is with my survey we are going to revamp the web site and I will have a selection a button on the survey that they can select to have the surveys sent directly to the FDA.

DR. JONES: Other questions from the panel?

[No response.]

DR. JONES: Questions from the floor?

[No response.]

DR. JONES: We thank you very much, Ms. Michal.

And turn now to Mr. James Turner of Swankin & Turner.

MR. TURNER: Good afternoon. My name is James Turner and I'm here in the capacity of a chairman of the board of Citizens for Health.

Citizens for Health is a consumer group that has supported the passage of Douche and has been critical of the FDA's use of its resources and activities in regulating dietary supplements since the passage of Douche.

We've been critical from two angles. First we feel that the agency has been excessively focused on raising what they consider to be serious questions about the safety and efficacy of dietary supplements. Which we think is an overstated position by agency and we feel that the reports such as this GAO report and others on the ephedra issue have supported our view of that excessive regulatory attitude.

On the other hand we feel that the FDA has underused authority it has; authority for example to create good manufacturing practice for dietary

supplement and we believe that the agency does have substantially more authority to create label information and other supporting information that it has used. And, again as one of the plaintiffs in the Pierson case we believe that that position has been supported by third-party forces that suggests that the FDA has not been as vigorous and effective in its use of authority that it actually does have.

Our basic point then is that the FDA has been overzealous in attempting to draw an analogy between dietary supplements and prescription drugs, in particular, and also over-the-counter drugs. It has been overzealous in that activity and underzealous in the activity of utilizing the resources and legal resources and the authority that it has to ensure that dietary supplement products are manufactured properly and carry the proper kind of information for their effective use by the consumer.

These arguments that I have made are underlined by the ephedra case history but the ephedra case history I believe is just the first of many of these issues that are going to develop over the next few years. The FDA has given an almost impossible task of drawing a line which says everything on the right side of the line is good for everyone, and everything

on the left side of the line is bad for everyone. In attempting to draw that line and poll products into that kind of a regulatory framework leads to serious failures on the part -- failures on behalf of the consumer, of both kinds.

Over 3 billion doses of ephedrine have been sold for example. Many consumers report a positive relationship with ephedrine, they like it. They think it's a good product. Their interest in having that product on the market is as important to be addressed as the interest of making sure that people who may be susceptible to it may not understand how to use it or may receive improperly manufactured forms of it are protected. Both sides of that equation need to be addressed.

And I believe that I and Citizens for Health believe that that is the direction in which the FDA needs to move. That is to take the consideration of all consumers in these areas into consideration. Our view about the way to do that would be to vigorously develop the good manufacturing aspects of Douche, vigorously pursue the Pierson court's guidelines, and how to create information for consumers that does not unduly burdened their rights, and does not unduly burdened the government and its ability to carry that

out. This is the issue of warnings contraindications, cautions, and so forth.

We also believe that it's very important for the Agency to institute vigorous postmarketing survey procedures so it can more easily trigger that portion of the Act which permits the FDA to act to remove products that are unsafe once they've been -- and this is in Douche, once they've marketed. The idea then is good manufacturing practices and all other things that tend to being sure that the products on the market are properly manufactured, effectively packaged, and meet the requirements that would be sound for a marketing activity.

Second point is to make sure that there is effective information and we have said in other settings with the FDA and we say continuously that the Internet offers another opportunity for the FDA to create a very robust information flow. But the second point is a robust information flow so that consumers can match their interests and their desires and their needs with the regulatory position that the FDA is taking on the ability of a product to meet those kinds of interests.

And third we are arguing that there should be a more vigorous postmarketing monitoring process by the

FDA to systematically look at products as they have reached the market so that they can have in early warning system that means that things can be dealt with effectively. One of the things that an early warning system created by postmarketing surveillance, I believe could be organized to do, is avoid the kind of problems that turned up in the ephedra adverse events reporting system.

If a system has been organized systematically and scientifically to review who is using the products and what their effects, what their experience is and what the effects of the products are, if a system like that is organized prior to the product reaching the market, when the information is collected and I think it should be proactive and I had been critical for years, and the Citizens for Health has been critical for years about the passive adverse reporting system. We need an active system where the FDA is actually soliciting information in a systematic scientific way. That kind of information can be a very effective tool in providing the kind of information that would allow the FDA to act in a regulatory way that could sort through the process protecting the rights and the safety and the well-being and the health of both those people for whom these products are proper and effective

and useful products, and those people for whom they pose a danger.

That is a very sparse presentation of what can be a very active regulatory approach, but it suggests what we believe, from our point of view, an approach that is more suited to the kind of world in which we have millions of people using products safety safely and effectively, which are helpful to them, which are not excessively expensive to them, and which they have good experiences with protecting them while at the same time protecting those people who have either because of their own individual framework an adverse reaction potential or, more importantly, making sure that the products that are manufactured are done so in the way that protects individuals without having to remove the ability of people to have the products that will be useful to them.

That's the sum of my statement, and I am happy take questions at this point.

DR. JONES: Thank you, Mr. Turner.

For the record, will you state whether Citizens for Health is a consultant to or has any potential or real --

MR. TURNER: No, we have not been involved with the ephedra industry. We have paid our own --

I've arrived here by cab. We have paid our own way on this issue on all of the work that we've done to put this together is by the people in our office.

DR. JONES: Thank you, Mr. Turner, for the record.

Questions from the panel? Dr. Coates.

DR. COATES: For the record, Mr. Turner, what questions of the four were you answering with this discussion? For me it sounded much more oriented toward the regulatory components of FDA, issues which as I understood it were not really on the table for discussion today.

MR. TURNER: Well, the framework first of all, we are concerned about the way that the adverse information has been collected, and I was addressing that point. The information that the FDA has about the seriousness of this problem is very skewed information. I did decide and believe it was important to suggest an alternative way of dealing with that problem. To that extent that may very well be a regulatory issue.

But each of the points that I argued about how we should proceed are addressed at a specific issue that is considered to be a problem in the ephedra case and I did want to add that I believe that that these are generic problems. They were not specific to

ephedra. That is the issue of adverse reaction reporting on others is very similar in its failure as in the ephedra situation.

In fact we have been very critical of that entire system. So I am saying that the adverse reaction reporting piece has suggested that there's a problem here I believe has failed to create that. Or to support that.

DR. JONES: Other questions from the panel?

[No response.]

DR. JONES: Questions from the floor?

[No response.]

DR. JONES: Very good. Thank you, Mr. Turner.

[Applause.]

DR. JONES: Linda Golodner of Brett Kay, from the National Consumers Leagues.

Is someone to do the overheads up here yet? Could come up and again. Sorry the old technology used to be more reliable it looks like it's the opposite in this meeting.

Hello staff in the back of the room. They're booting up the system.

MR. KAY: They're at the end anyway. I could go through the first part which is pretty brief

any then go through them.

DR. JONES: Thank you. And if you would, state your name for the record and who supports your work, et cetera.

MR. KAY: My name is Brett Kay I am a health policy associate for the National Consumers League. We are a private nonprofit consumer advocacy organization. We're funded through various means mostly membership and through grants and from foundations, and unions, and various other methods. But we're not taking it -- we don't have any money from the dietary supplement industry and no one has paid our way to do any of the speaking today or testimony.

As I said, the National Consumers League is one of America's oldest nonprofit consumer advocacy organization and we've represented consumers and workers in the marketplace for over 100 years in assuring that consumers can purchase safe and effective products is of primary concern to our organization.

We have a long history of working with the Food and Drug Administration and its predecessors to require that manufacturers produce safe and effective products with truthful and not misleading label claims. The league support the FDA's efforts to reduce the risks associated with dietary supplements containing

ephedrine alkaloids. This product has clearly demonstrated that it has safety concerns with numerous adverse events reported to FDA.

In 1997, in NCL submitted comments to the FDA regarding products containing ephedrine alkaloids urging the FDA to move in a timely manner to adopt then proposed regulations which included limiting the amount of ephedrine in these products to 8 milligrams per serving and 24 milligrams per day and requiring warning labels regarding recommended length of use.

Unfortunately, the proposed regulations were never finalized and the dosage and duration recommendations were withdrawn.

Since that time in June 1997, hundreds of new complaints added to the already numerous documented complaints up to that point have been filed. It seems clear that ephedra products pose a serious health threat and consumers are at risk.

Dietary supplements containing ephedra as we've heard many times, are currently sold for a variety of purposes including weight loss, increased energy, and body building. And because they are marketed to such a diverse population many of whom are vulnerable to the often tantalizing claims these products are ripe for abuse. Dieters seeking quick

weight loss or young men looking to pump up quickly are often desperate for fast results and may take more than the recommended dose for longer periods than recommended.

Because these products are often portrayed as a natural, most consumers assume they are safe. As more consumers turn to dietary supplements to self-medicate and improve their health, the safety these products must be ensured. Further, as consumer take more responsibility for the health they need to proper tools to make safe and effective decisions.

