



# Comprehensive Intervention Program for the Autistic Child: Special Environment Program

This is the beginning of a new era for parents of children with autism, Asperger's syndrome and PDD. Our research clearly shows that autistic symptoms and behaviors, even in severe cases, are not inherent characteristics of autistic children; instead autistic symptoms and behaviors are caused by the neurological effects of severe reactions to chemicals in food and the environment. Our research also shows that the child can be protected from these substances so that no exposure occurs, and the reactions stop. Finally our research shows that as soon as the reactions stop there are no symptoms left.

The data and results, presented herein, show that rapidly, generally within a few weeks of a simultaneous complete dietary change and complete environmental change, the physical manifestations of autism can be eliminated through the SF Comprehensive Intervention Program. Further the symptoms return quickly should re-exposure occur. In other words, in our program we can turn symptoms of autism on and off like a light. This is not possible unless one is eliminating the substances directly causing the autistic symptoms themselves.

Food sensitivities together with chemical sensitivities have accounted for the symptoms of autism in every child we have studied. In our recent research program, now including 45 children with autism or PDD, we found that food and exposures to substances in indoor air, plastics, polymerized resins and mold, fully accounted for the autistic symptoms of each child. The question now is, is food and environment the cause in 100% of autistic children or only 99% of cases?

We studied 3 approaches, diet alone, diet and moderate environmental changes, and simultaneous diet and complete environmental change. The results were so lopsided in favor of this simultaneous approach that it was clear that no other approach should be used. We found that with diet alone, the immune system of autistic children is still overwhelmed, and the children are at risk for developing many new food sensitivities. Many parents who have tried the gluten-free, casein-free diet have already learned this sad truth.

We also found that with environmental avoidance alone, the food-related symptoms are so strong that overall improvements cannot be observed, and children experienced gradually worsening symptoms. Together is what works! When the thorough SF Special Environment Program, was partnered with the Special Foods Diet, the children's improvements were hailed as miraculous by parents. These

---

\* Slimak, K.M., 2002, Autistic symptoms caused by chemicals in food, indoor air and mold; and using avoidance strategies to eliminate symptoms in children suffering from severe autism. Seminar for environmental avoidance strategies in severe autism. March 13-14, 2002, Jackson, Michigan.

Slimak, K. M. 2002, In 45 autistic children sharp decreases in autistic symptoms follow elimination of problem foods, volatile organic compounds, plastics, resins, and molds, Second International Conference On Advances In Treatment Of Autistic Spectrum Disorders, Opening Doors – New Biological Treatment Alternatives, Colegio de Médicos del Distrito Metropolitano de Caracas, Sociedad Venezolana para Niños y Adultos Autistas (SOVENIA), February 15-16, 2002, Caracas, Venezuela.

Slimak, K. M., (2001) Effect of Removal of Low Levels of Volatile Organic Compounds on Severe Autistic Behaviors in Children. Annual Conference of the Association for Science in the Public Interest Conference on Science For the Public Good, Virginia Commonwealth University, Richmond, Virginia (May 31-June 2, 2001).

wonderful improvements were in fact, simply the inevitable improvements associated with complete avoidance of food and problem substances in the environment.

The SF Comprehensive Intervention Program accomplishes complete dietary change and simultaneous complete environmental avoidance. The SF Comprehensive Intervention Program is designed to be fast paced, achieve results quickly, and make the process simple. Recovery is supposed to be quick. In the SF Comprehensive Intervention Program recovery occurs slowly only when the environmental changes are made slowly. We no longer use this approach because we found there is a risk that the child's sensitivities may become more severe, rather than improve. This is one of many reasons for the fast paced approach of the SF Comprehensive Intervention Program.

Our research has demonstrated that autism is a collection of symptoms that are much like allergic reactions, in which the allergic reactions are behavioral. The symptoms only occur when there is an exposure (to food, chemicals or mold). Each reaction has a pattern – a beginning, middle and end that generally lasts no longer than about two weeks – and the symptoms are gone when the last exposure is eliminated.

The Comprehensive Intervention Program has two critical parts, dietary intervention through the Special Foods Diet, and our equally important, simultaneous program for comprehensive elimination of chemicals, plastics, resins and mold in the child's environment. The emphasis in this booklet is on the second part of the program, creating a Special Environment, a truly safe place for your child.

The SF Special Environment Program emphasizes fast and thorough removal of VOC's (volatile organic compounds) plastics, resins and mold. Parents report that this approach is easier, simpler, and far less frustrating, not to mention the benefit of achieving faster results for the child.

We used to suggest moderate initial environmental changes together with diet, allow parents to discover on their own the importance of chemical sensitivities in their child, and then we would follow the child's seeking behaviors and symptoms to guide a process of environmental cleanup and change. The benefit of this approach was that by observing the serious effects of chemical exposures on their children's autistic behaviors, the parents were able to understand on a personal level just how important avoiding chemical exposures was for their child. However, there were several disadvantages with this approach. Parents found that they were running after their children for months trying to remove the substances they were seeking out and clearly reacting to. This was discouraging because as a result of 'seeking behaviors' the children were managing to maintain their autistic symptoms much longer than necessary. Finally the environmental changes tended to be made in a random and sporadic manner, which was complicated and less effective than a systematic and comprehensive approach.

The results of our ongoing research have made it clear that complete initial avoidance of chemical exposures is essential. In addition to parental input, the following has guided our restructuring of the environmental program: 1) every child studied was strongly affected by chemical sensitivities – this means a process of discovery is not necessary; parents need to accept from the start that there are serious chemical sensitivities in addition to food sensitivities causing autism and proceed from there; 2) the sensitivities appear to be immune system related, and appear to become increasingly more severe with age; 3) unless food and chemical exposures are avoided, the immune system continues to become increasingly reactive, 4) a large proportion of neurological symptoms appear to be related to chemical sensitivities, 5) the complete breakthrough for autism comes with complete, sustained

avoidance of chemical and food exposures, and 6) when chemical and food avoidance is complete, no neurological or physical signs of autism remain, and the child simply catches up on what the child has missed out on.

The newly revised program has changed from one of guided discovery, to a fast paced program based on the certain knowledge that autistic children are autistic because of the severe effects of foods and chemicals on their nervous systems.

This new approach will show you how to completely protect your child from the substances that have alienated him from his peers and robbed him of his birthright: the right to grow and develop, and explore the world in the safety of a loving and nurturing environment. The problem here is not the parents, but love and nurturing do not mean very much if the *environment*, instead of being comfortable and nurturing, is causing severe and constant pain, dizziness, blurred vision, inability to think clearly, repetitive actions and severely altered emotions. Thinking of the problem this way, what child wouldn't be behind other children and even disinterested in social contexts when their internal world is one of intractable pain and severe nervous system disruption?

Our newly revised environmental program gives the child the one thing he still needs after the dietary changes, and that is the safety of an environmentally clean place, a place of safety that is completely free of pain, where vision is unaltered, thoughts are clear, emotions are peaceful, calm and appropriate. This is a wonderful place where the child finally feels really, truly good and finally safe from harm. A place where the love and nurturing that has always been there can finally enfold him, and 'bring him home'.

