

CENTER FOR MIND-BODY MEDICINE
COMPREHENSIVE CANCER CARE 2001: INTEGRATING COMPLEMENTARY & ALTERNATIVE
THERAPIES

CONCURRENT: Environmental Factors in Cancer

SPEAKER: Michael Lerner, Ph.D.

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P R O C E E D I N G S

DR. LERNER: How many of you were just at the plenary that I was in? Okay. Well, I have a suggestion. I don't want to just sort of talk at you. I just did that for an hour. And I'd rather have a conversation. So I think some of you probably have some interesting ideas. I have a lot of friends in the audience. And I just want to ask what are you thinking about, about these issues, about the age of extinctions and the emerging environmental health movement, and are you involved? Do you want to be involved? What kinds of things come to you?

I have a particular interest in this issue I talk to you about toward the end, which is, I profoundly believe that for us to get to a better future, we have to start linking up the health-affected groups. We have to create a system in which, instead of breast cancer groups only advocating for breast cancer or, you know, endometriosis groups only advocating for endometriosis, learning disabilities association only working on that, we have to create conditions in which the health-affected groups and the health practitioners who care about them recognize the common realm of endocrine-disrupting chemicals and other chemicals in so many of these health concerns, and that each group begins to develop a survey of the literature about what's known about the effects of chemicals on this particular issue in animal research, in wildlife, and in humans, and that that literature summary be available on each group's website, and that their newsletters carry articles and editorials talking about what's known and not known and calling for more of a search on their specific issue and then reaching out and making the linkages which Commonweal is very interested in doing -- not that we want to play a lead role. If somebody else will take it on, we'd love to see that happen. But we will actively work with groups that are interested in this to link health-affected groups and health professionals who care about it.

So I'm just offering that as one starting place. But, Jordan, you're sitting in the front row here, and you've been thinking about these things and have been active yourself. Would you be willing to just say a couple of words -- let's see if you can grab this mike -- just about what you've done and sort of what brought you into it. And identify yourself.

DR. FIELDMAN: Sure, thanks. You caught me a little bit off guard.

DR. LERNER: Yes.

DR. FIELDMAN: I am standing.

My name is Jordan Fieldman. I'm a physician immersed in internal medicine residency and a longstanding interest in public health, environmental factors, and just doing the right thing, socially and environmentally, and have had the great privilege to be working with Michael at least over the Internet, and through positions as a delegate to the American Medical Association and a delegate to the Massachusetts Medical Society.

The publishers of the New England Journal of Medicine have been drafting resolutions to try to raise awareness about some of the environmental toxicities that do need to be addressed, both within and outside the medical communities, and trying to recruit support from physicians, because ultimately, we should be the arbiters of human health or public health. And if something is going on, even though it's not an internally or -- if it involves the environment, I believe it's still within our purview or our domain to be addressing this and taking care of it. And Michael Lerner has been an extraordinary resource and inspiration in all of this.

DR. LERNER: So, Jordan, you worked on both the Health Care Without Harm stuff, but also on antibiotic resistance in animals. And just to give you a sense, another campaign that we started was a campaign focusing on the fact that the beef and poultry industries have been using a very large part of the total antibiotic use in the United States to keep healthy animals gaining weight in factory farm conditions when there is a tremendous concern that this use of antibiotics as a growth promoter in healthy animals in animal agriculture reduces the potential for antibiotics to work in human beings.

This week The New England Journal of Medicine published the smoking gun, showing that there are residues of these antibiotics in the animals that we eat, and that they come directly to us, and calling for a change. Now, for the last 2 years, we've been working on an Antibiotics Resistance Coalition. And, again, this is a critical place for physicians and health professionals. So Health Care Without Harm and the Antibiotics Resistance Coalition are two examples that Jordan has been working on where moving these issues -- something very simple -- with your professional organization, joining the Coalition, working on it, and then moving resolutions on this through your professional organization, and then being willing to engage in other activities that make sense for you can make a profound difference.

The only way the society changes is not because the government does it; it's because small groups of committed citizens get together, and now, using the Internet and conference calls, we have become effective agents for social change. And I can tell you that it feels so much better -- you know, Dean Ornish was talking about much better you feel on a good diet with exercise and so on. In this world that we're living in, where we're living in this age of extinctions, where all this stuff is coming down, to find the specific place where you can engage -- in addition to your personal practice of health or healing or whatever you do, to take a little time each week or each month to be active on behalf of a better world, I think makes most people feel better. You know, I think it actively makes you feel better.

And so it really doesn't matter which piece you pick up, but just to begin to say, I'm not going to be just a resident of this country; I'm going to be a citizen of this country. And it's ultimately not about whether we win or lose, because we can't know that; it's a long road. But to be determined that when it comes to democracy and social justice and the environment, that you're going to keep the faith, and you're not going down without a fight, and if your vote is going to make any difference, you're going to be voting for what matters, you know? That makes a difference in your life in just a really fundamental way. The people I know who are engaged in some way actively with these basic citizenship activities feel better about themselves. And the greatest benefit is, you get involved with one of these, and then you get to watch the actual changes taking place. You get to watch the fact that in California, the governor just signed legislation that you can't buy a mercury thermometer in California anymore without a prescription, you know? (Applause) And France has banned mercury thermometers. We've been closing down medical waste incinerators all over the country. Just committed people.

And it's not only about doctors, let me tell you. Doctors are key. But the real work of Health Care Without Harm, to an extraordinary degree, has been done by nurses, which should not be any surprise to anybody. Why? Because most nurses are women, and because women are in the leadership of the Health Care Without Harm campaign, as they are in the leadership of almost every other environmental health campaign that's going on. Why are women in the leadership? Because when you do polls of people and you say something like, "Breast milk is the most toxic human food," and you talk to male pediatricians, or men in general, the thing is, oh, we don't want to frighten women by telling them that. It's too frightening for women to deal with.

But if you talk to the women, they say, that is just horrible, and I need to know it if I'm going to take care of my family. I need to know that, no matter how horrible it is. So men tend to fend it off, you know, and they tend to set on their emotional responses and so on, and women tend to hear it, they tend to engage with it, they tend to understand their feelings about it, and then they begin to say, what can I do? And that "What can I do?" is often in a small group settings. But when you have that kind of grassroots engagement in small group settings all over the country, you begin to see change.