Without adequate labeling consumers are deprived of important and necessary information to make the proper decisions. Currently dietary supplements containing ephedra do not contain adequate labeling. As a result reports of seizures, heart attack, stroke, an even death are too common.

NCL supports the FDA's previously proposed rule as a necessary step to ensure that consumers are provided appropriate instructions and warnings about these products. Most of the adverse events reported occurred in otherwise healthy young to middle aged adults who used to products for weight control, body building, or increased energy.

Again, without proper labeling instructions

and warnings consumers cannot be educated or how to use these products safely. We are also concerned about the abuse of these products by adolescents. Teenagers and young adults are particularly conscious of their physical appearance and products promoting weight loss or bodybuilding could be subject to misuse by this population.

Further, the inclusion of ephedrine in products marketed as natural alternatives to illicit drugs such as ecstasy contribute to possible misuse and abuse by a vulnerable and impressionable population, one that often sees itself as invincible, and is all too often not the case.

I would like to talk about the issue of labels and consumer behavior. NCL recently conducted a survey of consumers attitudes and behaviors with over-the-counter drugs.

While OTCs and dietary supplements are very different products with drastically different regulatory requirements to consumers they are not so different.

The line between dietary supplements and OTCs has been blurring in recent years and many consumers do not differentiate the two products. They are next to each other on the shelves at pharmacies, supermarkets,

and convenience stores and are often advertised in similar magazines in similar ways.

According to the confusion is the fact that many well-known pharmaceutical manufacturers offer dietary supplements with the same brand name as their OTC products. Because of the similarities I feel it is relevant to provide some data about OTC use to gain perspective on dietary supplements. And since labeling is the most direct method of communication to consumers about a product it is important to see how consumers use the labels.

Please keep in mind that this was a telephone survey and there is often a disconnect between what people say they do and what they actually do. So these results sort of represent a best-case scenario and may be conservative estimates specifically for the dietary supplements.

This is the first just sort of to give you who it was done by, random sampling phone survey, plus or minus 3 percent margin of error, respondents were at least 18 years old, and it was conducted May 15th through the 31st, 2000. So these are pretty new survey data.

We asked a series of questions about how consumers view OTC products and view the labels and

also their own health care, and how they're making decisions. And, as you can see, compared to five years ago, making decisions on their own, more consumers are making health care decisions on their own; 58 percent represent or claim that they're making more decisions now than they were five years ago with only 9 percent making less decisions.

We asked a question about what you do when facing my health ailments. We asked what resources to help decide which OTC take. The number one response, information on the label. So what you see here is that a label plays a vital role in consumer information.

Additionally word-of-mouth from friends and relatives and ads also have a great deal of influence. I think this is even more so for dietary supplements, particularly for teenagers and young adults concerning weight loss or bodybuilding. I think friends and relatives and the advertisements and promotions probably have a great deal of influence.

The Internet as you can see also is a growing influence on consumer choice and again, for younger populations probably even more so.

How often do you generally read the label? The good news is that 66 percent or two-thirds of the

population, is reading the label almost all nearly every time. The bad news of course is that one-third of them are not reading the label on a consistent basis. That can pose a serious problem especially for the products where there are potential help risks, contraindications, or other warnings if a third of the population is not even looking for those in the first place.

And if you're talking about dietary supplements where they assume they are safe and natural, they may not look at the label even less.

How easy are the labels to read and understand? I think this is a very important and telling. And this is for OTCs, first of all, so the labeling requirements are very distinct and clear; 25 percent still feel that it is somewhat or very difficult. That's one quarter of the population.

For dietary supplements, I think, which have different labeling requirements than the OTCs may be even more confusing.

Now, do you take more than a recommended dose? And 32 percent are saying that almost always, or most, or some of the time they are taking more than the recommended dose. For product like ephedra, this can have serious health implications.

And then the other question which is of issue, do you take them for long than recommended? Again one-fifth, a larger than acceptable number of consumers, is saying that they take OTC products for longer than recommended.

We can extrapolate this out to them taking dietary supplements in similar ways and also misbehavior may lead to serious health problems for people using products containing ephedrine alkaloids.

So while the league supports the previously proposed rule, we also urge the FDA to continue to evaluate the safety of these products. Because many of the health conditions that increase the risk of adverse events are not self-evident such as hypertension, diabetes, and other cardiovascular conditions. People with such conditions who use these products are unaware of the health risks.

Further, more and more people are turning to dietary supplements and there is increased attention on body image by adolescents and young adults in the population that often leased inappropriate behaviors.

Thus, if the scientific data shows there is no safe level of ephedrine alkaloids that can be used, an adequate labeling regime cannot be implemented, then we feel that dietary supplements containing ephedrine

alkaloids should be removed marketplace.

Thank you for this opportunity. I will accept any questions.

DR. JONES: Thank you, Mr. Kay. This presentation is now open for questions. Panelists, any questions? Dr. Philen.

DR. PHILEN: Rossanne Philen from the Centers for Disease Control.

DR. JONES: We can't hear you.

DR. PHILEN: I'm Rossanne Philen from the Centers for Disease Control and Prevention. I believe I heard you say that you collect adverse event reports; could you tell us more?

MR. KAY: No.

DR. PHILEN: No?

MR. KAY: We do not collect adverse event reports. I was talking about the ones collected and documented from the FDA.

DR. PHILEN: From the FDA?

MR. KAY: Yes.

DR. PHILEN: Okay. All right. So you don't collect an of that information?

MR. KAY: No, unfortunately, we do not.

DR. PHILEN: Okay.

MR. KAY: We receive anecdotal things from

time-to-time on a series of consumer and health issues, but nothing systematic in any way.

DR. PHILEN: Do people ask you where or what they can report or to whom?

MR. KAY: Yes, we have promoted FDA's Medwatch program in the past and have I put it on brochures and other educational materials that we've used, and if people call today, if they have problems, I tell them to report to FDA Medwatch program.

DR. PHILEN: Thank you.

DR. JONES: Other questions from the panel?

One question I have, Mr. Kay, is do you have any information on what consumers -- you indicated for your OTC-related survey that they looked at the label, most of them do read the labels, a lot still don't, and that they're easy to understand and so forth, but do you have any indication where consumers go for other information, not just on use of the product, per se, like you suggested, that, you know, the literature, friends, or whatever --

MR. KAY: Right.

DR. JONES: But what they consider reliable sources. And it goes to reliability of information that consumers might --

MR. KAY: Yes, I do. Actually, one of the --

I didn't have it on these slides, but part of -- the most reliable that people usually use is the doctors from this survey and from others consistently for health information people are still relying -- something around 65 percent or so talk to their doctor. Another 50 percent consider the pharmacist, especially for something for minor ailments, will talk to the pharmacist; nurses, probably about 30 percent or so. That's what they consider. It's health care professionals, generally.

DR. JONES: Okay. Questions, from the floor?

[No response.]

DR. JONES: No. Mr. Kay, there might have been a paper that dropped from your sheaf there.

MR. KAY: Thank you.

DR. JONES: Thank you very much, Mr. Kay.

[Applause.]

DR. JONES: Let me now call Col. Ester Myers from the U.S. Air Force for presentation.

COL MYERS: Good afternoon, Dr. Jones, panel members. I'd like to share a just a few comments with you this afternoon addressing the nutritional supplements and some unique military concerns as your deliberate the answers to your questions and ask you to particularly addressed concerns that we might have.

DR. JONES: And you will state your name for the record and any potential conflicts of interest.

COL. MYERS: I'm Col. Ester Myers, the Surgeon General's consultant for nutritional and dietetics for the Air Force. As far as I know I have no conflict of interest.

As you so mentioned the government owns us.

[Laughter.]

COL. MYERS: The unique military concerns will surround three different possible issues. One of them is what happens during deployment and assignments oversees? Another one has to do with our special flying population aviators and then the personnel reliability program. And let me explain a little bit about each of those.

Now, to address the issue of ephedra for us, we kind of put it in the whole issue of herbals and dietary supplements. It is one of those that need to be addressed in each of these issue. And I'll mention specifically who may talk about ephedra.

In terms of deployment and being located overseas there are many varying supplements available when a person deploys. You'll find that the product certainly that are available in Europe and Asia vary from what are available in the United States and they

may be thinking that they are taking the same type of product when it in fact may be very different. The labeling requirements differ. Right now the dietitians that are assigned in Usaf are having the challenge of coming out with a listing of products that are comparable to the American product so that our servicemen can make reliable decisions about what to take.

And the second one in terms of taking sometimes that they are limited by what they can take along with their baggage so that they may take issue a supply supplements when they leave. It may not be sufficient for the entire time that they are there.

Probably the major concern though is what happens in that environment during deployment. In many cases that heat is very high, especially if they go to the Middle East, that's coupled with a very high level of activity, and at the same time a very high level of stress.