At the time you enter our SF Comprehensive Intervention Program you will be provided the detailed instructions on how to make these essential environmental changes. In addition you will enter our ongoing research program in which the progress of each participant is followed carefully, and you will be provided, at no charge, all of the scientific and technical guidance and personal support necessary to help you achieve these goals.

It is a virtual certainty that food, chemical, and environmental sensitivities are the underlying causes of autism for your child. This is the legacy of our modern way of life; a continually worsening environment that our bodies were not designed for, and increasing numbers of chemicals your child cannot handle. Do not consider this a program to try, in the hopes that it might work for your child. Consider this a program to follow, a roadmap, a procedural guide for recovery. *We have yet to find a child who does not respond.*

Plan to follow the Special Environment Program fully. It would be foolish to follow part of the environmental recommendations and expect to achieve the impressive results we describe here. Dr. Davidow, molecular biologist from Harvard University, says it best in regard to our program, "The immune system does not work like a toxic effect in which half of the exposure drops the response by half. The immune system is triggered fully at extremely low levels. Problem substances will continue to trigger a full immune system response even when exposure is reduced to very low levels, so exposures must be fully eliminated."

In other words, the symptoms remain until the last tiny amount is gone (We will tell you how to achieve this.) For example if a substance has 30 different sources and 29 of them are removed, the one remaining

source will be enough to continue the full immune system response, maintain neurological symptom levels, and prevent recovery from autism. This is the reason the complete protection of the SF Special Environment Program is so important. This level of thoroughness is the way to recover.

When my own child was suffering severe neurological and physical symptoms from foods, I desperately sought the safest, most well tolerated foods first; so my son could get well *in a hurry* while I worked out the details. I didn't care what the foods were; I just cared that they were the safest anywhere. The safe room lets you do the same with the environment and when combined with the Special Foods Diet, – gets your child out of his misery, and saves his life fast. Then while your child is free from pain and is recovering, we will guide you through organized, sequential changes to other areas as needed – working out the details and expanding the clean environment.

You can start right now! Begin by visualizing that for your child, the environment is a swirling toxic cloud of poisonous substances that harm his mind and affect virtually every cell of his body. These substances cause great, constant pain and misery, even if right now you can't tell for sure. Helping him, saving him is in your hands. This view is true, and will help you gain the motivation to make the necessary environmental changes quickly. Throughout the Special Environment program, you will be guided and directed by our experts in comprehensive environmental avoidance. Our program eliminates the pain and misery fast.

If you have ever said, "I'll do whatever it takes!" and meant it. This is the program for you.

The purpose of this booklet is to convince you that avoidance of chemical exposures is extremely important. This overlooked area in combination with diet, is the most important approach you can choose for your child. We will tell you why you probably have not realized the importance of chemical sensitivities on your own. We will describe just a few of these problem substances and their properties. We will show you how the levels of these substances have increased over the past 20 years. We will present other reports and studies from the published scientific literature and the highest levels of the government that span that past 50 years. We will describe the results of our research. We will describe a unique response of autistic children – seeking behaviors – that indicate especially severe chemical sensitivities. We will describe the mechanism that starts with chemical exposures and ends with autism. Then we will tell you what to do.

## I

### **Food, Chemical, and Environmental Sensitivities Are Underlying Causes**

Parents often wonder why they haven't already been able to recognize the underlying chemical sensitivities in their autistic children. The answer is simple; it is hard enough to recognize food-related symptoms, and virtually impossible to recognize chemical sensitivities. Chemical and environmental exposures continue day and night, the symptom patterns merge and fluctuate but never go away long enough for the parents to correctly associate the symptoms with the causes. No client entering our program has recognized in advance the full extent and severity of effects that chemical exposures were having on their children, none fully anticipated the contribution that reducing chemical exposures proved to make in eliminating the symptoms of autism.

As you prepare to enter this program and read about the environmental changes that will be necessary, it is important to first fully understand how and why environmental avoidance is so absolutely essential. We will begin our explanation by talking about foods.

It is easy to understand that when a person eats the same food everyday, it can be very difficult to know which symptoms are caused by which foods. This is due to the fact that in general, before one food reaction is over, another food reaction has already begun. Often many simultaneous reactions occur to several foods at a time causing symptoms that fluctuate but essentially never end. A typical food reaction begins within an hour or two, increases to a peak, progresses through a series of symptoms, lasts 6-12 hours at its worst, and tapers off gradually over a period of about four days. Obviously, eating a food once a day or several times a day, as often occurs with the common carbohydrates, would cause symptoms that occur continually. This is why on a regular diet it is very difficult to tell which foods are causing the problems and which are not. As long as foods are eaten regularly and frequently, there will not be a time that a reaction is not occurring. In addition, when you consider that our clients are reacting to many foods in their diets, even when one food is not eaten for awhile, many other problem foods will be, and so symptom levels fluctuate but rarely fall.

Now consider that chemical exposures are worse! At least with foods one rarely eats constantly all day long. Meals are spaced every few hours, and at night it is common to go without food for 10 hours or more. This means that there is enough fluctuation in food-related symptoms that people will often be able to associate some of their most obvious symptoms with a food. There is no break from exposures to environmental substances we are concerned with here. There is no heavy exposure followed by a break of many hours in which no exposure occurs. Exposures to environmental substances occur at lower levels, but steadily and essentially without end.

Reactions to environmental chemicals follow a very similar pattern to that described above for foods. Although there is much individual variation, the typical reaction to an environmental chemical begins within an hour or two, increases to a peak, progresses through a series of symptoms, lasts 6-12 hours at its worst, and tapers off gradually over a period of from four days to two weeks, and is not present after that time. Typically the reaction pattern of a person to organic environmental chemicals is very similar to their food reaction pattern. In this case, however, there may be essentially no fluctuation at all, since the exposure levels and also the effects are essentially constant during the day and during the night.

As is the case for foods, we know that the reactions that occur to these organic environmental substances are not toxic effects. The reactions, like the reactions that occur to foods, are triggered by an immune system response. This is very important because the immune system is triggered at extremely low levels, as low as part per billion, part per trillion levels, and even below. The immune system, then, can be and is triggered by exposure to incredibly low levels of environmental exposures. This is why complete avoidance is so important.

## II **What Are These Problem Chemicals?**

So what are these substances that cause these continual symptoms and together with food are the underlying causes of autism, Asperger's syndrome, and PDD? This would mean a very long list; a partial list of these substances is presented below. There are literally hundreds of thousands of substances in the air, fluids and materials that children come in contact with every day.

When we speak of substances responsible for the symptoms and effects of autism, Asperger's syndrome and PDD, We are primarily referring to chemicals that are present inside the home and

school and to mold. The levels of these substances are roughly 10 times the levels found outdoors. New, newly painted or newly renovated homes can be 250 times higher than outdoor levels. Chlorine in tap water reacts with organic matter in the water and produces chloroform, bromoform, and thousands of other volatile chlorinated organic compounds that are in the tap water we drink; these chemicals pass directly into the bloodstream through the lungs every time we take a shower. Foam mattresses and cushions release formaldehyde. Urea formaldehyde and phenol formaldehyde resins are primary constituents in plywood, particle board, pressed board, and strand board; phenols, urea, formaldehyde, phenols and many other substances are released to the air from these materials, and directed to the interior of homes with vapor barriers. Volatile substances are released from pressed wood and composite furniture and kitchen cabinets. Mineral spirits are found in paints, paint thinner, and cleaning compounds.