And that's the way these grassroots movements work. They're not fast, they're not high-tech, they're not well funded or any of those things. But a real grassroots movement has an unshakable, unstoppable power to it.

Any other comments? Yes.

DR. SIERPINA: I'm Vic Sierpina from the University of Texas Medical Branch. I'm on the editorial board of *Alternative Therapies and Health in Medicine*, and this year at our editorial board meeting in Santa Fe, Larry Dossey and the rest of our Board are collaborating with Kenny Ausubel and Bioneers to really move that journal, *Alternative Therapies and Health in Medicine*, to conjoin with this eco-environmental movement in medicine. It's the same problems that we're facing as a CAM practitioner community with the environmental movement. So I'm really happy that the journal has taken that direction.

I had one question, just as a practitioner. Patients are now concerned as we're raising the alarms about chemical toxicities and such. They come into the office and they say, I think I've had this toxic exposure. It's very difficult for me to always get a handle around how to measure that. We live in Texas, where there are lots of petrochemical plants, thousands of potential compounds.

How do you actually clinically establish what are safe levels or any levels of these toxic exposures that people have had?

DR. LERNER: Well, Victor, that's a great question. Let me start by saying that your work with Kenny and the Bioneers -- as you know, they're meeting out in California right now -- and the Bioneers, for those of you who don't know it, is a great organization. And the fact that your magazine and Bioneers are working together is tremendously important, because that really would be cutting-edge in alternative therapies, to develop a strong, sustained concern with environmental health. So I really congratulate you, and it's a great example of what we need to do.

In terms of how you measure body burden, what we call the hundreds of chemicals and heavy metals in our body, the shorthand is called body burden. And some of you may have seen the Bill Moyers film "Trade Secrets" -- can anybody raise hand who saw "Trade Secrets," just so I just have a sense? Okay.

"Trade Secrets" was a film that Bill Moyers did for PBS on the chemical industry. And basically, it made the case that the chemical industry has acted the way the tobacco industry has acted with respect to science and public health: That it has systematically made an effort to mislead the American people about the hazards of chemical products and what they do for our health. And this is a sad fact, but the real fact is that chemical science is like tobacco science. It is really not balanced, it's not fair. And given that the chemical industry controls most of toxicology in this country, we have a very, very serious problem, in that the toxicologists who should be defending us from this are mostly in the employ, directly or indirectly, of the chemical industry. So it's very hard to get good science about what these hundreds of chemicals in our bodies mean.

So there are two questions, it seems to me, about this. One is how do we measure them? And the second is what do we do about it?

Well, when Bill Moyers did this film, "Trade Secrets," about the chemical industry and how it was not telling the truth about its products and its processes, he was part of a group of 12 people that we help put together that participated in a study by Mount Sinai School of Medicine in which we had -- and I was a member of the study also, as was my wife, Char Patton (phonetic) -- we had these 12 people have comprehensive studies of our body burdens, of close to a hundred chemicals, I think, and heavy metals done. These tests cost \$5,000 per person, to give you some sense. And the only place that does this sort of gold-standard version of this is the Centers for Disease Control, Environmental Health Laboratory, headed by Dick Jackson in Atlanta. But we couldn't do it with the CDC, because this was a small, private group, and when the CDC does it, they don't tell you what's in your body, and we wanted to know what was in our body.

So we went to a private lab, and they did these elaborate tests, and what we discovered -- my wife Charl and I had been living in a small town called Bolinas, eating a primarily vegetarian diet for the last 25 years. And if anybody was going to have lower levels of chemicals, we should, and, you know, as children, we were both in places where we weren't heavily exposed. If anybody was going to have lower levels, we should have had lower levels.

But the fact of the matter is that our chemical levels were about the same as others in the study in Louisiana or New York or Boston or wherever it was. And as my wife, Charl, who had dioxin levels pretty much the same as people who were near chemical factories in Louisiana, said, "You know, we all live in the same chemical neighborhood."

You can't get by this by -- I mean, yes, you can make a difference on the margins by eating a vegetarian diet and drinking bottled water and all these other things. But those of us wandering around here drinking bottled water, if you ever look at the research on what happens when you take a shower, your chemical exposure from the air in the showers and so on and so forth really loads you with the chemicals. What are you going to do, stop showering as well as drinking bottled -- you know, it really isn't -- there is no safe place when it comes to chemicals.

You know, they migrate through the atmosphere. If you look at what happens to the Inuit in Canada and up around the North Pole, there are a whole set of chemicals that skip up through the atmosphere and deposit in the polar regions, and then native peoples up there eat the seafood and so on, and they have incredibly high levels of chemicals when they've never been anywhere near the sources of those chemicals.

So the second point I'd make is, we all have these hundreds of chemicals. We're all in the same neighborhood. And sometimes those chemicals have moved thousands of miles from where they were produced.

Another key question -- and this, by the way, I think is a critical need of complementary medicine, which I know Keith Block, who was here before, is interested in, which is, do any of the supposed detoxification programs that complementary medicine offers actually work? Do they actually scientifically work?

Now, the position of mainstream toxicology is that with the exception of chelation for a very few things, there is no way, other than breast feeding, to detox from toxic chemicals. But in complementary medicine, there is a whole raft of products and places and so on that are making claims. Now, I'm a big believer in true objectivity in complementary medicine. So one of the things that we should get busy and do is start doing real careful pre- and post-testing, using some of these different regimens, to see whether it's possible for a woman who wants to get pregnant and breast-feed to detox, because if it is, it's a really big deal, and it's not out there in mainstream medicine. So that ought to be done.

We have commissioned a paper by Andy Weil and his colleague Iris Bell to do a search of the literature on detox and complementary medicine. And we've commissioned another paper by some folks

who are going to take a look at a very controversial literature, which is the Scientology literature on detox. I have no respect for Scientology, personally, but I've never been afraid to look objectively at anybody in alternative cancer therapies who thought they had something that might work, and Scientology really began as a drug detox program. And there is a literature around the world that is not just Scientology, but associated with it, that uses a set of common mechanisms, including saunas and, you know, this, that, and the other, that in theory is supposed to detox people, which Scientology hypes all over the place. Somebody's got to do objective evaluation of some of those approaches as well.