Several of the presentation this morning have mentioned the fact that ephedra may be affected by all three of those issues.

In addition, to that, there may be unfamiliar fluid and electrolyte beverages and there may be limited availability and ephedra and dehydration is

also a major concern for us.

Of particular concern in the Air Force is what happens to our flying population and aviators. And we have addressed different types of products that they need to be very careful about, certainly anything that's a cardiovascular agent, one of which is ephedra, a sedative, hallucinogen, and anything that will promote dehydration since that's critical to our flying personnel.

The third type of issue confronted by the military is what we call the PRP, that's our personnel reliability program. There is a an entire regulation that deals with that. Personnel reliability, the goal of that particular program is to screen and select anyone who has the capability or will be handling nuclear weapons. And then to remove anyone that might have any reason why they could not -- or have questionable reliability.

In particular you are looking for anything that would have mood alterations that would cause changes in mood. We have submitted changes to the Air Force instruction which is pending release of the DOD instruction that we would like for the military members to consider that herbal and dietary supplements be treated the same as over-the-counter.

What that means is, that they need to talk with their physician about self-medication so the positions could then evaluate to be whether or not they could continue in their status as PRPs.

In 1998, we did form a working group in the Air Force that was dealing with nutritional supplements in particularly addressing aviators and personnel on PRP program. The people in the working group were consultants, dietitians, pharmacists flight surgeons. We also had members of external agencies, NIH from the Office of Dietary Supplements, ASMA, which is the association that sets and regulations for commercial airline pilots as well as representatives from USARF.

We were targeted to address the guidelines for the military members who were aviators and PRP. We wanted to look at an educational approach so that people could make reliable decisions instead of coming out with a magic list of those that could they could and could not take.

We were very concerned about labeling and the issue about how much active ingredient were in the various products so that the personnel again could make reliable decisions. And then we wanted to address the marketing of products on military installations.

There are three major venues of products of

ways that products can be sold on military installations. One of them is through AAFES, which is the Army Air Force exchange service they have a contract with a company that produces and sells dietary supplements. Another venue is in DECA, which is our commissary, our grocery store. And a third venue is in the fitness centers. And in the fitness centers often what they would come up with is the juice bars and so the items that are being made do not have labels that are readily available to for the consumer to look at.

Our major concern about this was that it was implied consent. Just as people had indicated that if a product is available on the market there is an implied assumption that it is completely safe.

The same thing is probably true about issues about products that are sold on military installations. You take the young, 18-year-old airman, soldier, or Marine Corps man, put them on the base and then sell a product, and they're going to assume that that's safe for them to use and also allowable.

And as I showed you earlier, there are some cases when it is not allowable for them to take different products. And then we come up with the legal dilemma of the commander says I don't want this sold on my base, but it's legally available on the market; then

there's a whole lot of legal issues about whether the commander wants to ban it on his particular base to protect his soldiers.

In terms of the policy guidance that came out of that working group one was the recommendation and PRPs that herbal and dietary supplements be treated as over-the-counter which means they must in fact report them to their physician and get official approval to use them.

There was an Air Force Surgeon General policy to that effect indicating that they should be treated as over-the-counter for the two categories of people were talking about, anyone who is on PRP or on flying safety.

Special tactics and Madge COMS issued several policy letters. The services agencies which is the agency over the fitness centers has also issued a policy letter indicating for those people who on flying status or PRP that the products needs to be tagged so that they can know what products they can safely take and still maintain their flying status or their PRPs status. And ephedra is one of the products that we recommend they do not take.

And then there is an ATHEs information paper that indicates they must have a precautionary label on

those items. And I know that you can't read this label but it is a five-by-seven precautionary notice that is supposed to be placed anywhere they sell the dietary supplements.

The content of that notice. First of all, it says the "follow instructions," you don't take more than is on the label. It says "more is not better specifically." It addresses that you must consult your health care provider, it identifies what are common symptoms and then it indicates to stop immediately if you feel those symptoms. It defines dietary supplements in the context of health care. In other words contact your provider before you take these items.

A special warning for pregnant mothers and children and then tells you again how to report the adverse side effects.

Other existing guidance. If you're on flying status, you are already limited to one multivitamin a day and any supplements that are approved by the flight surgeon. The drug testing program again outlaws certain dietary supplements and then for flying status if your own and anorectic drug that's medically disqualified for flying.

In terms of looking at implementing these

policies we said there was a lot of education that would required, both for the consumer as well as for the health-care providers. So we did create a trifold brochure, then again ephedra is one of the products that's listed on the page that says specific supplements to avoid that you need to contact your health care provider and it is listed under a cardiovascular effector agent.

There is a web site that has this brochure on it as well as a list of papers for military members that specifically addresses issues for us.

We've created a videotape for health-care providers to make sure that the flight surgeons when the fliers or people on PRP came in and asked questions they were familiar with all the different names the products might have and how to address those. And then a series of news articles.

The dietary supplement brochure includes definitions of policy summary, guidelines for use, types of supplements to avoid, and sources of information, and web sites.

This is the web site if you want to look on you can look it up at any point and log on to see what kind of information is available to military members. There is a reading room section that's for both the

provider or the physician.

The videotape is basically a primer on herbs and supplements with some common names that tells the provider how to address that in their conversations with the patients.

These are the types of news releases that are targeted for the military members.

Other initiatives, we are focusing on looking at ephedra. We have had two deaths in the military that are associated with ephedra, so it has got our attention. We are looking for examples about the reporting incidents we were talking about underreporting today and I think that that is absolutely true. We are looking at how to enhance that. The Army policy letter again is reinforcing for people to make sure that they're reporting those up through the system to make sure that those are adequately reported.

In one week at Travis alone we had three ER admissions due to dehydration secondary to taking products with ephedra.

In looking at the health behavior survey, Captain Gortney from the Navy was successful in adding three questions to the supplement to the questionnaire that will be administered in the year 2003 that

specifically asked basically your question about the denominator. How many people are taking them, and how often they're taking them in the military population. So when we look at those two pieces of data now we will hopefully have a good nominator and denominator for us.

And we are collaborating with the FDA discussing underreporting, what kinds of things we can do to reduce the underreporting and get an accurate member as well as a potential for data sharing so we can look to see what is the real issue and what do we need to do to maintain the safety of our military members.

We are exploring the possibility of a DOD policy on ephedra rather than service specific. The Navy is very concerned, had a working group about a month ago, or two months ago now, specifically addressing supplement use in the training environment; again, where they're under heavy exercise and lots of stress.

Looking at finding out whether or not we can get precautionary labels similar to what's in AAFES, in the Navy exchange, which is the NEX, or the DECA and the Commissary. Right now we only have them in the AAFES.

Bottom line, in the military we are very

concerned. We need to make sure that we safeguard the health of the military members. We do have some unique concerns particularly in cases of deployment what should happen in supplement use during deployment for our aviators and for people on the personnel reliability program. And we're looking for governing guidance and specific studies that will show us whether or not these products are safe for our military members.

Thank you very much.

[Applause.]

DR. JONES: Thank you Col. Myers. Questions from the panel? Dr. Schwetz.

DR. SCHWETZ: You mentioned a special warning for pregnant women and children, can you say more of what that warning says? If you would supply a copy for the record?

COL. MYERS: I can give you a copy for the record, I certainly can.

I think that is says specifically, consult your physician. But I can get that for you.

DR. JONES: Dr. Philen.

DR. PHILEN: Col. Myers, does the Air Force have any systematic recordkeeping regarding adverse events related to this ephedra or other supplements?

COL. MYERS: Not outside of the FDA system. Our reporting system is who -- we do have each hospital obviously has a committee that looks at the different effects and so forth. But our method right now in terms of collecting it throughout is through the FDA.

There has been some discussion of whether or not we need to set something similar. When we went back to look under flying safety, in particular, we wanted to go back to say, tell us the results of the flying safety; how many flying mishaps have been attributed to something like this? And the data isn't stored in the way that we can use it.

DR. JONES: Dr. Coates.

DR. COATES: Col. Myers, given the discussion that occurred earlier today about -- the word isn't "discrepancy" but differences of interpretation about autopsy findings. Would there be any possibility of submitting records of the deaths that you referred to that could be attributed to ephedra to some independent evaluation to determine as some of the ones this morning were submitted -- raise the question about how closely associated with ephedra use they were.

COL. MYERS: If you forward the request I can see how it goes through channels. One was a different service -- both were from different services than mine,

so I would have to -- if you wanted to submit the request. Or get with me afterwards and I can tell you how to find out the answer to that question.

DR. JONES: But those data could be obtained theoretically? They could be requested, let me put it that way?

COL. MYERS: The could be requested.

DR. JONES: We can ask for anything.

[Laughter.]

DR. JONES: Other questions from the panel?

[No response.]

DR. JONES: Questions from the floor?

[No response.]