Known effects of some common substances in the environments of *everyone* include the following (Sources: Material Safety Data Sheets (MSDS), Condensed Chemical Dictionary). Notice the numbers of times neurological effects and irritation of skin and mucous membranes are described.

Haloform compounds, including chloroform (present always in tap water) – strong narcotic.

Formaldehyde (polyurethane resins, foam cushions, permanent press fabrics): mucous membrane irritation, upper respiratory tract irritation, eye irritation, skin rashes, itching, nausea, stuffy nose, headaches, dizziness, and general fatigue.

Vinyl chloride: damage to the liver and nervous system.

Ethyl hexyl phthalates (plastics, scotch tape): Endocrine disruptors that interfere with production, release, transport, metabolism, binding, action, or elimination of hormones responsible for homeostasis and essential for normal growth and development, this substance also interferes with FSH action on the Sertoli cell.

Perchloroethylene (dry cleaning fluid): adverse health effects on the nervous system that range from dizziness, fatigue, headaches, memory loss and confusion, sweating, incoordination, irritation of the skin and mucous membranes, liver and kidney damage.

Isopropyl alcohol (rubbing alcohol): central nervous system depression, headache, decreased blood rate, nausea, intoxication, and irritation of the skin, mucous membranes, and respiratory system.

Petroleum ether (paint thinner): symptoms of peripheral nerve disorders and central nervous system depression, loss of appetite, muscle weakness, impairment of motor action, dizziness and drowsiness, irritation of the skin, mucous membranes, and respiratory system, blurred vision, and diarrhea.

Benzene (gasoline, magic markers): excretion of ascorbate (vitamin C), production of oxygen radicals, depletion of glutathione (GSH), oxidative stress, DNA damage, activation of protein kinase c, central nervous system depression, irritation of the skin, mucous membranes.

Organic chemists have been very busy for the last 50 years, and have now replaced virtually every glass and metal and wooden object in our lives with synthetic versions. The Table I below compares children of 50 years ago and today's children to show increased use of synthetic materials.

**Table I**

<b>50 years ago</b>	<b>Now</b>
<p>Children played with balls of leather; wore cotton clothes; washed clothes, face, hands with real soap; played with wooden and metal trucks; played with dolls stuffed with cotton; used virtually nothing scented, and never wore anything that was dry cleaned.</p>	<p>Children play with plastic and synthetic balls; wear polyester and acrylic fabrics; wash their face and hands with soaps that are petroleum based scented detergents; play with plastic trucks and action figures; play with plastic dolls stuffed with polyester and dressed with polyester and plastics; virtually everything is scented.</p>
<p>TV's and radios had wooden cabinets.</p>	<p>TV'S, radios and telephones are plastic.</p>
<p>Play almost always meant play outside.</p>	<p>Computers and games are plastic.</p>
<p>Fifty years ago children slept in bunk beds that were solid wood; the mattress was all cotton and was supported with metal springs and cross pieces; the sheets and blankets were cotton.</p>	<p>Play now often means huddling around the computer.</p>
<p>Their dressers were solid wood.</p>	<p>Children sleep in bunk beds made of resin based composite wood look alikes; the mattress is vinyl plastic covered foam; the mattress is supported by chip board; the sheets and blankets and cotton polyester blends or polyester.</p>
<p>In the bathroom, the tubs, sinks and toilet were porcelain; the floor and walls were tile.</p>	<p>The dressers, chests and bookcases are made of resin based composite wood look alikes.</p>
<p>In the classroom they sat at wood and metal desks; wrote with pencils;</p>	<p>In the bathroom, the tubs and sinks are fiberglass or faux marble</p>
<p>used paste from animal glue and metal scissors, and copied things from the blackboard.</p>	<p>In the classroom they sit at desks made of resin based composite wood look alikes, and write with felt tip pens, magic markers, scented pens, and plastic pencils.</p>
<p>The children ate on glass or china; drank from glasses; and their food was cooked in metal pots and pans.</p>	<p>Use glue sticks and plastic scissors.</p>
<p>The meat was grown nearby, and wrapped in paper; there were relatively few processed foods.</p>	<p>Much of their work is working on hand out sheets copied from a copier, printer, or ditto machine.</p>
	<p>The children eat on plastic plates, drink from plastic cups, and food is microwaved in plastic, or cooked in Teflon coated pans.</p>
	<p>The meat is precut at centralized processing plants where all is wrapped in plastic.</p>
	<p>Learning and free time includes time with computers that heat so hot internally that fans are needed to blow the hot fume-laden air from the overheated plastic boards, wires and connectors, through the vents and out onto the students.</p>

We could go on, and describe every facet of our lives, including use of plastics and styrofoam in packaging of the food we eat, use of plastics by the medical profession, synthetics in curtains and window treatments, changes in insulation, changes in heating and air conditioning systems, and tight environments.

Although to look at classrooms and homes then and now, much appears the same at first glance, from the standpoint of environmental chemicals it is very, very different. Every single new item now includes large numbers of substances released steadily and continually into the immediate surrounding air. There are thousands of new compounds now present in most rooms as a result.

Each one of these substances has properties similar to those described earlier, in page 6. Many substances are harmful to mucous membranes, specifically causing irritation and inflammation of mucous membranes; this contributes to malabsorption in the gastrointestinal tract, diarrhea, constipation, and digestive difficulties. Most of these substances also alter function of the nervous system, some causing confusion, some irritability, others excitability, many causing headaches, others causing impairment of neurological function. Many substances alter the functioning of hormones and enzymes. Addictive adaptation is possible for virtually every substance.

### III

#### **Levels have been increasing steadily, especially over the past 20 years**

The Environmental Protection Agency (Environmental Protection Agency) warns us that the indoor air quality epidemic is the nation's number one environmental health problem. Scientists estimate that fifty years ago indoor levels were about 50 percent higher than outdoor levels; levels of volatile organic compounds in indoor air are much higher now. A recent study by the EPA, found indoor levels up to ten times higher than those outdoors -- even in locations near petrochemical plants. This means that in the US in the last 50 years there has been an approximate 20-fold increase in indoor levels of volatile organic compounds. The levels of a few substances in homes now exceed the standards established to protect the health of industrial workers.