So this other area, which we're going to be responsible for, is taking a really close look at whether personal detoxing is possible. I will bet you anything in advance that even if we find that detoxing has some impact if you do a whole lot of stuff, that it's not going to solve the problem. This is a problem that can only be solved by a national and global effort.

So finally, coming back to the specific question you asked, how do we measure this, there's everything from the \$5,000 Cadillac version to the \$5 lead evaluation and everything in between. And there is a national campaign called the Coming Clean Campaign that came out of the Bill Moyers "Trade Secrets" show that is a national coalition of organizations working specifically on bringing together all the groups that are working with chemical concerns.

And one of the working groups is called the Body Burden Working Group. And the Body Burden Working Group of Coming Clean is working specifically on, how do we decide which communities get tested for which toxins, and what's cost-effective, and what the consequences of that are. So one way into that is to contact the Body Burden Working Group of Coming Clean and begin to bring complementary medicine into Coming Clean the way we should be in Health Care Without Harm and the way we should be in health-effective groups.

Thank you for that question, and congratulations on the work with Bioneers. Yes --

QUESTION: My name is Andrea ÄÄÄÄ. Could you tell us what your views are on mercury in dental fillings?

DR. LERNER: Well, there's somebody here who just came up to me who's working on that. Is she in the audience today, a friend of Artie and Pamela Krasny (phonetic)? Yes. Could you say your name, please?

Working on dental amalgams -- is that person in the audience? No? Okay. It's a group working on mercury amalgam. And it's a very important issue. The problem with mercury amalgam is that the alternatives to mercury amalgam are more expensive, and when you get to low-income communities and people that don't have much opportunity for dental care, it's harder to treat them without using mercury amalgam. But it is a big issue. It should be addressed. It should be addressed by a coalition like Health Care Without Harm. And it's a great concern.

The problem there is that there isn't as clear-cut a cost-effective alternative as there is with mercury thermometers and PVC plastics. And, you know, we always have to be concerned when we address one of these things with the human cost. Before you do a campaign to, say, get rid of mercury amalgam, you want to be very sure that you've really done the research, and that you've figured out a cost-effective alternative, so that poor people can get adequate dental care. But if people focus on that, we will find a cost-effective alternative. It's just that, right now, from my knowledge, there aren't comparably priced things for people for whom adequate dental hygiene is not always available.

QUESTION: Are you suggesting, then, that ÄÄÄÄ could afford ÄÄÄÄ that would be desirable?

DR. LERNER: Is it desirable to get your fillings changed if you can? That's a complicated story. I had that done before I learned that in order to do that without poisoning yourself, you have to have a

very elaborate trap so that you don't blow the mercury into your whole system. And I blew the mercury into my whole system, because I didn't know about that.

And then there's controversy over how much mercury is leaching and -- you know, in other words, once you've got them in, it's not only expensive, but there are risks involved in doing it. So again, I try to be very careful about what I know and what I don't know.

I had it taken out, because I have a tremor and -- actually, this is an interesting story. I'm a DES son. So my mother took DES to try to prevent herself from having a miscarriage with me, because she'd had seven or eight miscarriages before she had me. She took DES in the hopes that this would help. Many of you know that the industry actually knew several things. It knew that it didn't really improve outcomes of pregnancy, long before they stopped distributing DES, to take DES. They also knew that there was a very high risk of cancer in female animals in studies where the mothers were given DES. And of course, we all know today that DES women have an extremely high risk of reproductive cancer. I think it's about 50 percent of women whose mothers had DES. And DES sons are not as well studied, but I've talked to quite a few, and I notice, we're interesting. We have a -- you know, DES is not only an endocrine-disrupting chemical, but like many endocrine-disrupting chemicals, it's estrogenic. So many of us DES sons have a fairly developed feminine side. And, you know, some DES sons that I know are gay. Now, I didn't turn out to be gay, but it was almost a conscious choice for me when I was an adolescent and in college that I was going to be straight rather than gay. And I've noticed that quite a number of the men I know have these tremors. So there are a whole set of things that we don't know about this particular endocrine-disrupting chemical. So we were among the sort of canaries in the mineshaft of endocrine disruption.

And it's an interesting example, because when I was talking during the talk about wounded healers and how the wound is not only a wound but it's an opening, in many ways, being a DES son has been one of the important openings in my life. I treasure the side of me that sees the world from a feminine view as well as a masculine view. You know, I even treasure the fact that I get to live with this tremor. I wouldn't have chosen the tremor, but the tremor has taught me a lot.

So going back to the mercury, mercury also causes tremor. So I thought, well, with the DES, I should get the mercury out of my system. And then it turned out, when I did the big set of chemical tests with the Moyers group and Mount Sinai, I was extremely high in arsenic, and arsenic also causes tremor at high level. So I had three things going: The DES, the mercury, and the arsenic. And knowing that, there was a whole set of lifestyle choices that I could begin to make.

So that's the thing about body burden. It's the thing about testing for body burden. One of the most radical things that we can do in this country is to let people know what chemicals are in their bodies, because if we let people know, they begin to ask questions. It's a very traumatic experience to know that. And I'd like to see that \$5,000 test in another 10 years be like a PAP smear. And once every mother in this country knows what her chemical burdens are, there is going to be a revolution like you would not believe, you know? (Applause) So driving that down was a key thing.

QUESTION: Hi, I'm Tom with Alternative Medicine magazine. I'd like to see something in terms of, instead of sending biopsies just to pathologists, but to send biopsy specimens to toxicologists too, because when they've done that, they've discovered consistently higher concentrations of pesticides and heavy metals and toxic --

DR. LERNER: Yeah. Okay, you all heard the question, because the mike was on. Okay, the question was, Tom said he'd like to see biopsies of cancer sent to toxicologists as well as oncologists, because there are higher levels of chemicals in heavy metals.