DR. JONES: I will note Col. Myers, thank you very much, you offered to provide for the record the warning for women who are pregnant or may become pregnant.

COL. MYERS: The precautionary labeling, yes.

DR. JONES: Yes, the precautionary notice. As well, you held up a trifold brochure, if you would provide that for the record as well we would appreciate that.

COL. MYERS: I certainly will.

DR. JONES: Thank you very much, Col. Myers.

Dr. Fugh-Berman.

DR. FUGH-BERMAN: Good afternoon, I am Adraine Fugh-Berman. I am a physician and vice chair of the National Women's Health Network which is a consumer advocacy group that's independent, member-supported, we take no money from pharmaceutical companies, medical device manufacturers, or dietary supplement companies. I do not personally take money from any of these entities and put this together on my own time and paid for my own farecard.

Ephedra is -- I want to go back to a point that Dr. Fong made this morning which is that ephedra has a long history of use in both western and eastern herbalism. But that it's traditionally used for respiratory ailments, asthma, usually, and there is no reported cases of adverse events that are associated with traditional use of this herb. And this might be because the side effects of increased metabolism are actually something that one tries to avoid in asthma treatment.

Asthmatics just what to breathe, we don't want to stay up all night. And we adjust dosages to avoid side effects like rapid heartbeat or insomnia which are actually common to a lot of asthma medications. But a speeded up metabolism is the goal if you're trying to lose weight, if you're a

bodybuilder or if you're trying to get high. And the use of ephedra for weight loss, bodybuilding, energy, or recreational use has no traditional precedent, and it can't be considered safe.

Any range in which weight loss occurs is an overdose. Ephedra has been associated not only with strokes, heart attacks, kidney stones, and chest pain in adolescence, but ephedra does not cause side effects in everyone. Clearly there is susceptible populations and populations that are less susceptible, but we don't know what the difference is between these two populations.

Our response to the first question that has been given the panel is that ephedra contains -- well I'm not going to go into what it is, we have already really heard that. We've heard about systemic affects, bronchodilation, increased peripheral resistance, increased heart rate, increased blood pressure.

Now, bronchodilation can be helpful in those with asthma and over-the-counter oral asthma medications including Primateen, and Bronchaid do include ephedrine and many unconventional and conventional treatments for asthma can increase heart rate and blood pressure and they can be dangerous in

people with underlying cardiovascular disease or cerebral vascular abnormalities, sympathomimetic agents are contraindicated in people MAOIs, in people with prosthetic hypertrophy, in people with thyroid disorders.

But it least -- and this is in response to Dr. Lieberman's comment this morning -- at least the labels on the ephedrine-containing asthma drugs they had decent warning labels; and I've included some Xerox's of them in my testimony which I will make available to the panel.

Primateen, for example states "intentional abuse of this product can be harmful or fatal." Still recommended dosages on these OTC drugs is up 150 milligrams a day. And I would say that in an ideal world, I would want none of these sympathomimetic other than the methyzanthenes, don't mess with my coffee and chocolate, these other sympathomimetic should only be given to people under the supervision of a health-care practitioner who is knowledgeable in their use.

And the National Women's Health Network recommends that both warnings and dosage information on ephedrine-containing dietary supplements and ephedrine-containing from OTC drugs be standardized.

Consumers assume that products that are

available OTC safe, but there should be a higher standard of safety for over-the-counter products and for prescription drugs and there should be a higher standard of safety for products that are used for cosmetic concerns rather than medical conditions. Low energy and wanting well-defined muscles are not medical conditions. And while obesity is associated with several health problems, it's very difficult to separate the risk of obesity from the risk of dieting. And we would certainly want any products that are available for weight loss that are over-the-counter to be safe.

Ephedra is not safe. It was very interesting hearing Dr. Love's excellent report this morning that it was quite striking that 40 percent of adverse events related to dietary supplements are associated with ephedra-containing products. But it really struck me about 64 percent, she said 64 percent occurred in people under 39 and 16 percent of these adverse events in people under 19.

You know it's tough to hurt young people. You know, think back about the ways we used to abuse our bodies when we were teenagers. You know, it's pretty hard to cause an adverse event in a teenager. Ephedra has done so. So not only has it been

associated with many medical problems, but also psychiatric problems, ephedrine-induced psychosis and episodes of mania are quite well-documented.

And it's been associated with the chest pains in adolescence, this is the study that has not been mentioned today, but it was the case controlled study 28 adolescents with chest pain versus 26 adolescence with other complaints that found ephedrine in 17.8 percent of the cases of chest pains and 0 percent of the controls.

None of the kids in whom ephedrine was found admitted use of ephedrine-containing products. And routine urine screens won't pick it up, these were not picked up by tox lab or EMED, they were picked up on GC Maspec. Ephedra is also associated with kidney stones and a kidney stone database has analyzed over 200 stones that contain ephedrine, norephedrine, and pseudoephedrine.

I have already mentioned the case of this 23-year-old who was taking an ephedra caffeine product, a fatality. There was another product that was used successfully for suicide, ephedrine/caffeine combination. There has been a case of a severe MAOI interaction that was reported a between phenelzine and ephedrine product that contained caffeine and also

theophylline.

Now, there's been a number of trials of ephedrine for weight loss and increased heart rate has been seen in most of these. The increases in blood pressure are less consistent and they're probably more likely to occur early on in use. In studies that have looked blood pressure within a few hours of taking ephedrine they found increased blood pressure in at least some percentage of the participants.

In most of the trials of weight loss, what they've done it to not take the first blood pressure reading after baseline until a week or usually four weeks after the trial has started and people get habituated by that.

So in those trials you do not see an increase in blood pressure over the long-term. And the reason that I'm pointing that out is that, okay, maybe people do habituate to the ephedrine's cardiovascular affects after while, but if you have an underlying cardiovascular or cerebral vascular problem you don't need to have your blood pressure high for more than a couple of days to have a problem. So that immediate effects of tachycardia or hypertension can still be important and that actually has been looked at very carefully. Additionally very few these trials have

actually included hypertensive patients.

There have been a number of statements made here today about the efficacy of this herb for weight loss. I've made a chart of weight loss trials that I could find. It omits four Danish studies that there are no English abstracts for and I don't have translation resources for. But I've identify eight weight loss trials not counting the one that Lori Love mentioned this morning. And only three out of these eight trials showed a beneficial effect on weight loss.

Five out of eight in these trials show no difference in weight loss between a placebo group and ephedrine or an ephedrine/caffeine combination, in one case caffeine ephedra aspirin.

A couple of trials have included hypertensive. There is one trial of the ephedrine caffeine combination that included treated hypertensive and did not find more hypertension in a group that was already on treatment.

In the answer to question two, we would say there's no well-established indications for the use of dietary supplements containing ephedrine alkaloids. Ephedra increases for thermogenesis as do many sympathomimetic agents, but these trials have not shown a consistent or a dramatic effect on weight loss and

they have shown significant adverse affects.

Not only are most of these weight loss trials quite small, but there's a strikingly high drop-out rate. And a number of those drop-out are due to adverse side effects. Sometimes the re not perhaps what we would consider serious side effects, but they aer insomnia, they are palpations, there's nausea and vomiting that sort of thing. Good reasons for somebody to drop out.

The use of ephedra for the treatment of respiratory conditions is probably not dangers and giving the bronchiodialating affects of ephedrine, it's probably effective, but there's been no methodologically acceptable clinical trials of efficacy of ephedra preparations for respiratory conditions that I they could identify.

There is some evidence that a caffeine/ephedrine combination can improve aerobic exercise performance, and you saw one of those studies mentioned today, the Bell study. Well, what wasn't mentioned was that not only does the treatment increase heart rate, but the incidence of nausea and vomiting in that study was 25 percent.

In answer to question three about whether there are differences in individual sensitivity;

individual sensitivity can only be established retrospectively, after an adverse event has occurred. Certainly some are more susceptible than others. This is the same with cocaine, the majority of cases of stroke that are associated with ephedrine have occurred in people with cerebral vascular abnormalities. However, cerebral vascular abnormalities are not very uncommon; they affect about 1 percent of the population, and, you know, most of us don't have a prescreening MRI before we go to buy our dietary supplements.

Ephedra is certainly associated with more adverse reactions when combined with other sympathomimetic. Okay, we don't know what, for which subpopulations ephedra may be more dangerous, but we do know that virtually all of the adverse effects the associated with use ephedra alkaloids have had been when it was used for weight loss, recreational use, or bodybuilding.

Asthmatics are apparently the only population who are responsibly using this herb. And so I say there's no safe doses, but there are safe indications.

For number four, are the outcomes associated with use of these products affected by dosage or other factors? Maybe, but we don't have enough information

to date to take the answer these questions and there's high variability in products which has already been mentioned.