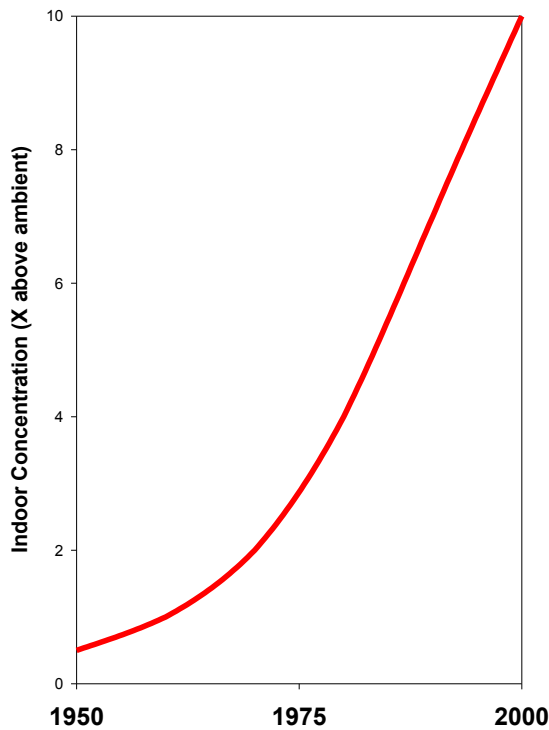
The energy crisis of the 1970's brought a greater emphasis on tighter construction and retaining heat more efficiently. Accomplishing this caused reduced air exchange in the home and increased indoor levels of environmental compounds approximately 200 percent in many homes.

Figure 1 below shows how indoor air pollution levels have increased in the last 50 years. Now consider the rise in diagnoses of autism in the same time frame, Figure 2. New case data for Figure 2 was obtained from the California Health and Human Services Agency. These numbers may underreport the incidence of PDD and Asperger's syndrome. In the time period in which indoor environmental chemicals increased 20 fold, the incidence of autism increased about 90 fold. The data suggests that a threshold level may have been reached about 1985. Children born then lived continually in environments containing ten times the level of volatile organic compounds that were present in 1950. Prolonged exposure to those levels and the increasingly higher levels that continue each year, suggest that we are likely to experience escalations in the incidence of autism, PDD, and Asperger's syndrome for years to come.

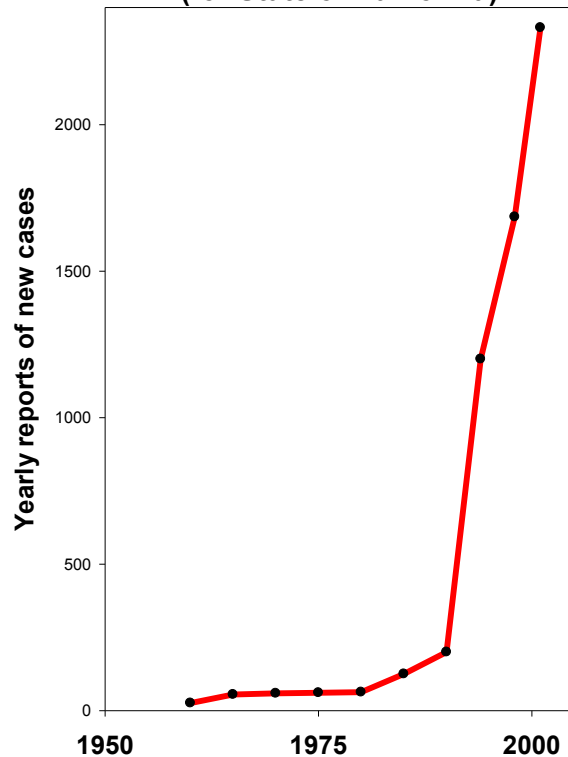
We are convinced that these increased levels of environmental chemicals represent a serious health crisis, because we are able to eliminate the symptoms of autism merely by eliminating exposure to these same chemicals that have increased so many orders of magnitude over the last 50 years.



**Figure 1**  
**Increase in indoor volatile organic compounds**  
**(number of times higher than outdoor levels)**



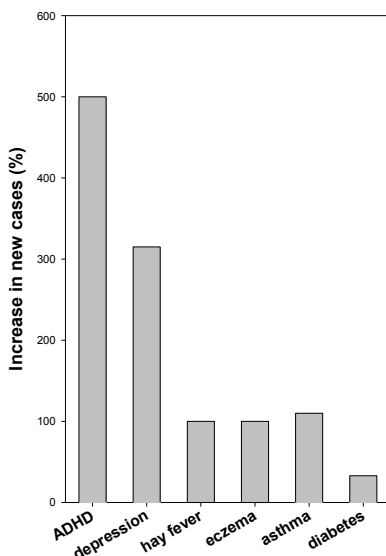
**Figure 2**  
**Increase in Incidence of Autism**  
**(for State of California)**



Autistic children also suffer from wide variety of other chronic diseases and conditions; these include digestive difficulties, hyperactivity, eczema, and seizures. As a result in addition to new cases of

**Figure 3**

**Increases in Chronic Diseases**  
**(1990-2000)**



autism increasing ten-fold in the last ten years, we were interested in knowing whether there were increases in other chronic conditions. If the substances causing autism, also caused the children's other symptoms, which we have found to be true, then the substances causing autism should be the underlying cause of other conditions. If true, the substances causing the increase in autism should be causing increases in other conditions as well. As is shown in Figure 3, this is precisely what has been happening in the last decade.

During the same last decade when autism increased 10 fold, ADHD has increased 5 fold, and now includes more than 6 percent of all children (Figure 3). The number of individuals diagnosed with depression has increased 3.15 fold, and now includes approximately 3% of the entire population. The incidence of hay fever has doubled. The incidence of eczema has doubled; currently 15 million people are affected in the US. Asthma has increased 110%, and diabetes has increased 33% overall. The CDC warns of epidemic increases in each of these areas.

In the past ten years, Table 2, the total number of individuals diagnosed with one of the chronic conditions listed below has increased by over 65,000,000; an overall increase of 123%. 47,000,000 of these individuals were diagnosed with a neurological disorder. This is very important when one considers that neurological effects are the primary effects of many environmental compounds.

**Table II. Increases in chronic diseases and conditions during the 1990's**

Condition	2000	1990
Autism	600,000	60,000
Diabetes	16,000,000	12,000,000
Asthma	21,000,000	10,000,000
Eczema	15,000,000	7,500,000
multiple sclerosis	200,000	200,000
depression and other mood disorders	17,000,000	5,400,000
ADHD	4,100,000	800,000
Schizophrenia	2,700,000	860,000
anxiety disorders	44,800,000	14,000,000
Seizures	2,300,000	2,300,000
<b>TOTAL:</b>	<b>118,700,000</b>	<b>53,120,000</b>

Source: data obtained from The Centers For Disease Control, California State Department of Health, US Bureau of Census, and Report of US Surgeon General, National Institute for Allergy and Infectious Diseases.

It is no wonder that experts in many diseases are using the words *out of control* and *epidemic*. Sudden increases such as this with no known cause must be taken seriously. The other place in which the words *out of control* and *epidemic* are being used, is by the Environmental Protection Agency, as it refers to indoor air pollution as the nations number one environmental health problem.

The final, awful truth of these numbers is in the overall percentage. There are 287 million people in the US today. Table 2 shows that 118 million of these individuals suffer from one of the chronic diseases and disorders listed. That is 41% of the entire population of our country. Not included are migraine headaches, general allergies, irritable bowel disorders including all types of digestive difficulties, and a host of other chronic diseases and disorders. It is fairly certain that the incidence of these are increasing as well, and that the age of onset is becoming younger. A reasonable estimate that includes all of these, and avoids double counting is approximately 50%, and that there was an increase of approximately 25% in the past ten years. How can there suddenly be something wrong with 25% of the population? Could this be due to genetics? Defective enzymes? One half of our entire population cannot be suffering from genetic defects. Genetic defects do not suddenly increase 100 percent in ten years. Enzyme defects do not suddenly increase 100 percent in ten years throughout our entire population.