And that is true, and complex, in that the studies that have been done, for example, in Sweden with breast cancer and different toxics -- didn't show higher levels of chemicals for most of the chemicals,

but did show it with dieldrin, d-i-e-l-d-r-i-n, which is not what people were looking for or expecting. And so there's a hypothesis that dieldrin may do it.

The story, though, is incredibly complicated, because we're not exposed to one chemical. We're exposed to a soup of hundreds of chemicals. And they're all studied one by one, and the safety levels are set one by one. And so how those soups actually work is terrifically difficult to figure out.

And that is where one of the most important things that we can promote as health care professionals comes in, which is, we need to shift the burden of proof from proving that these chemicals are harmful to asking the companies that want to introduce them to prove that they're safe. And that basic idea is known as the precautionary principle, and the precautionary principle basically says better safe than sorry, and it says when you have a new chemical, you need to test it in animals, or you need to test it in the lab. And if those tests show toxicity, you'd better really explain why you expect that not to be true in a mammalian system as well.

So the precautionary principle is increasingly widely accepted in Europe. It was written into the POPs treaty, the treaty on Persistent Organic Pollutants, and we're trying to write into more and more and more things. It's like the Hippocratic Oath on the global scale. It's, above all, do no harm, you know?

So it is really up to the health professions in a very fundamental way to explain to people that right now, our whole system of evaluating chemicals absolutely doesn't work. Most of the chemicals are not even remotely adequately tested, and even those that are adequately tested are not tested using the precautionary principle. So part of this movement toward a sustainable world, toward a garden earth, is to enshrine the precautionary principle in every single industrial sector.

QUESTION: I read Endora Wrapp's (phonetic) work how the average American is exposed to 70,000 chemicals that didn't exist 50 years ago.

DR. LERNER: That's right. There are 70,000 chemicals in production.

QUESTION: And you just mentioned the problem of poly-pharmacy, that two seemingly benign chemicals can, in the body -- or even in the atmosphere of the soil -- be deadly. And then there is the problem of things that are not just carcinogenic, immunogenic, but teratogenic too.

That sounds very difficult, to assure the safety of any of these chemicals.

DR. LERNER: That's right. Other questions, comments? Yes, right back there.

QUESTION: Hi, I'm Polly Delavit, and I teach at the Duke Center for Integrated Medicine. I'm also a three-time oral cancer survivor, and my concern has to do with fluoride treatments that my dentist continues to want to use in my mouth, both the topical application and the presence of fluoride in the water.

Every dentist that I've brought this issue up with -- I had cancer in '87, '91, and again this year, and I am fully recovered, thank you -- continues to say fluoride's safe, fluoride's safe, and I cannot get a straight answer.

What is your view on both the -- if you know -- the presence of fluoride application or in the water?

DR. LERNER: Well, there's a debate about whether fluoride is safe or not, and it's one of these many controversies, and I don't really have a view on it other than that it is something really worth looking

at with care, because the costs and benefits of fluoridation don't seem to me to have received adequate, really objective, evaluation. So I think you have reason to look into it.

I think it's very important in a field like chemicals and health where sort of the same kind of rampant fear that we're experiencing right now about bioterrorism is very easy, that we have to be as careful as we can be about saying what we know and what we don't know. So all I can say, I've sort of followed some of the debates on fluoride, and it seems to me that that question is not settled, and that it is valuable to continue the conversation.

And I can certainly tell you that the community I live in has never been willing to have fluoride in its water, and the places where people like us gather, where they have political control of their community, tend not to have fluoride in the water. So I think it's an important question.

You know, I want to sort of riff off that question for a moment. I was talking about hydrocarbon man and the hydrocarbon society. And it's really fascinating; since September 11th, I've been re-reading a book by Yergin called "The Prize," which is a study of the oil industry and the chemical industry from its inception in the early 1900s to the present. And what is really fascinating, if you look at it, is that starting with World War I -- you know, World War I was essentially determined by gasoline supplies and the creation of tanks. And World War II was fought over oil. I mean, that wasn't the reason for it, but Hitler absolutely based his entire strategy on trying to get access to oil. That's what he was about. And the Allies were basically involved in trying to stop Hitler and the Japanese from having those oil supplies.

And ever since then, if you look at the sources of what's going on in the Middle East -- and again, this in no way excuses the insanity of what happened on September 11 -- but if you seek to understand it, given how central oil has been to our entire modern lives, that's why the West has supported anti-democratic regimes in the countries that have the oil, because the oil is a matter of state policy. And if you control the oil, you can't afford to have places that might turn the oil over to somebody else in control of the oil.

So when we think about these relationships between personal and planetary healing and the risk of benefits of hydrocarbon society, it's just interesting to think deeply, not because we don't have to find and prosecute the people who did what they did to New York and Washington, but because as we think deeply about the future, the costs and benefits of the whole petrochemical system are profound ecological and human health issues, you know?

We hear a lot about bioterrorism, in the sense of anthrax and smallpox and stuff like that. For whatever reasons, people are talking a lot less about incidents similar to what happened in Bhopal, India, where an explosion of an American chemical plant killed over 10,000 people and wounded hundreds of thousands more. And we have plants like this all over the United States. Now, one just blew up in Toulouse, France, recently, and there may well have been sabotage involved in that one, also possibly related to the whole Afghanistan situation. And the consequence of that was so traumatic in Toulouse that President Chirac of France is calling for getting these chemical plants away from populated areas.

Now, if you begin to think in a world where terrorism is a reality about simply what the public health consequences are of having these huge concentrations of petrochemicals scattered all over the landscape where anybody with malevolence can do something like what somebody did in Toulouse, that's a pretty big deal, you know?

So all I'm saying is, this is not something we can change overnight. But when you deal with a world -- it isn't as though terrorism just emerged in the world; it's just that it finally caught up with us. And when you are living in a world in which people can turn planes or nuclear power plants or chemical plants or things like that into weapons of mass destruction, then you have to ask -- then the calculus becomes different about what a green future would mean. Because if we had a green future with lower reliance on petrochemicals and lower need for concentrations of very toxic chemicals and sustainable agriculture and

all those other things, our national security would in many, many very profound ways be stronger. It would be more difficult to use these things against us, while right now we really are hostages to a system that has brought us many enormous benefits, but has these dangers as well.