Ephedra should not be available in products that are labeled for weight loss, labeled for bodybuilding, fitness, energy enhancement, or recreational use. The only indications for which ephedra products should be labeled are respiratory conditions.

The National Women's Health Network would oppose taking ephedra off the market; for traditional use in traditional forms it is not hazardous. But it's use for weight loss, exercise enhancement, or as an energizer are not traditional uses and any dose at which these effects occurs in overdose. Thank you.

[Applause.]

DR. JONES: Thank you, Dr. Fugh-Berman. Questions from the panel?

[No response.]

DR. JONES: Questions from the floor?

[No response.]

DR. JONES: Thank you very much, Dr. Fugh-Berman.

Next Michael MGuffin, President of the American Herbal Products association.

MR. McGUFFIN: Good evening, Dr. Jones, esteemed panel, members of the audience. And thank you for the opportunity to present an industry perspective on the safety of dietary supplements containing ephedrine alkaloids.

My name is Michael McGuffin and I am President of the American Herbal Products Association or AHPA. AHPA is the national trade association and voice of the herbal products industry comprised of companies doing business as growers, importers, manufacturers, and marketers of herbs in herbal products. AHPA serves its members by promoting the responsible commerce of products that contain herbs.

As some AHPA members sell products that contain botanical ephedra and extracts of ephedra we have an interest in the regulation and safety of such products.

My presentation here will primarily summarize an ephedra survey undertaken by AHPA earlier this year. I will provide quantitative information tabulated in this survey on the total consumption or actually total sale of supplements containing ephedrine alkaloids and also on serious adverse events reported by consumers to manufacturers and marketers of these products.

I will also discuss some of the

manufacturing, marketing, and labeling practices that were observed in this survey. As other speakers have acknowledged, AHPA has taken a lead on establishing industry guidance on the responsible sale of products containing ephedra since 1994 when a trade recommendation for such products was first approved by our board.

This formal industry position has been revised from time-to-time and is currently supported by other trade associations including the National Nutritional Foods Association, the Utah Natural Products Alliance, and the Consumer Health Care Products Association. The policy which serves as a condition of membership for all AHPA members who sells supplements containing ephedra consist of several elements. These include serving limits of 25 milligrams of total ephedrine alkaloids per serving and a 100 milligrams per day, a requirement to state the amount of ephedrine alkaloids on the product's label, a cautionary label statement that limits use to persons over the age of 18 that cautions against consumption of any amount in excess of the recommended serving size and against unsupervised used by persons with certain pre-existing conditions. It also recommends against use in pregnancy, and it also recommends

discontinuation in the event that specifically described side effects are experience.

The industry position also prohibits the use of synthetics of ephedrine alkaloids and prohibits the marketing of any ephedra product as an alternative to an illegal street drug.

AHPA and the others associations that I mentioned earlier recommended in May 1999 that FDA adopt these policies for all supplements that contain ephedrine alkaloids. Our organizations and others have also worked to establish these guidelines as regulations in several states including Ohio, Missouri, and Hawaii.

At the beginning of this year I APHA, through it's ephedra committee, sponsored a survey of companies that sell supplements containing ephedra or extracts of ephedra. The survey was administered by the accounting firm of Arthur Andersen, LLP. The target companies were 42 manufacturers and/or marketers including both AHPA and non-AHPA members, whose products were listed in the FDA's initial adverse event report as reported in the proposed rule published by FDA, June 4th, 1997.

The survey consisted of a series of general questions regarding each company's overall business as well as specific questions related to current

manufacturing, labeling, and marketing of supplement products containing ephedrine alkaloids. The survey also requested quantitative sales information for each of the last five years.

Of the four to 42 companies solicited Arthur Andersen received responses from 14, eight of the 14 respondents were AHPA members; all responses to the survey were confidential. So the report received by AHPA consisted of summarized aggregates of individual responses.

The compiled results of the survey included the following data: the survey asked for information regarding the principal purposes for which these products are marketed; 12 of the 14 respondents replied to these questions and reported such uses as we've heard here today; weight loss, energy, increased athletic performance, and for a few products, four products, for use for colds and asthma.

A significant portion of the survey was designed to measure the degree to which these products are in conformity with the industry's trade recommendations. The maximum amount of total ephedrine alkaloids recommended in each serving was reported to be less than 25 milligrams, the industry recommended maximum for all but one of the respondents' products.

And this was a total of about 120 products between the 14 companies.

The maximum amount recommended to be consumed within a 24-hour period was less than 100 milligrams, the industry-recommended maximum for all of the respondents' products. All respondents reported that they use a cautionary statement substantially similar to the statement recommended by the industry standard, except that one of the 14 companies reported that it does not include the recommendation against use by persons under 18 years of age as is recommended by industry.

All of the respondents reported that they state on their product's label the amount of ephedrine alkaloids contained in the products as recommended in our standard. All but one reported to their manufacturing practice include testing of each lot of finished product to determine the labeled amount.

Twelve of the 12 respondents who sell products that all so include xanthene alkaloids caffeine reported the quantity of these alkaloids is also disclosed on the label.

All respondents reported that they do not use synthetic ephedrine in any of their products consistent with the industry's long-standing prohibition against

use of such ingredients. One of our primary interests in conducting the survey was to determine the breath of consumption of these products. We were only able to ask sales as we didn't have access to information about how many consumers that represents, or how many doses each of them took.

The total number of servings sold by the 14 responding companies defined as the maximum amount to be consumed each use per the directions on the label was reported with each of the past five years. The total serving sod were reported to be 425 million in 1995; 585 in 1996; 976 in 1997; 1.75 billion in '98 and over 3 billion servings last year.

This significant, ongoing, increase represents a more than sevenfold increase in sales in 1999 compared to 1995, and the average annual growth in sales volume of 64 percent in each of the intervening five years, and total sales of 6.8 billion servings over the five-year period.

The final portion from the survey was designed to determine whether companies that sell these products are prepared to receive consumer complaints and to quantify any serious adverse events reported. For purposes of the survey a serious adverse event was defined as quote, "any report of a person suffering a

heart attack, stroke, seizure, death or other injury that resulted in hospitalization or treatment by a physician." The survey found that all 14 respondents reported that they do have systems in place for collecting reports of serious adverse events, a total of 25 serious adverse events were reported to the 14 respondents in 1999 which can be calculated at just over 8 such reports with each billion serving sold

A total of 66 serious adverse events was reported to the 14 respondents of the five-year period from '95 to '99 compared to the more than 6.8 billion servings sold in the same five-year period. This total represents a reporting rate of less than 10 such reports per billion servings sold.

Because the responses to the survey were confidential no follow-up was done to assess the legitimacy of any of these reports of serious adverse events; nor did the survey attempt to evaluate individual companies' procedures for collecting reports or establish any degree of probability between any report and any actual adverse event.

All reports identified here should therefore be considered to be just that, reports filed by consumers. It is also valuable to note that although the recorded, reported sales of supplements containing

ephedrine alkaloids has increased more than sevenfold in the last five years. There has been no commensurate increase in reports of adverse events gathered by FDA.

In summary the AHPA ephedra survey estimated the total sales of products containing ephedrine alkaloids to have been over 3 billion servings in 1999 with a combined total of 6.8 billion servings sold in the past five years and an average annual increase in sales of 64 percent.

The survey also found that in almost all of the ephedra products marketed by the survey's respondents are in full conformity with the industry-establish standards.

Finally, the survey recorded that consumers of these products are reporting very few serious adverse events to the companies that market these products. AHPA has taken to position since 1994 that acknowledges the use by persons over the age 18 of supplements that contain ephedrine alkaloids as a legitimate self-care option. Our association's trade recommendations regarding the formulation, labeling, and marketing of such products now adopted broadly through the industry and by some state governments also acknowledges that such products must be treated with respect both by the companies that market them and by

the consumers who use them.

The survey sponsored by AHPA's Ephedra Committee provides for the first time some information toward the creation of a denominator against which all reports of adverse events could be measured. The conclusion that should be drawn from this compiled data is the supplement products containing ephedrine alkaloids are safe when responsibly manufactured, labeled, and marketed in conformity with the industry-establish policies and responsibly used by consumers.

It is my sincere hope that the information provided here today from the AHPA ephedra survey will assist the process of determining a national regulatory policy that protects consumers health as well as their access to supplements containing ephedrine alkaloids. Thank you.

[Applause.]

DR. JONES: Thank you, Mr. McGuffin.

Questions from the panel? Dr. Salive.

DR. SALIVE: Can you explain why you only had a 33 percent response rate to the survey?

MR. McGUFFIN: According to our Arthur Andersen that's quite good. We've hired Arthur Andersen to do other surveys for us in the past primarily with regard to tonnage, how many pounds of

different herbs are we using. We're lucky to get 20 percent in those.

So with Arthur Andersen tells us, and this is a business, that if they get one-third response from a targeted audience, they considered that a quite successful response rate.

DR. SALIVE: Out of those 42 companies what percentage are members of your association?