This strongly points to a wonderful possibility that nothing may be wrong with most of these individuals. Exposures to the increasingly high levels of substances in food, plastics, indoor air, resins and mold may account for the entire array of symptoms. The truth may be that there is nothing wrong. These individuals may be responding precisely as their bodies were designed to respond to situations such as these. The 'something wrong' may not be the person, but the environment. When half or more of the population responds, that is the norm, the way the body was designed to respond. The emphasis may then need to turn from research on illnesses that have suddenly increased to a search for ways to clean up our environment, and return to the environment our bodies were designed for.

Children of today are not being raised in the same environment as their parents or grandparents were raised as infants and children. The immune systems of increasing numbers of children may be simply overwhelmed by the sheer numbers of chemicals and the increasingly higher concentrations in their bodies.

The dramatic increase in incidence of autism that has been happening for the past ten years is in itself a strong indicator that there is an environmental cause for autism. One way to be more certain that the association is correct is to reduce the 'exposure' and reduce the effect, autistic symptoms; to increase the 'exposure' and increase the effect, autistic symptoms. This is the reason we are so convinced that food and environmental compounds, plastics, resins and molds are the cause. In the SF Comprehensive Intervention Program the symptoms of autism can be manipulated. Eliminate the exposures and the symptoms disappear; return these exposures and the symptoms immediately return. The dramatic surge in environmental exposure levels in our country precedes the dramatic increase in numbers of autism cases by just a few years. It is this fact, combined with the dramatic way that autistic symptoms are eliminated when exposure to these substances is eliminated that is convincing.

#### IV

### **The role of vaccinations and mercury exposure in autism and chronic diseases**

Other researchers have been concerned that mercury, especially mercury in childhood immunizations could be responsible for the surge in autism. Autism is frequently appearing in children about 18 months of age; many parents describe the onset of autism following immunizations.

There has been a 14% increase, on average, in the number of children receiving MMR vaccines in the state of California. During the same time period in California, there was an approximate 1000% increase in diagnosed cases of autism.

Figure 3 and Table 2, above, show that along with autism, dramatic increases also occurred in many other chronic diseases in the past ten years. The increases in exposures to environmental substances in food, plastics, resins and mold is correlated with and accounts for dramatic increases in the chronic diseases described in Table 2. This is important because removal of environmental chemicals in food, plastics, resins and mold eliminated symptoms in individuals suffering from each of the chronic diseases we studied. Both populations, the autistic group and the group of individuals suffering from chronic diseases, responded equally quickly to removal of environmental substances.

Parents' stories are compelling; many children do begin to exhibit signs of autism shortly after receiving an immunization. The explanation we feel that is the most plausible is the following: exposure to environmental substances, residues from plastic, mold and food begins in utero. After birth the exposure levels in food, bedding, clothing, diapers, lotions, soaps, toys, and so on raises exposure levels even higher. These levels are increased to 250 times higher when homes are renovated or are new. The immune systems of babies are stretched to its limits by about age 18 months, and the shot itself, whose sole purpose is to stimulate the immune system, simply overwhelms the child's immune system. The child quickly becomes hypersensitive to foods and environmental chemicals and the reactions to these substances cause the immune system attack on the brain, causing the onset of autism. The shot for some is the final straw. This tragic consequence does not happen when children do not have the earlier, sustained exposures to environmental substances, plastics, resins and molds.

The greatest correlative factor we have found is in fact, home renovation. Many parents report onset of autism occurring within 6 months of moving to a new home, of a major home renovation project, or installing new carpet and painting a child's bedroom. The things many do 'to get the baby's room ready', and all the new things we buy and receive as gifts for a new baby mean that most infants begin their lives surrounded by products and materials that release especially high amounts of environmental substances and plastics to their immature immune systems.

## V

### **Why Hasn't Someone Already Figured Out The Connection Between Autism And Exposure To Environmental Substances, Plastics, Resins And Mold?**

Evidence pointing to a serious problem associated with exposures to environmental substances, plastics, resins and molds has been accumulating for the past 50 years. Although evidence from animal studies showing serious adverse effects has been available for many years, scientists have been uncertain about how to correctly extrapolate from animal studies to humans. Direct studies with human subjects have verified that chemical exposures can cause a wide variety of serious neurological problems and other serious health problems, but until now no studies have been done with autistic children. This is probably because until recently autism affected too few children, and because of the widely held belief by professionals and researchers that autism was caused by an inherent neurological defect. The research conducted by Karen M. Slimak, founder of Applied Science and Technology International, Inc./Special Foods, is the first investigation of the effects of chemical exposures on autistic children, and the first to clearly show the role of chemical exposures in the disorder. However suspicion and concern about a possible link between chemical exposures and autism has been present in the scientific community for many years.

### **NIEHS Is Concerned That Substances In The Environment Are An Underlying Cause Of Autism**

In October 2001, the Environmental Protection Agency (EPA) and the National Institute of Environmental Health Science (NIEHS) jointly announced the formation of four new children's environmental health research centers that will focus research on childhood autism and other behavioral problems. Two of these centers will study environmental factors that may be related to autism. As stated by NIEHS Director Olden, *'We want to see what other environmental substances might trigger developmental problems. – so that we can reduce the exposures and prevent the damage.'* (NIEHS press release, 2001). This demonstrates the depth of the concern about a link between environmental (chemical) exposures and autism, and also describes the importance of avoidance as the way to eliminate the problem.

Our ASTi studies show that when exposures to chemicals in the environment of autistic children are reduced to very low levels, the children's autistic behaviors are quickly eliminated. One mechanism that would explain this involves the immune system. Substances in the environment trigger an immune system response, and as a result the immune system attacks neurological tissue. When the triggers are removed, the immune system no longer attacks and the symptoms are eliminated. For autistic children, because triggering substances are constantly present, the immune system constantly reacts. This suggests that components of the immune system should be chronically altered in autistic children, and this is precisely what is being found.

## **The Immune Systems Of Autistic Children Are Elevated, And Continually Reactive**

Singh et al have proposed that autism involves a neuroautoimmune response that occurs at the neuro-immune biology interface. Antigenic stimulation of Th-1 cells pathogenetically linked to autoimmunity in autism was described by Singh (1996) who studied immune activation in 20 autistic children and reported elevated plasma levels of interleukin-12 (IL-12) and interferon-gamma (IFN- $\gamma$ ). Depressed lymphocytic proliferation to mitogens (Stubbs 1977), impaired immunity of macrophages and NK cells (Weizman et al, 1982), circulating autoantibodies to brain proteins (Singh et al, 1993), elevation of T-cell activation antigens (Singh et al, 1991), and increased levels of DR+ activated T cells (Warren 1995) among others have been reported in autistic children.

Chronic exposure to environmental chemicals, plastics, and resins appears to be the cause of the elevated neuroautoimmune response found in autistic children.