So I'm just suggesting that, just as we have the problem of the body burdens of chemicals in our personal bodies, we have the problems of national burdens of these exposures to chemicals in our national body.

And while that's something that we can't do something about in the short run, the question that we have to ask ourselves is do we really want these SUVs and these huge vehicles, and do we really want to keep going in that direction, and then need to be tethered to these sources of oil around the world, and need to have governments that we can control running them? Or do we imagine a future where, wherever possible, there are solar collectors on roofs and there are photovoltaic systems, and there's hydrogen power, and if we were putting money and energy into those things, then alternative energy -- it's sort of deeply symbolic relationships. The more you study this, the more convinced I've become that these relationships between personal and planetary healing are very profound.

I want to keep asking new people for comments. Yes? The lady right back there, yes.

QUESTION: My name is Angela Yen. I'm from Buffalo. Actually, I'm from China.

Our China has a question, because just now we talk about smoke. But we Chinese have 500 million people smoking. But their cancer is not much. So what the question is, with the lifestyle we take, so chemical, it is, because the West culture, waste the science there -- they research a lot, our side acknowledge. They research TV, microwave, computer, chemical, all things. The fog is outside long, long time, but if they doesn't concentrate their body -- their self's body, because of where the medicine is waiting, so is medicine in your insides body -- you have your own energy medicine in your inside body, but in your own life. So this is your medicine. So we find that this medicine can compare outside chemical and the poison.

So this point is different as culture and our waste -- waste of people. They're focused a lot on outside reason. They ask help from outside, outside medicine -- herbs, vitamin -- all things taken from outside. But actually, you have a very precious medicine in your inside body.

So our point is, that's why Eastern -- they're looking for harmony balance from the inside, so --

DR. LERNER: I hear you.

QUESTION: You heard me?

DR. LERNER: Yes, I did. Thank you.

QUESTION: Yes, so that's why my question -- I got a question -- listen, I feel funny, because our Chinese -- a lot of people are smoking. The fault is not smoking's fault. Because of the smoke, we say the chemical -- they will make another poison. So then occurs the human's healthy.

So yeah, I do healing work. I do energy work. It's a really worker. So you can help people find their balance back. Where their immune system balanced back, the cancer disappear, 100 percent disappeared. So yes, this -- where are you get a healing, from the inside medicine.

DR. LERNER: Let me see if I can paraphrase the thrust of your question, I believe, or your point.

As I hear you, your belief is that in China there are a lot of chemicals and a lot of people smoking, but because the Chinese understand internal energetic resources that are available to us, their cancer rates are much lower.

And I think that's an interesting hypothesis. I think that the people I know who are working in China -- there is a lot of concern in China that rapid industrialization is creating levels of toxicity that are killing all the fish in all the rivers and making the air very difficult to breathe and creating real environmental disasters.

(Tape interruption)

DR. LERNER: -- I'll just start there.

Then the second point that you make is that internal energetic resources can be important in combating this. And that's an interesting hypothesis.

I think Andy Weil put it well when he was talking about researching the literature on toxics. He said there are three things you can do with toxics. You can prevent yourself from taking more in as best you can by eating a good diet, breathing clean air and water, although we've seen what the limits on that are from my description of our lives in Bolinas. But you can do your best to prevent yourself from taking more in. You can try to detox personally. But the third thing you can do is to enhance your general health as much as possible so that you are more resilient.

Now, when Dean Ornish spoke earlier, he showed those really interesting slides about the lab animals on low-protein versus high-protein diets in which, with chemical exposures that cause cancer, the animals with the low-protein diets did infinitely better. And if you also look at Ornish's other slides, which were wonderful, on just a whole set of things -- on being married, on having a confidante, on having friends, you know, just whole bunch of things -- it's perfectly clear that how we live and how we carry ourselves do make dramatic differences in our health. And I think that could be interpreted as those ways supporting the inner psychic energy that you were talking about, helping Chinese people to reduce their levels of incidents of cancer. I think particularly important is that generally in the past, low-protein diet -- although that's changing very rapidly in China, and China has an enormous increase in animal fat in the diet, and it would be interesting to see what that does to cancer.

Other questions or comments? This gentleman right here.

QUESTION: Thank you. I have a very practical family. My family, we're organic vegetarians, and of course we don't raise our own products. So we buy things that come prepackaged, and I have written to the companies about their packaging materials. And, of course, they say they're within FDA limits of things.

So can you comment on how to get that part out of our life?

DR. LERNER: Well, packaging is a really important area of campaign work, and there are a number of groups that have been working on packaging. I can't give you a citation. Obviously, when you go to co-ops and places like that, there are a lot of foods that are available without packaging, so you can get your tofu or whatever it is out of a container rather than in a plastic wrapping.

I think this is an area -- I don't think there's a simple solution, but I think that campaigns work, and for example, if you wanted to do a campaign on packaging, you'd find the people who are working on packaging; you would find an industry leader in packaging who had a brand name that they cared about; you would pick a particularly egregious example of why their packaging was unnecessary and harming the environment; you would assemble a really broad coalition of environmentalists and health

professionals and others; and you'd go to the company and say, look, guys, you have a choice: Either we're going to attack you publicly, or you can change this particular practice. And that is the kind of dialogue that is going on.

But at a personal, human level, people voting with their feet is an enormously powerful grassroots activity. I mean, if you look at the health food industry, it has been the most rapidly growing part of the whole food sector for a really long time.

So it just seems to me -- I don't have a quick solution, but if that's the area that calls on you to work, I would go on the Internet and go to Google and type in "packaging and environment," and in two seconds you'll have a list of 400 references. I would screen through google.com's references to find the group you wanted to work with. I would contact them. I'd get involved in that, and I'd work in your community in grassroots ways to focus on that particular issue. It's a great issue. Packaging is a great issue.

Yes, go ahead.

QUESTION: I have a question and also an observation to make about a topic that doesn't, on the surface, seem that important, but I'd like to know what you think about natural flavors in foods. And my observation about them is this. I mean, of course, according to the precautionary principle, there could be a lot more danger there than we know about them, and they're not talked about a great deal.