MR. McGUFFIN: See, because the information is blinded I did not actually see the list, although actually our committee did.

DR. SALIVE: Who they sent it out to?

MR. McGUFFIN: That's right, our committee saw that list. What we don't know is which responded.

Of those who -- I actually don't have that information, which portion were our members of the whole list. I do know that, as I said, eight of the 14 respondents were AHPA members, but I don't know of the 42 how many were.

Again, we selected it from that group that FDA had already identified as possibly products of concern through their adverse event system.

DR. JONES: Dr. Lieberman.

DR. LIEBERMAN: Thank you. The question has already come up today, how you established your daily

dose and your single-dose levels and the issue it was suggested that that might be a scientific question. But I'm asking purely from a scientific perspective, can you give us the scientific criteria that would be used that were used to establish those levels?

MR. McGUFFIN: We borrowed both the dosages numbers and the cautionary language from the models of the OTC products. And also from the historical use and extrapolation, as Dr. Fong said, you expect 2 percent alkaloids; the standard dose is six to nine grams, that's 120 and 180 milligrams and then tbe OTC maximum dose is 150 and we just went conservative from that. But that's, as I recall, how it was established. It was some years ago.

And, again, the cautionary statement looks remarkably similar to that that is on the over-the-counter products.

DR. LIEBERMAN: Thank you.

DR. JONES: Dr. Philen.

DR. PHILEN: You mentioned that you do have some adverse events reported; can you tell me sort of the type of personnel at the companies that would be collecting this information and then what they do with this information?

MR. McGUFFIN: We did not ask those

questions.

DR. PHILEN: So you don't even have a wild guess who is collecting this, if it's a clerk or a scientist?

MR. McGUFFIN: We didn't and, you know, I'm not here to present that I have all of the perfect answers in these few sheets of paper or in our first survey, but we really worked hard to get this survey undertaken, and some of what we felt like we had to do is get people used to the fact that it's really valuable to gather this information. I think that's a fine idea to next time not only ask them, do you but ask for a description of it. Because we'd like to know. You know the responsible industry really does want good systems in place that captures this information and that does something with it if it is in fact indicative of concern. We really do want to have such systems and support such systems; so I think that's a good idea going forward.

DR. PHILEN: Well, you need to know how it's handled and if it's reported to the appropriate people afterwards.

MR. McGUFFIN: Right. We did not ask that this time.

DR. PHILEN: Thank you.

DR. JONES: Questions from the floor? Ms. Culmo.

MS. CULMO: Cynthia Culmo, Association of Food and Drug Officials. Mr. McGuffin, do you know if those 25 adverse events were reported to the FDA?

MR. McGUFFIN: We don't know.

MS. CULMO: And of your responders versus your nonresponders, do you know the percentages that were your small companies versus your billion dollar sales companies?

MR. McGUFFIN: We asked mostly larger companies. We didn't really -- there was one idea that we should poll all AHPA companies which includes about two-thirds of our members or quite small companies. We did get some data on the sizes of the companies though, and they tended to be -- I've got the study here and I could give your copy -- they tended to be large companies who responded. Better than half of them were sales with sales above $50 million total sales including ephedra products.

MS. CULMO: And was there a reason you didn't inquire as to whether or not the reports had been forwarded to the FDA?

MR. McGUFFIN: I don't believe there was a decision not to as much as that we didn't consider that

at the time.

MS. CULMO: Thank you.

DR. JONES: Thank you.

Other questions from either the panel or the floor?

[No response.]

DR. JONES: Mr. McGuffin, thank you very much.

MR. McGUFFIN: Thank you very much.

[Applause.]

DR. JONES: The last of the abstract session, Dr. Robert Stark, Yale University.

MR. RUBIN: Good afternoon my name is Paul Rubin, an attorney in the Washington, D.C. office of Patton Boggs was. I'm actually scheduled to speak tomorrow on behalf of Metabolife, when I will introduce our expert panel. One of our distinguished experts is speaking today, and I would now like to introduce him.

Dr. Robert Stark is a graduate of Harvard Medical School. He did his residency in internal medicine at the University of Pennsylvania and a fellowship in cardiology at the National Institutes of Health.

Dr. Stark currently practices internal medicine and cariology in Greenwich, Connecticut and is

a clinical assistant professor of medicine at Yale University School of Medicine. Since 1997 he has researched the safety and efficacy of dietary supplements used for weight loss and has been involved in evaluating FDA's adverse event reports for ephedrine.

Dr. Stark will be discussing the safety profile of ephedra and ephedra caffeine combinations in dietary supplements including his assessment of the adverse event reports compiled by FDA. Dr. Stark.

DR. STARK: Thank you and thank you for having me here. My participation today was funded by Metabolife International. I'm here as a clinician.

I see internal medicine and cardiology patients in my office and in the hospital daily. And I mention that in part to explain why it is that I don't have attractive slides or a zipping PowerPoint presentation to back up my talk.

I also mention it because I want you to have some understanding of the mindset and the context in which a clinician considers the issue of dietary supplements. On the one hand in favor of dietary supplements are the centuries of experience in using them, are the scientific studies which I'll go into today, and also the satisfied experiences of current

users.

On the other hand weighing against the use of dietary supplements are the anecdotal adverse reports that randomly circulate. There are also the studies, many of which use primates which show some adverse effects. And finally tbe well-organized collections of adverse events reports that are collected and analyzed by professionals and then are disseminated. To a clinician it's these latter adverse event reports that carry an awful lot of weight. And I reviewed hundreds of reports three years ago and a little over 100 early this year when the new set of AERs came out.

And I'd like to share with you some of them that I analyzed that are exemplary of the majority, and then go on to talk about the research studies that were suggested by them.

The first report may speak to what Dr. Marcel Salive, from an NIH asked about earlier today, and that is the existence of any positive rechallenge studies for adverse effects. This is a 29-year-old woman who reported two separate adverse event occurring in 1996 and 1998. She unexpectedly became pregnant twice while using depoprovera contraceptive and while taking Metabolife dietary supplement. She indicated that she had seen a television special about women who take

Metabolife and who get pregnant while they're on birth control. And she wrote to the FDA.

"I was on Metabolife when I became pregnant, both times. I thought maybe this would be an example of positive rechallenge but a subsequent FDA memo from an analyst, Dr. Morefski stated that this woman was found to have a uterine fibroid by her physician and so she was taken off of Depoprovera. Both pregnancies occurred while she was off oral contraceptive. The Depoprovera was stopped and the woman became pregnant. Nevertheless this case remains one of the FDA collections of adverse event reports related to the use of ephedra and it's counted as among the 800 or now 1,100-some adverse events that have been collected.

A second involved a 24-year-old man who was undergoing chemotherapy for acute limpoitic leukemia. He developed signs of both liver failure and chromium toxicity.

In addition to receiving potentially hepatotoxic chemotherapy. He was also taking ephedra and a nutritional supplement that contain greater than 1,400 micrograms of chromium. His serum chromium level was measured at over 300 times the toxic level and he eventually had to have had to have a liver transplant due to chromium toxicity. Nevertheless his case is

listed by the FDA as been one of their adverse events related to ephedra alkaloids. This is listed as ARMS No. 13464

A last report, a similar report, involves a suspicious pelvic mass in a young middle-aged woman. This was a 40-year-old who noticed tennis balls size mass in her left lower abdomen. She had an ultrasound and it showed a left ovarian cyst. This was removed and was found to be an ordinary benign adenoma.

Because she had been taking an ephedra supplement for the previous three weeks, she retained a lawyer to represent her. She actually had a history 15 years before work of having severe gynecological problems. She had a coloscopy and conization biopsy and then in the ensuing 15 years never went back to the doctor, never sought gynecological care, never had a Pap smear, and now presents with this mass. There's no known cause and effect relationship between ovarian cyst and the ingredients in ephedra supplements. This ovarian cyst is probably just another incident in this patient's long history. Yet it is still listed as being indicative of an ephedra-related problem

Now, the accepted methodology for evaluating a suspected adverse drug reaction is usually to demonstrate actual exposure to drug or the agent and to

demonstrate proximity of exposure, not to four months ago, or two years ago, but a reasonable time before the event to demonstrate production of a reaction or a response that has been previously recognized to be a response for that substance and then to prove the absence of significant contributing or other underlying medical conditions.

In many of the cases that I reviewed that are now on permanent record with the FDA, there are major flaws in these specific areas. These reports as such really don't form a sufficient basis to suggest or confirm a danger to health from a ephedra.

In addition to these numerous AERs compiled by the FDA, I also reviewed relevant literature on ephedra use on the pharmacology and epidemiology of ephedra use, and looked at the reports, analysis reports authored by the expert reviewers who were retained by the FDA to evaluate the FDA's adverse event reports. I really didn't find sufficient evidence to support a significant risk from ephedra or ephedra/caffeine containing combinations when taken in accordance with product labeling.