## **Avoidance Studies With Human Subjects Show A Strong Link Between Chemical Sensitivities And Many Neurological Problems**

Avoidance strategies, referred to in Director Olsen's mention of 'reducing the exposures' have long been a method of choice for avoiding the adverse effects of exposure to hypersensitive agents. For example the JAMA Allergy Information Center among many others recommends allergy avoidance to the general public as an important preventive measure to reduce symptoms and to reduce the need for medication. The principle, 'one cannot respond immunologically, i.e., experience allergic reactions, to substances to which exposure does not occur', is obviously true, and is universally accepted.

In the third quarter of the last century a number of investigators began to use avoidance to study the effects of food and environmental substances, particularly environmental substances, plastics and resins, and pesticides, and their role in chronic disease. The studies were done using the principle of removal of exposures. Subjects in groups and individually were placed on a fast and placed in a clinical setting with greatly reduced levels of environmental substances.

These investigators published approximately 200 studies about the effects of foods and chemical exposures on humans. In these studies symptoms were eliminated and then caused to return by re-exposures to various foods and environmental chemicals. Researchers associated elimination of foods and chemical exposures with: irritability and associated behavioral problems, sensory sensitivities, disorders impairing interpersonal reactions, difficulties related to cognitive abilities, and acute psychotic episodes, and illnesses of many types, including seizures, headaches, gastrointestinal symptoms, muscular symptoms, eczema, bronchial asthma, diabetes, fatigue, myalgia, disorders of the endocrine system, and rheumatoid arthritis. These studies were reviewed by Miller (1994). Although the studies associated many neurological effects with foods and environmental chemicals, no studies were done with autistic children.

## **Environmental Toxicologists Have Suspected Serious, Adverse, Long Term Effects Of Human Exposure To Environmental Chemicals But Lacked An Approach To Study The Problem Directly In Humans**

A strong association between chronic disease and exposure to substances in the environment has long been suspected throughout the research community of environmental toxicology. In this field, the

emphasis has been on environmental chemicals, not foods. The approach has been to understand the toxic effects of substances one chemical at a time in healthy animals. The approach for humans has been to conduct epidemiological studies of workers in industrial settings. There remains a serious gap in these studies, namely, the translation of animal data to humans, and an understanding of the response of humans over long periods of time of exposure to myriad numbers of substances in a complex and constantly changing milieu. The unfortunate truth is that no effective method has existed until now to study humans in a situation of this complexity, and the research, until now, has not been done. In the absence of a causative link, the levels of substances in our environment and the materials of daily life has increased steadily over the last 50 years, particularly the last 10 years, essentially without any attempts being made to understand the affects this would have on general health.

From animal studies and epidemiology studies in industrial settings we know that acute toxicity to single compounds is of concern, but is thought to occur at higher levels than daily exposures in most environments. Unfortunately, the additive and cumulative effects of exposure to thousands of substances, which are roughly equivalent to high doses of one or more substances, have not been evaluated. Ambient levels have increased steadily over the past 10 years, and even toxic effect levels are occurring. For example, plastic exposures to hospitalized newborns currently exceed levels for toxic effects.

The individual chemicals studied in animal models shows strong neurological effects in a majority of the substances studied.

The field of environmental toxicology has been studying volatile organic compounds, plastics and resins one at a time; however, the body sees them all at once, and responds in a cumulative way. The concentration of just one of these substances is not high enough for concern, but the concentration of them all is above toxic levels. Scientists in this field have not been able to develop the tools for studying the direct effects of exposure to complex arrays of organic compounds on humans.

### **In summary:**

All of the parts are there, but they have not been pulled together. There is increasing evidence of neuroautoimmune impairment in autistic children. Human exposure studies show that neurological and physical effects occur following exposure to food, environmental substances, plastics, resins, and mold. Animal studies show that neurological and physical effects follow exposure to environmental substances, plastics, resins, and mold. The concentrations of environmental substances, plastics and resins have increased approximately 20 fold in indoor environments. The incidence of chronic disease appears to have doubled in the last 10-20 years, especially diseases and conditions involving neurological effects.

Until now there has not been a study that pulls this data together and demonstrates clearly that food, environmental substances, plastics, resins and mold exposure are the underlying cause of autism and many other diseases.

## VI

### **20 Years Of Study Of The Effects Of Food Sensitivities And Chemical Sensitivities On Chronic Diseases**

I am a scientist and researcher with expertise in analytical methods, environmental chemistry, biochemistry and physiology. I did not begin with an emphasis on autism; my work began over 20 years ago with an emphasis on severe food allergies and chemical sensitivities. My career interest is in understanding the interplay between environmental contaminants and human health. I have developed a methodology whereby the effects of chemical exposures on humans can be studied. My work in this area, over many years, has brought me increasingly into contact with the autistic community as I began working with increasingly more seriously affected individuals. I have found that autistic children as well as children suffering from severe seizure disorders are the most strongly affected groups to date.

As an environmental chemist, for over 30 years I have had a career goal of studying the effects on humans of years of exposure to the complex milieu of substances in our environment. Although I knew there would be effects, initially I expected that they would be mild and relatively inconsequential.

In the beginning it was impossible to directly study human subjects. Severe neurological and other physical effects of volatile organics and plastics have been documented for many years in animal subjects, but always at high levels, and only one chemical at a time. No one knew how to accurately extrapolate to human subjects other than to consider epidemiological studies of industrial exposure. No one could tell for sure that any group of individuals was experiencing severe neurological effects associated with any chronic exposure.

For the first 15 years I could only choose activities as closely related as possible to my career interest. These included: 1) serving as director of a trace organics analysis lab, 2) conducting an assessment of environment fate and effects for the National Research Council and Congress, 3) managing a study for the Environmental Protection Agency, in which over 100 volatile compounds were traced through their full cycles of production and use, and rates of release to air, water, soil and waste were estimated at all steps and in all materials.

Toward the end of this time, I faced a severe personal crisis with the near death of my infant son from extraordinarily severe and extensive food allergies and sensitivities and early onset autism. I was forced to find a way to save his life on my own, as he was severely allergic to virtually every food. As a result of the impressive recovery of my son due to the dietary intervention approach I developed, I began to receive referrals of severely allergic individuals from physicians.

I approached my work with each person with the scientific rigor I have always used. Each person I studied as a scientific experiment of one subject. Even though my emphasis was on foods, I wanted to be sure that my observations could only be related to foods, nothing else. To control for as many other variables as possible, each person was required to drink distilled water in glass, avoid plastics, avoid cooking with gas heat, avoid perfumes, and test organic foods only. When a set of well-tolerated foods was found, the dietary intervention was completed.

To maintain scientific credibility and what I would call idle scientific curiosity, I instructed the clients to add back the other variables one at a time. The clients and I were shocked to find an array of severe, completely unanticipated symptoms. One client wrapped her well-tolerated food in plastic wrap for 20

minutes, then unwrapped and ate it. She was bedridden for three days as a result. One young father, sat at his table, drank his first glass of tap water in 6 weeks and reported being overwhelmed with intense, barely controllable rage. He said, 'I was just sitting there! I had no reason to be filled with rage; nothing had happened. All I did was drink the tap water. That's when I realized the only time in my life I didn't experience this barely controllable rage was when I was on your program!' Person after person reported similar experiences; all were different reactions. There were different systems of the body affected, no two people reacted in the same way to anything, but the reported effects of these materials were consistent and surprisingly severe.