But maybe the most insidious thing about natural flavors in foods is that they create a very uneven playing field for the things that we've been here talking about quite a bit, in terms of green foods, colorful foods, things which are natural. When you artificially flavor a lot of these highly saturated-fat products, it creates an uneven playing field.

If there was some regulatory -- if there was a regulatory environment around these things, maybe people would be much more interested in eating actual foods. So this is a small thing that may have actually tremendous ramifications. What's the regulatory environments around natural flavors which are in fact not natural at all, and what's being thought and done about that now? Do you know?

DR. LERNER: I don't. That's a great question. I don't know exactly what's being done. I think that you're absolutely right that flavorings and colorings are a critical area of regulatory work.

I guess the other point I would make is that it's very hard -- one can work on it, but in the current environment, it's very hard to change regulations, because the regulatory agencies are to a very large degree bought and paid for by the industries they're supposed to regulate. That's just basically the deal. And that is why these grassroots campaigns usually aren't primarily focused on regulation first. What they do first is to find a market leader with a brand name that is vulnerable and pick an egregious example and create a wide coalition and go after them in the marketplace. And then other industry leaders see what happened to that one, and they begin to think, gee, maybe we should do this differently. And so you get much more rapid change by these market mechanisms than you do by regulatory campaigns, and then the regulations follow.

So as an example, for Health Care Without Harm, we went after the companies that were manufacturing the mercury thermometers, and we went after the health care chains that were using the mercury thermometers, and we got change in the marketplace and then lo and behold, regulatory change follows because you're changing corporate behavior in the marketplace.

Now, as I said during my talk, with September 11, it's much more difficult, because nobody wants to hear about these apparent low-level threats when everybody is terrified of bioterrorism and depressed about the whole world situation. So what I've been describing to you is what we did for the last 5 years, you know? But what's going to work for the next 5 or 10 years is really unclear right now, and I think that

at this moment, what you do -- I mean, one of the simple rules of organizing is the same as the rule of patient care. What do you do when a patient walks in the door? You meet that patient where they are. You meet what their concerns are, what they're asking you, and you respond to that question, and from that, it moves out into other things.

Well, today, where is the patient at a national level? The patient at a national level is terrified about bioterrorism and depressed about the prospect that we've moved into a world where civil liberties and civil rights are likely to be pushed downward, and where a whole set of issues that we've cared about for a long time are taking secondary status.

So what can we do? We can meet people where they are, in terms of their fears of bioterrorism, and we are part of communities who are working around the country to organize community forums on bioterrorism and chemical threats to the community so that people can get involved, so it's not just the experts telling people what to be concerned about. It works much better when communities are involved themselves.

So we're trying to meet people where their concerns are. We're trying to use the bioterrorism issue to strengthen the public health system. And we're trying to, I think above all, help people with the question of how we live in this new world, which is very similar to the question of how a cancer patient lives with a life-threatening illness. Do you close down, do you just become overwhelmed and in despair, or do you find deeper sources within yourself and open up to deeper truths, so that many, many women with breast cancer will tell you that, as horrible as this has been for them, it has been a profound opening in their lives? Julia Rowland, who is with the Office of Cancer Survivorship, and may be in the room, has looked at a lot of this research and has said to me, you know, if you didn't know that these women had cancer and you were simply looking at what they were describing as the changes in their lives, you would think that some really positive thing had taken place, because of all of the benefits that they're describing.

So in this new world that we're living in, with all its perils, our greatest hope is if we can help the country as a whole to use this opening to go deeper. And in that going deeper, people almost inevitably make good choices. They're caring about deeper things. And in that deeper way, they can look holistically at all the issues we're facing and move the country in a good direction, because we know that the civilization is going to shift, and the question is which way it shifts. And if we can help moving it toward an opening, it will shift in a better direction.

Who else? Where is the mike right now? You should go to whoever is closest to you, and we'll just -- yes.

QUESTION: Hi. You may have already addressed this. I came in a little late. But I was wondering your opinion on the artificial sweeteners.

DR. LERNER: We just had a question just like that. Yes.

QUESTION: Okay.

DR. LERNER: Let me just say this about the artificial sweeteners. I'm not an expert on that research, but I think you have to be very careful about them. And there is research literature out there; I just don't know it in detail.

QUESTION: My name is Arnold Paul, and I was diagnosed with non-small cell stage-4 lung cancer about 9 months ago.

I'm trying to do everything I can to improve my household environment. I had a couple of questions. The first one involves ionizer filters for the water. I understand that such filters can break down the minerals in the water so that they can be more readily absorbed into the body.

And the second one had to do with specialized air filters. I think they're called high-efficiency particulate air filters. They're both fairly expensive items, but I was just wondering what your comments are on the efficacy of these two appliances.

DR. LERNER: I try to always tell the truth when I don't know the answer, and I wish I did, but I don't know the answer to either of those questions. I'm sorry.

QUESTION: My name is Leslie Gershein (phonetic). I'm a physician, and I noticed downstairs in the exhibit area, there was a booth that dealt with chelation. I have no idea what that's all about, other than we were taught about EDTA and lead poisoning in medical school.

Can you comment on that, because I have had patients ask me about it, and --

DR. LERNER: I went to that, because I'm interested in detoxification. I asked the gentleman at the booth whether they had done rigorous, independent, scientific studies demonstrating that chelation actually reduced level of persistent organic pollutants before and after. And he was a nice gentleman. I didn't get an answer to that question which was satisfying to me.

I mean, I think chelation therapy is one of the areas of great controversy, and it's said to reverse coronary artery disease and to reduce toxics in the body. I have an uncle who has had it and swears by it in terms of coronary artery disease reversal. But I know it is incredibly controversial, and that a lot of people don't believe in it.

So I haven't studied chelation therapy closely enough to be able to give you an objective answer. But when we start looking carefully at detoxification, it's high on the list of things that we're going to study.

Maybe, Tom, do you want to say it is?