And I based my conclusions on the following: the literature is in agreement that there is a legitimate role for single agent like ephedra or

combination agent like ephedra and caffeine regimens in appropriate patients for promoting weight loss. Several studies by Astrup and by others have shown that there is a synergistic effect between ephedrine and caffeine in causing weight loss.

Studies at the University of London and the Harvard Medical School also show that the combined regimen of ephedrine and caffeine was generally well tolerated, however, some patients did experience dry mouth, tremors, dizziness and insomnia and these were the drop-outs that were mentioned earlier.

Also some patients had a four or five beat per minute increase in their heart rate. Another study from the University of Copenhagen showed the most of these side effects declined over time back down to placebo levels usually by six or eight weeks of treatment.

The ephedrine and caffeine dose ranges that were looked at in all of these studies which generally 72 milligrams per day of ephedrine and 240 milligrams per day of caffeine. These doses are identical to, or even exceed, the doses that are currently recommended by dietary supplement manufacturers. And there doesn't seem to be any causal link between these doses and serious adverse events.

In addition, these are the same or similar doses that are already contained in common asthma and decongestant medications. The ephedrine contained in Marax of the caffeine contained in extra-strength Excedrin, dwarf those levels that are found in the herbal supplements that we're discussing today.

Even one of the FDA experts who reviewed this issue concluded that quote, "the ephedra doses in herbal products is similar to or less than that in bronchodilators or decongestants."

For my review of the FDA adverse event reports and the literature and the reports of the experts reviewers, I don't find a sufficient evidence to support a significant health risk from ephedra/caffeine combinations when taken in accordance with recommendations and product labeling.

The risk of experiencing adverse effects events presented by ephedra dietary supplements is no greater in magnitude than the new risk presented by over-the-counter drugs that contains synthetic ephedrine and the potential adverse events are similar to those associated with caffeine.

The overall health risk associated with the ephedra/caffeine supplements is far less, for example, than that associated with the ingestion of peanut

products by the general population because a small proportion of our population have peanut allergies. The same is true for shellfish products or certain additives like MSG.

Ephedra supplements appear to be effective and safe in normal healthy populations, but they do present some risk when taken by certain people with pre-existing conditions which we've mentioned earlier. For people with no such predisposition, these supplements did not appear to increase the likelihood of cardiac events.

Ingestion of ephedra can increase the heart rate as I mentioned before by for or five beats per minute, but this does not appear to be associated with adverse events in the absence of underlying pathology.

I hope that when future AERs are collected by the FDA that they will be shared together with full accompanying clinical information with multidisciplinary panels of reviewers in order to accurately access the risk posed by these dietary supplements.

I'd be happy to take questions.

[Applause.]

DR. JONES: Thank you, Dr. Stark.

Questions from the panel? Dr. Philen.

DR. PHILEN: Dr. Stark, I believe I heard you say right at the beginning of your comments that you had, had a lot of reports of favorable experiences from using ephedra in your patients, but that the adverse reports were simply anecdotal.

Now, if these favorable experience reports are to be, you know, accurately reported I guess I can say, then are you collecting these in a systematic fashion? Do you plan to report these out as any kind of a paper or technical thing?

DR. STARK: I don't want to in anyway suggest that I've collected favorable reports from patients. I merely said that in determining the benefits versus the drawbacks one has to consider the long history of use, the favorable reports by current users.

I'm not collecting adverse events or positive events.

DR. PHILEN: So then are favorable reports anecdotal?

DR. STARK: They are.

DR. JONES: Any other questions from the panel?

[No response.]

DR. JONES: Questions from the floor?

[No response.]

DR. JONES: Very good. Dr. Stark, thank you very much.

DR. STARK: Thank you.

[Applause.]

DR. JONES: This concludes our abstract session and we now move to Public Comment Session A.

I just want to say a word of thanks to all of our speakers today that I've not had to be the strict disciplinarian that I've got this terrible reputation for an have had for about 30 years for keeping things on track and on time. I'm very much appreciate everyone sticking to time limits and keeping their remarks to the point.

We would now invite -- we have four commenters registered for this particular public comments session Samieh Wood, Hanna Zechzer, and I'm sorry if I have abused the name, David Molony and Pablo Francisco Semiao. If you would be a prepared pleased to approach the podium, you will each have three minutes. And we will not be questioning you about your remarks.

We very much appreciate your coming. My personal opinion about science in the public interest is that science that we do in government is better served when the public has a role, so we very much

welcome your comments.

MS. WOOD: My name is Samieh Wood and I am here from California. I just want to say this, that what every one of the little me the grass-roots level that everyday citizen out there, for every one of me there's hundreds or thousands of people whose voices will not be heard today.

I also would like to make a comment that I sat there today and I heard the distinguish panel of the regulatory group who provided their research and I as a citizen, as a consumer, was very, very offended when one industry representative stood here and said "where is to beef?"

Even though I've been a vegetarian for 25 years, I think I have some beef for the gentleman right now. In 1995, following a complete hysterectomy I was put on HRT. You know, we the ladies here the boomers this is our turns now. And I gained 25 to 30 pounds. I went from size four to size nine. That was very unacceptable for me.

I went to the nearest health food store. I said, "I need a diet pill." The lady who is there to this day gave me this ephedra drop and she said, "Samieh, this is a miracle pill. You're going to thank before this."

Well, it was the miracle pill. I took it. I lost the weight and also lost my mind. I suffered a para -- psychosis. I entered the horrible dark zone of my life that I've never ever want any woman to experience. I had to dropout of master's degree I was going for my second master's in family counseling. I would sit there and I was blank.

After three hours of lecture I couldn't comprehend, I couldn't retain anything that was said to me. I would lock myself in the bedroom and my two teenage kids lost their mother. It was a horrible, horrible experience for any human being to have to go through.

I also must say that I am the epitome of goods health. I've been a very vegetarian for 25 years I have never tasted a drop of alcohol in my life, I have never smoked a cigarette, I am antitobacco, antialcohol, antidrug. So when I took that pill it went into a pure brain, right here, and it hit me right there.

I would get in the car I would drive 80 miles in a 45 mile zone, and I would say, "what is happening to me, God? Why am I so abnormal?" but I couldn't stop myself. I didn't know what was happening to me. I became an abnormal dangerous citizen. I was dangerous

to myself, I was dangerous to my family, I was dangerous to the road when I got on the road.

That pill is a silent weapon, ladies and gentlemen. I cannot help but to remember 25 years ago when I told my dad, "when you smoke, I can't breath. I wheeze in my chest." And he told me to shut up.

Twenty-five years later my dad died from lung cancer and everybody in this room now agrees that secondhand smoke can kill.

And I think maybe it shouldn't take 25 years from now for the government to stop this silent dangerous pill called ephedra. Please let's that stop it before we have many people in the graveyard. Thank you.

DR. JONES: Thank you, Ms. Wood.

[Applause.]

DR. JONES: Ms. Zechzer.

And, oh, I'm sorry, Ms. Wood, for the record, would you please state the source of support for your travel here today? We do want our commenters -- please to the microphone so we have this on the record. And just remind all our commenters to please do so as well.

MS. WOOD: I found out about HEAT through the newspaper article that was sent to me by an 83-year-old Chinese friend of mine, my former professor from the

University of Hawaii. I contacted Ms. Barbara Michals on the Internet, and I said to her, "You have -- here is my credit card, I will pay for all my expenses, and I am devoted into fighting this ephedra pill." This is a crusade for me from now until whenever I can.

DR. JONES: The source of travel support to be here at this meeting today, please?

MS. WOOD: I provided my -- I don't know. I provided my credit card.

DR. JONES: Ms. Michal -- no, just for the record, my office supported your travel to come to the meeting today.

MS. WOOD: I'm very grateful for that. I didn't know that, but I'm very grateful for that.

DR. JONES: Thank you.

MS. WOOD: Thank you.

DR. JONES: Ms. Zechzer.

MS. ZECHZER: Dr. Jones and panel members, I am Hanna Zechzer, here as a consumer at my own expense. My case was one of those reported to the FDA in 1998, through a Medwatch report by my health care provider.

I am addressing question number one of an adverse reaction of heart and respiratory failure due to a dietary supplement containing ephedra with caffeine.

At the time of my reaction I was 42 years old with no predisposing health conditions. The only stimulant I was taking would've been an occasional cup of coffee or caffeinated soft drink.

Two years ago I was taking an herbal supplement for weight loss as prescribed on the bottle. I had received a pamphlet in the mail and ordered the product. A doctor's claim in the enclosed literature said this was not a drug, but all ingredients were organic and natural. The selling factor for me was that it was all natural, so I thought it was safe.