I realized that I had stumbled on a way to pursue my life long goal: studying the effects on humans of long-term exposure to the complex milieu of substances in our environment. Instead of taking well people and trying to make them sick with one chemical at a time; I could study people who were ill, eliminate foods as a factor with my highly effective diets, and through a process of selective removal, see how various substances were effecting each person by observing which symptoms would disappear. I realized I could reasonably adopt the view that everybody was unintentionally playing a part in a grand experiment, since everyone was living in a world virtually swimming in a sea of new substances.

My approach was to directly study human exposure in the 'negative'; that is by selective elimination of exposures and studying the improvements. By working with referred individuals who were already ill, I could study the role of removal of foods and environmental exposures and learn to what extent foods and environmental substances were contributing to their condition, and help my clients regain their health in the process.

My first step was to eliminate all of the food-related symptoms. If I could start people on a diet of only well-tolerated foods, food related symptoms would be eliminated immediately. This would make it much easier, essentially possible, to determine the causes of the remaining symptoms. I sought a starting diet that was essentially universally well-tolerated, which could be expanded later.

Over a ten year period, I observed the food choices of approximately 5,000 individuals with severe, extensive food allergies and sensitivities. These individuals chose from a wide array of unusual carbohydrate choices, and made their choices based on what worked best for them without direction and without discussion with each other. I observed their final choices after, by whatever method, they selected the carbohydrates that they tolerated best. Each person found the foods that they tolerated best independently, but each person ended up choosing essentially the same set of foods. Each individual independently chose tropical root crops, and essentially only tropical roots. This was not a previously predicted or intended outcome; however, I had to accept that just as there are the most poorly tolerated foods in the world, there are foods that are the most well tolerated. My data clearly showed that tropical root crops were the most well tolerated carbohydrates.

I developed the Special Foods Diet, which incorporates tropical root crops as the sole carbohydrate source into a well-balanced seven day rotation diet of unusual foods, as a result of these years of observation. In part, there was a second reason for this. If these were the foods that subjects were eventually going to need to eat, the whole process could be shortened by beginning with these foods.

The Special Foods Diet proved to be a highly effective diet, especially when combined with reduction of chemical exposures. One highly important benefit was that when combined with reduced chemical



exposures, the problems encountered in other programs of developing sensitivities to new foods was found to not occur. Further the small number of foods each day, all extraordinarily well tolerated, each not repeated for a full week; made it possible to know for sure that each food was well tolerated and make any necessary adjustments. When all problem foods are not eliminated, no matter what else one does, increases in symptoms and severity, and worsening of condition will ultimately occur. With the Special Foods Diet it was possible to fully eliminate this problem.

In the past 20 years I have worked with over a thousand individuals. Because I have been able to reduce food-related symptoms of each individual I studied to 'zero', i.e., complete elimination, I have been able to clearly study causes and effects of exposures to foods and environmental chemicals, particularly volatile organics, plastics, and molds, and to detail and record the associated symptoms for each person.

a. Food: Experience With The Special Foods Diet:

Please see the Special Foods Diet booklet, page 6 for a discussion of experience with the Special Foods Diet.

b. Learning About The Symptoms Caused By Chemical Exposures (After Fully Eliminating Food-Related Symptoms):

The early years were ones of discovery. I carefully recorded each person's reactions -- the foods and substances they reacted to and the symptoms that were associated with each exposure. Mostly what I learned was about tremendous, incredible variety. There was no pattern anywhere. No two individuals were alike. When I listed a particular food, and then the reaction of every person I studied to that food, no set of symptoms were identical. Similarly when I listed a particular chemical or a particular substance such as tap water or paint thinner, of the individuals reporting reactions, no two symptom patterns were alike.

*To the same substance*, whether it was a food or fumes from the news paper, some individuals reported rashes (no two were alike), others reported digestive problems, others reported headaches (no two in the same place or same severity or same duration), others reported rages, others reported confusion, others reported zoning out and becoming distant; others reported difficulties with balance; others became quiet and listless; others reported feeling very cold; others reported difficulty moving muscles; others reported joint aches and pains; others reported difficulties sleeping; others reported just wanting to be left alone.

So I tried looking at *similar symptoms*. This was a challenge because in 20 years I have never recorded two descriptions of symptoms that were identical. I grouped the symptoms into similar categories. For example, I looked at all the records of individuals reporting eczema and listed the foods and substances that caused the skin reaction. Again there was no pattern. I ended up with a list that said someone had reacted with eczema to every food and every environmental substance. The problem was that name beside each food and substance was different. There was no particular food that caused more eczema reactions; there was no particular environmental substance that was causing a particular eczema reaction. It was different for everyone.

After years of careful study, there is still no pattern of this type. No food or chemical causes a particular type of symptom. No symptom has a particular type of cause.

In the early years I realized that the complexity and uniqueness of the individual responses was primarily what characterized the reactions. What I was observing was a response of the immune system that was as individualized as fingerprints, facial features and hair color. I recognized that just as we all have major arteries and veins that are very similar but secondary and tertiary vessels that are in unique patterns; there is similar variation in the immune system. Each person may respond in similar ways to major challenges such as invading bacteria; however each person responds in unique ways to small quantities of many other substances. How does the very same substance cause diarrhea in one person, eczema in a second, overwhelming rage in a third, and stupor in a fourth?

My work with autistic children has helped the research progress and focus. About 4 years ago, parents heard about the successes of children entered into my program, and through their networks began to enter the program in much larger numbers. Autistic children quickly became about 40% of our subjects and a relatively large group of individuals of one diagnosis. The ability to study a relatively large group of subjects with the same diagnosis, albeit a broad one, was an important piece that had been missing.

In the next section you will read about the results of the work with autistic children, but here the importance of the research, is its help in simplifying the incredible complexity I had been documenting for 20 years. I had assumed that all of the people I had worked with over the years suffered from symptoms that mimicked severe, chronic disorders. In other words, there was a disease, for example eczema, that was caused by some inherent physical defect, that responded in conventional ways to conventional treatment, and then there was a second set of people who really didn't have the inherent physical defect, but just experienced similar symptoms, and this small set of individuals would be cured just by changing their diet and environment.

Through my research with autistic children I realized this was wrong. When I began the work with autistic children I fully expected that 40-60% of the children would show no response at all. This was consistent with what other investigators were reporting. So I was very surprised when the first 5 children responded fully, then the second five, and so on and so on. When I had proceeded toward elimination of physical signs and symptoms with the first 20 children, I began to realize I would have to rethink my initial hypothesis. The odds that 40-60% no response could be true when I had just successfully worked with 20 in a row, did not favor this premise. Now that the number has increased to 45 in a row, the results strongly indicate that a very high percentage of autistic children suffer from autism because of foods and other environmental factors as the underlying cause.