MALE SPEAKER: The organization -- the chelating division is called ACAM, American College for Advancement in Medicine, and there are a lot of studies about the subject. Their website is www.acam.org, a-c-a-m.

DR. LERNER: But I want to say that I would not assume that an organization of chelating physicians were going to be a front of total objectivity on the subject, no.

MALE SPEAKER: ÄÄÄÄ.

DR. LERNER: No, no, I appreciate the reference. I'm just saying that I'd take care when I hear from the people who do it as to whether that's the full story. Thank you, though.

QUESTION: Michael, have you looked or heard about the possible value of ayurvedic, panchakarma treatments, detoxification treatments, and the mobilization of stored --

DR. LERNER: Well, if Dr. Ray Rosenthal is here -- he probably isn't, but Ray Rosenthal was here, and he is an ayurvedic physician of very high quality.

You know, in Bhopal, where the big chemical factory went up, there is an extraordinary clinic that uses ayurvedic techniques to help people who were poisoned by the chemical explosion. And, again, ayurveda is one of the areas that I think one should look very carefully at in terms of detoxification

techniques among the traditional therapies. It certainly is the basis for a lot of the work at the Bhopal clinic. And actually, we've asked from the Bhopal clinic for a summary of their research methodologies for evaluating the efficacy of that. So I think it's a really important question.

And I think -- you know, these are areas where the traditional medicines are just very interesting: Traditional Chinese medicine, ayurvedic medicine, and homeopathy, by the way. And these are some of the areas where really rigorous objective evaluation should be done.

QUESTION: I'm Carol Becker from New York City. I'd like to introduce economics into this discussion, because if we are going to move toward a sustainable future with regard to energy use, farming, and so on, the current perpetrators who are polluting the world are involved in multi-billion-dollar industries, and your example about the thermometer makers -- what are they going to do if they don't produce mercury thermometers?

I have a sense, for instance, that until Exxon and General Motors and these other organizations have an alternative that will make them money so that their bottom line doesn't change, then maybe they will move into this arena.

So I'm wondering how you see that happening in the future.

DR. LERNER: Well, that's a really good question. Let me say, while I think corporate misbehavior is real and profound, often, I also believe that corporations are made up of people, and that corporation, often good people. In fact, one of the things that fascinates me, just as a human thing, is I know people in Exxon and Shell, people high in those organizations. And many of them are extraordinarily good people. And it's fascinating to me that extraordinarily good people work for organizations that do things that they wouldn't really want the organizations to do. It's just how the market works.

So the question of how we create a world where corporations are working in the public interest is a really fundamental question, and people have given it a lot of thought, and they have different ideas. You know, some countries tried communism, and they ended up with worse environments and worse pollution than corporations create. So that didn't work. So state control doesn't work. Some market mechanisms seem to be, in general, a more efficient way of allocating resources.

So then the point is, if you want the corporations to work in the public interest, you have to send market signals that reward good behavior and punish bad behavior economically. And there are many ways of doing that. Just as a single example, the insurance industry. Companies need to be insured, and if the risks of running a nuclear power plant or a big petrochemical facility cause premiums to be high enough, people will move out of that, unless you are subsidizing in some way or limiting the exposure of the companies so that they can't be sued for more than a certain amount. So that's just one example.

But another is price signals. And price signals are basically affected by tax structures. And right now, we tax income. We could tax pollutants. And if we taxed pollutants rather than income, there would be a profound shift in the market signals about what you manufacture and how.

So when we as a people decide that we're not okay anymore with toxics and breast milk and that we will not elect any congressman, senator, or president who isn't for a national plan to identify all the toxics in breast milk and create a set of specific goals, and we're going to roll back those toxics year by year -- which we could do. And as soon as that happens, then we will start to have legislation to tax these pollutants, and it will become uneconomic to create them, and they will start to go down.

QUESTION: Actually, that last question fed very well into mine. I'm in New Mexico, and there is a major controversy there right now with an Intel facility where Intel claims that they're within federal guidelines, but the downside of that is that there are no federal guidelines, so they could do absolutely

everything. And the community doesn't have the same resources that a large semiconductor company has, and, you know, in terms of market-type things, it's very difficult in a business-to-business or an OEM-type environment to really get at the villains.

So what would you recommend as a way of mobilizing to, one, prove that there is the problem -- we've got anecdotal evidence but not scientific evidence -- and, two, do something to create on a national level a way to get the guidelines that are necessary to get people to be involved?

DR. LERNER: Well, I'm familiar with the Intel situation somewhere in New Mexico. And my understanding is that they are trashing the water table and creating very high levels of toxics in the water through their plant operations there. And you know what it's a fascinating example of? Who are the people down there who are concerned about that? Mostly there's some environmentalists, and there are some Latino and native peoples who are in the area, and from my knowledge, there are some folks in Albuquerque.

But what really fascinates me is this. I spend a good deal of time in Santa Fe. Now, Santa Fe mecca of complementary and alternative medicine, of people being spiritual to the *n*th degree. Do you think those people in Santa Fe who are being spiritual to the *n*th degree and are up to their ears in alternative medicine have expressed very much concern with the Intel situation? They have not. And do you know how much economic and political social power they represent? It's enormous. So they really are a microcosm of what's wrong with the complementary medicine movement, which is, it doesn't have a social and environmental conscience, you know? (Applause) The complementary medicine movement is primarily about boutique therapies for rich people. That's what it's basically about. And that's not okay. That's not okay.

And so we have really deep work to do on ourselves. We can talk about what's wrong with the corporations, and that's really true. But until we really look deeply into ourselves and ask ourselves why CAM conferences are almost all white people, and why CAM conferences don't address the needs of people of color and of poor communities, and why CAM is not out there being the social conscience of this country, if it's as interested as it says it is in these issues -- it's really a profound question. I'm not saying we haven't done a lot of really good things. We have done a lot of good things. We've really transformed the upper end of medicine in this country. But it's about time that we started thinking about poor people and people of color and the environment and social justice. (Applause)

QUESTION: My name is Judy Phillip (phonetic), and the question comes from an observation. I'm a naturopathic physician who finished a 2-year residence in a hospital-based oncology program, as well as being heavily involved in endometriosis.