The label stated that the ingredients were ma huang and guarana. After taking the pills for seven days I began experiencing a severe headache and felt very jittery. I then develop the chills, chest pressure and a tingly feeling in my left arm. My blood pressure was elevated at 150 over 100. A two-hour grand mall seizure followed which was eventually controlled and I was then intubated. My problems worsened as doctors tried to figure out the reason for my decline, thinking it was neurologically related.

A drug screen tested positive amphetamines of which I was not taking. I was transferred to a larger hospital with greater capabilities. Upon admission there I had a diagnosis of one seizure, etiology

unknown; two, altered mental status; three, respiratory insufficiency despite ventilator treatment; four, hypotension requiring dopamine drip.

An echocardiogram revealed severe cardiomyopathy with an ejection fraction of less than 15 percent. A cardiac catheterization revealed a dilated hyperkinetic ventricle with reduction in ejection fraction. Hemodynamics, coronary arteries, and aortic root were all normal.

Another echocardiogram three days later still revealed severe myopathic left ventricle with five ventricle dysfunction. A repeat echocardiogram seven days later revealed persistent severe diffuse hypokinesis with markedly depressed ejection fraction. The following day another echocardiogram revealed a normal left ventricle function with borderline concentric hypertrophy.

The discharge summary states the principal diagnoses as multiple system -- excuse me, multisystem failure secondary to obesity drugs. Secondary diagnoses are sepsis, respiratory failure,cardiogenic shock, congestive heart failure, rhabdomyolysis, tonoclonic seizure, obesity, urinary tract infraction, pneumonia. I was in the hospital for a total of 14, ten of which was on life support.

My children were faced with the possibility of losing their mother, my parents their daughter, my sisters their little sister.

DR. JONES: Please wrap up. Your three minutes are --

MS. ZECHZER: All because of my reaction to the dietary supplement ephedra. I was an unsuspecting victim because I did not know of the dangers of this ingredient. By the grace of God, I physically recovered from this reaction with no permanent heart damage. I am now being treated for post traumatic stress disorder to deal with the emotional side to this. Thank you.

DR. JONES: Thank you, Ms. Zechzer.

[Applause.]

DR. JONES: Mr. Molony, the American Association of Oriental Medicine.

MR. MOLONY: I'm the Executive Director of the American Association of Oriental Medicine.

The American Association of Oriental Medicine is the oldest and largest association of acupuncture and Oriental medicine practitioners and the United States with herbal medicine falling within our practice in many states and predominantly in our training nationally.

Our profession is the only rigorous national certification examination for herbal medicine and there are diplomants of that exam in every state with over 5,000 licensed practitioners using herbal medicine in California alone.

As licensed health care professionals we applaud the FDA efforts to protect the public from mislabeled products. Yet due to the potential negative impact in of overregulation or outright removal of the availability of the herb on our privilege to provide such herbs to our patients we would like to see a clarification to proposed regulations of ephedrine-containing products that recognize a difference between the effects of ephedrine and ephedra.

Many of the reports state first that the illness or death was related to ephedrine-containing diet and stimulant product then state that the most common source of ephedrine is the herb ephedra.

We would like to point out that ma huang, ephedra sinensis is the first herb to be taught in the traditional Chinese system of herbology. Herbs are classified in more than two dozen categories and always starts with ma huang as the first herb in the first category.

To take away access to this herb would show

disrespect to the well-educated practitioners of historical, traditional, and validated system of medicine that has licensed practitioners in most every state and would be similar to restricting use of the scalpel by surgeons.

Interestingly enough, there are no traditional indications for the use of ephedra for either weight loss or stimulant use although there is recognition of its stimulant effect. I want to point that out.

For more information on the use of ephedra we would like for you to refer to any of the many Chinese herbal textbooks on the subject. There is in each book information on dosage, indications, and contraindications that have been in existence for hundreds if not thousands of years.

I also want to note that almost every herb is historical used in formulation which accentuates the effectiveness of the herb while minimizing any untoward effects even with long-term usage, if that formulation is indicated for long-term usage.

To summarize the regulation of ephedra needs further discussion from all parties. Use of ephedrine for its thermogenic dietary stimulant stimulant properties is not a traditional indication in herbology

and thus the herb needs for observation and understanding by both traditional herbal providers and conventional regulatory agencies working together.

To severely restrict ephedra the herb from the public and especially from the armamentarium of qualified herbal practitioners because of the abuse of its alkaloid cousin ephedrine, or even for ephedrine's abuse by unscrupulous manufacturing should be avoided and its regulation dealt with in a rational manner.

The development of dosage schedules should take into consideration age, weight, and even constitution should be developed with the input of classically trained herbalist as well as conventional scientists and regulatory staff.

The American Association of Oriental Medicine would like to see continued availability and use of ephedra for its members and its profession and its profession and hopes that his forum is a stepping stone to continue discussion on the issue. As a result we offer expertise of our educated and experienced herbalist to confer with issues around the usage of safety and control of all herbal products. Thank you.

DR. JONES: Thank you, Mr. Molony.

[Applause]

MR. MOLONY: And I paid my own way.

DR. JONES: Thank you. Thank you.

Mr. Semiao.

MR. SEMIAO: My name is Pablo Francisco Semiao, I also paid for my own farecard to get down here and I represent a portion of the fitness industry.

I'm a public health graduate student and I also or have been a certified personal trainer since 1994 by the American Council on Exercise.

My concern over the sales of these dietary supplements comes from what I've heard and seen. In the gym I hear: take these first thing in the morning with some coffee and you'll be ready for workout. At a fitness seminar I hear: carbs are bad for you if you're trying to slim down; so how do you get the energy to workout, fat burners.

It's not really ephedrine it's only Ma Huang, instead in the bottle. For some time now I've noticed personal trainers at fitness center and private studios prescribe and sell supplements containing ephedrine alkaloids without any regard for the safety of the consumer. Yet these trainers are not registered dietitians or have credentials that will allow them to determine if the supplements would have any adverse side effects.

They also do not pay attention is to warnings

by the FDA or any other reputable journal studies. Their sources of information are usually off-the-rack muscle magazines.

After supplying gym and studio managers and owners information from the FDA studies and articles about ailments, deaths, and side effects attributed to ingestion of these pills, they dismissed them with the belief that there is still need for long-term studies or for those who are actually educated say, they are within statistical variance

Meanwhile, the risks to the consumer of dangerous side effects and even death will continue to exist until the marketers of these supplements choose to heed the warnings and stop their just to any person or until this product becomes controlled.

The definition of the drug from Webster's dictionary is a substance other than food intended to affect the structure or function of the body. The reality is that these supplements are drugs even though they are sold with warning labels and estimated safe dosages.

Yet there should be some control of their distribution due to those unqualified marketers who have access to them and for the sake of marketing and for the sake of making a profit off the consumer

without any concern for their health, especially to those women who are eager to lose weight to meet today's in vogue, slim physiques, or those who have coronary heart disease dangers.

I would also like to emphasize that American Council on Exercise in its journal reminds its certified professionals to be mindful of professional limitations when working with clients. And their chief exercise physiologist Richard Carlton also reminds that recommending supplements is beyond the scope of practice off all certified professionals. Most dietitians will not even recommend them especially the stimulants.

In 1994, Congress passed and President Clinton signed the Dietary Supplement Health and Education Act. This legislation eliminated FDA's authority to regulate the safety of nutritional supplements before they are on the market. Now, the FDA can intervene only after an illness or injury occurs.

The FDA can still restrict the sale of unsafe dietary supplements when there is evidence of the product which presents a significant or unreasonable safety concern. But now the agency must wait for complaints about a product before acting.

As a responsible certified trainer and health professional, I submit my complaint and recommend that the FDA make an effort to control or regulate the marketing of dietary supplements containing ephedrine alkaloids for the protection of the consumer. This is not as much as for the product itself but for its availability to just anyone. Thank you.

[Applause]

DR. JONES: Thank you, Mr. Semiao.

That concludes our scheduled day.

In terms of tomorrow, we will open at 9 a.m. with just a brief recap of logistics and introductions. And then we will start a public common session. We have had one change in the agenda. Scheduled a 10:01 a.m., Dr. Jerry McLaughlin will speak. We apparently lost an abstract somewhere in the submission there and we are plugging him into the end of the public comment session, and apologize to Dr. McLaughlin.

Otherwise we will see you back here at nine o'clock.

Please turn in your badges, they will be here in the morning you can check-in.

If you are scheduled for public comment, please see your number in the agenda, if you choose to sit in the chair with a number on it our staff will

facilitate your getting up here and be ready for all that.

Thank you very much. Have a nice evening.

[Whereupon, at 5:25 p.m. the meeting adjourned to reconvened on August 9, 2000, at 9:00 a.m.]

C E R T I F I C A T E

This is to certify that the foregoing public meeting on The Safety of Dietary Supplements Containing Ephedrine Alkaloids, held on Tuesday, August 8, 2000, was transcribed as herein appears, and this is the original transcript thereof.

Gerald Brooks
Court Reporter