And my question is, are we looking at people, number one, who lose weight or are trying to lose weight, and the fat storage -- the chemicals that are released in their fat storage -- and people that are transferring even to becoming vegetarians, and what happens when the chemicals are released from the fat?

DR. LERNER: That's a really profound question. I mean, it's a really profound question. I'll tell you a story of somebody who came on the cancer help program. A young woman came on the cancer help program, and she had Hodgkin's disease. So I started having a long conversation with her.

It turned out that what happened to her was that she was unmarried, and she had a strong will, and she was a little heavy -- a little bit -- and she decided that what she needed to do to find a husband was to lose weight. So she lost 50 pounds in one year and she developed Hodgkin's disease.

Now, the Lymphoma Foundation of America, mainstream organization, has a publication, which I think should be a model for the field, called "Pesticides and Lymphoma." And what it does -- it's very

straightforward. Oh, you've got one. Great. Look at this. "Do Pesticides Cause Lymphoma?" Can we pass this around a little bit and have it come back to Jordan and make sure Jordan gets it back?

What this publication does is that it poses the question in an objective way. It summarizes the research literature. It says, we don't know a hundred percent, but if you look at these studies of humans and animals and dogs exposed to pesticides getting lymphoma and this, that, and the other -- and then it tells people what they can do to reduce their pesticide exposure.

So I certainly believe that rapid weight loss, from what I understand, releases chemicals into the body where they can be more problematic. And I am very concerned about that. And when you think about the number of young women who, trying to fit these models, are on an anorexic/bulimic seesaw, it sounds to me like just a model for constantly gathering and re-releasing chemicals. So I think it's a real concern.

But, again, see, we need to do science on all these things. And we need to push for science on them. And we need to be the advocates, just as we were the advocates -- I mean, what have we been the advocates of? Studying herbs, studying diet, all good things. But we haven't been the advocates for studying chemicals, not in a really systematic, rigorous, impeccable way. It's got to be impeccable, because, believe me, the chemical industry is going to be right there double-checking every study, and they have some good scientists. So it has to be absolutely impeccable. But I think it's a great question.

QUESTION: Hi. I actually haven't asked a question. In terms of the whole bioterrorism versus the Union Carbides or exposure to chemicals through chemical plants and at home, it seems much easier to mobilize the nation, to mobilize people, against an external villain rather than internal villains, if you would, the companies at home. And if I ask myself why, it seems that both the industries and the people themselves have a role in this. The industries themselves wield considerable political influence. They use their wealth to donate heavily to campaign contributions and lavishly wine and dine elected officials. And there's been precedent, if anyone has even said anything remotely antagonistic, such as Oprah mentioning offhand that people may be better off not eating beef, there's a tremendous backlash from these powerful industries to quiet them.

The second part -- I think people themselves are conflicted. I live in Pittsfield now, and sometimes people own stocks. They don't even know they own stock in companies that are doing this. And in Pittsfield, where GE had their plant -- General Electric -- and we're now dealing with tremendous PCB pollution -- a lot of the people were unwilling to ask GE to clean up because of their pension funds and not wanting to irritate or jeopardize General Electric.

And the other part is, people are conflicted in their choices. They want the luxury. They want an SUV that takes twice the raw materials to transport one 70-kilogram man and consumes twice the limited natural resources to move that one 70-kilogram body around the country.

So what do we do? The choice is complain, feel victims, and do nothing, or actually do something to change this. And I'm really curious what we can do to address this.

DR. LERNER: Well, thank you, Jordan, and I'm going to give Jordan the last question there, so I figure we can't sit for more than about an hour and 20 minutes without going bananas.

So what can we do? Each of us can pick that place in our lives where sustained activity makes sense to us. We don't all have to do the same thing. But if we become active citizens, we model a way of being for our patients and our communities that, hey, the doc, the naturopath, the acupuncturist, the healer, whatever, yeah, they're healing; yeah, they're doing massage -- and, by the way, in their office I saw this pamphlet, I saw this folder; you should see their office, it's toxic free; it's interesting the way live; it's interesting how they're building their house. You know, they wouldn't let me use the toxic wood when they were building their house. They wouldn't let me use the toxic carpet when they were refurbishing

their house. They walk their talk. Not -- we can't do it a hundred percent, but if you look at that healer in your community, it is striking to you that that healer is walking his talk; that he or she is a source of accurate, objective, non-hysterical information about these things; that they're factual; that when there is something up before the Board of Supervisors or up before the school board or something else, they're there; that they are choosing to show up and introduce questions about pesticides in school yards, about, you know, just local issues of local concern, building awareness and building consciousness in our communities, step by step, and walking our talk as best we can. None of us are going to do it perfectly.

But there is something very interesting about how belief structures actually work. Most people think that what happens is, you believe something and then you begin to do it. But the way belief structures actually work, research shows, is that you start doing something, and you come to believe it. And so if you start the actual process of simply incarnating this in your life, then your belief in it becomes deeper and deeper, and you become a walking Bodhisattva of earth justice. That's basically what happens. You become what it is that you have begun to do, even when you weren't sure about it.

And bit by bit, in that tiny way in our lives, we become enlightened, not in some flaky, airy-fairy way, but in the simple sense that we, as best we can, instead of contributing to dissent and to chaos and artificial people on an artificial planet, or business as usual, we're just making those incremental steps.

And if it seems impossible that we can do it, ask yourself how the first Quaker opponents of slavery felt, or ask how the first activists in the women's movement who believed that women should not be property felt, or ask yourself how the first people in the labor movement who believed that labor should have a voice and conditions felt. Or ask yourself how the first proponents of democracy against either kingships or dictatorships felt.

The simple fact is that if we look at human consciousness, there is a constant history of movement toward a more enlightened consciousness, against all the powers of all the forces of the governments and the companies that were arrayed against it. The simple fact is, there is a slow, quiet movement in history, created by people, one by one, who kept the faith about these things.

So you just become part of that community of faith. And the rest is not in our hands. We don't know whether we're going to win or lose. But it's the most interesting way to live.

Thank you very much.

(Whereupon, the PROCEEDINGS were adjourned.)

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