I realized that I also had to rethink my belief about all of the other conditions I had worked with over the years. Was I working with individuals who experienced mild symptoms? No. I had worked with the most severe cases known, with individuals who had not responded to conventional treatment, and were otherwise beyond help. What were the chances that these severely ill individuals were really suffering from a phantom disorder that caused mimicking symptoms? In light of the results I was achieving with autistic children, I realized that this was not very likely.

I began to view my work of the past 20 years in a very different light. If I had not been working with a subset of individuals who just happened to mimic these diseases and disorders, then I had actually been

working with the most intractable, difficult, resistant cases in each field and bringing the individuals to full reversal of their conditions and returning them to vibrant health. If that was true for these most difficult cases, then the same cause was very likely true for all of the less severe cases as well.

Sensitivities to foods, volatile organic compounds, plastics, resins and molds was the underlying cause of everything? Everything? EVERYTHING???

I turned this around in my mind, examined the data from the past cases every way I could, and I simply could come up with no other explanation that would explain the results of the last 20 years, the results from 1000 individuals.

Maybe it's time to face the further truth: no one's body was designed to handle the levels of environmental substances in foods, plastics, resins and molds that we are currently exposed to.

The protocol for the research study summarized below was based on the knowledge gained from many years of observations. I would like to thank each of the families who participated in this study. They had to trust logic, underlying principles, and reports of successes with non-autistic individuals. Without their willingness to participate in this ground breaking study, these results would not be available.

## VII

### **Research study: SF Comprehensive Intervention Program Responsible For Dramatic Improvements In 45 Autistic Children**

In summary the results are as follows; we also refer you to our scientific publications and presentations for additional information:

**Removal of food and environmental exposures eliminated the autistic symptoms in children studied:** Together food and environmental factors (we define these as environmental substances, plastics, resins and moldy odors) are important causes of symptoms in autistic children. Food and environmental factors fully accounted for the physical symptoms of each child studied.

Problem foods in the diet accounted for 24% of the symptoms in children who were already gluten-free and casein-free. Problem foods in the diet accounted for 34% of the symptoms in children who were not previously gluten-free and casein-free. Although there is great variation among children, in most children we found approximately one third of the symptoms were food related and two thirds of the symptoms were related to the environmental factors: environmental substances, plastics, resins, and molds.

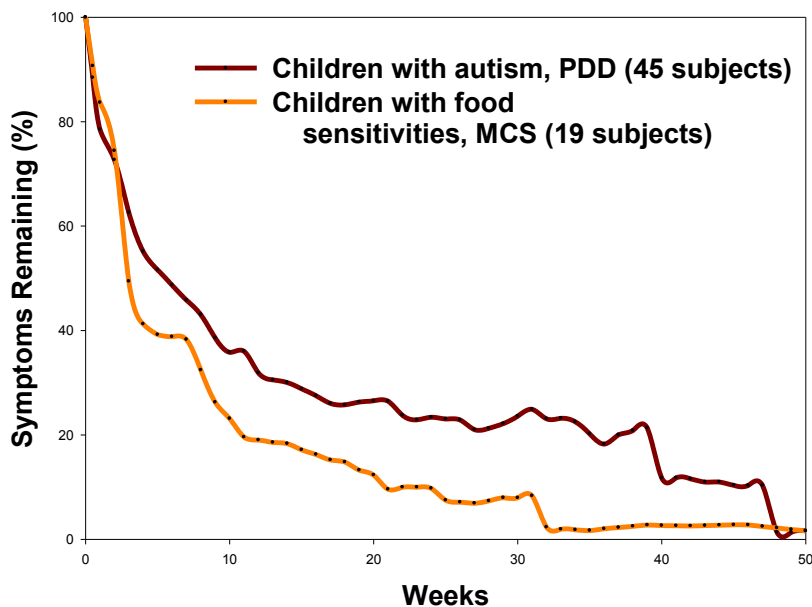
In terms of the types of symptoms, again there was great variation; however most children responded as follows:

- Physical symptoms such as congestion, eczema, asthma were equally caused by food and environmental factors.
- Symptoms associated with the digestive system were associated with foods two thirds of the time, and associated with environmental factors one third of the time.
- Neurological symptoms were associated with environmental factors 84% of the time, and associated with foods 16% of the time. Included in this group of symptoms were head banging, seizures, cognitive abilities, withdrawal, depression, temperament, moodiness, OCD, violence, aggression sensory sensitivity, self stimulation, and social interaction, social awareness and abilities.

There was both a food and environmental component to each child's problems. At least 95% removal of symptoms was required in order to achieve a sustained improvement that assured the child's recovery, avoided new sensitivities, and was comfortable for parents and family to live with.

Figure 4 shows two lines. Both lines start at 100% symptom levels and drop over time to the 0% level. The brown line, for autistic children is the same as that of the non-autistic children for the first 3-4 weeks, and then shows higher levels for many weeks. The reason for this is the concerted attempts of the autistic child to increase his symptom levels as a result of seeking behaviors. In the study, parents were quickly removing items the child was clearly sensitive to, while the child was also finding new items. For this reason we now instruct parents to create a clean room for the child. This eliminates the problem of continual seeking, and makes the process of environmental change more systematic and much less frustrating.

**Figure 4.**  
**REDUCTION IN OVERALL SYMPTOMS: autistic children compared to children with food allergies and multiple chemical sensitivities (MCS)**



Seeking behavior is a term I have used to describe actions that apparently attempt to compensate for reductions in exposures of one type (such as reducing food-related reactions) or thing (such as Lego's) by hunting ways to increase exposures of another type (such as spending increased amounts of time in a moldy area) or thing (such as flushing the toilet for hours). This includes walking around a room with nose slightly elevated, sniffing, and following the scent to an area of concentrated fumes. Seeking behaviors were generally most purposeful and frantic at the end of a reaction as symptoms started to diminish.

Individuals purposefully sought out exposures that caused symptoms to rapidly increase, often as a spike. When the item was exchanged for something with no exposures, then reactions would run its course and the symptoms would drop, and as they started to drop the child would seek out a new type of exposure. This again would cause a sudden spike in symptoms and a repeat of the cycle. Because of the consistently associated surge in symptoms, drop in symptoms when exposures were reduced (by

removal of the item or cleaning), return of symptoms when a new exposure was sought out, I was able to observe the very severe chemical sensitivities in the autistic group I studied.

Seeking behaviors were consistently observed in children with autism, PDD, and Asperger's Syndrome. Occasionally individuals with very severe forms of other conditions also exhibited mild seeking behaviors. Children with autism, PDD, and Asperger's Syndrome made purposeful attempts to compensate. Examples included: finding and rapidly smelling overlooked items, compensating for the loss of exposures with a new behavior such as spending hours flushing the toilet (fumes from chlorinated water), laying on the floor with nose directly into the carpet and breathing deeply

Figure 5 shows the difference that complete environmental avoidance can make in the speed with which symptoms fall. The environmentally related symptoms (orange line) were eliminated in about 18 weeks; this is an average of 30 weeks faster than the results presented in Figure 4, above, which required about a year to achieve the same results.

In addition to achieving results more quickly, with much less hassle for parents, the shorter time frame makes the program much less expensive.

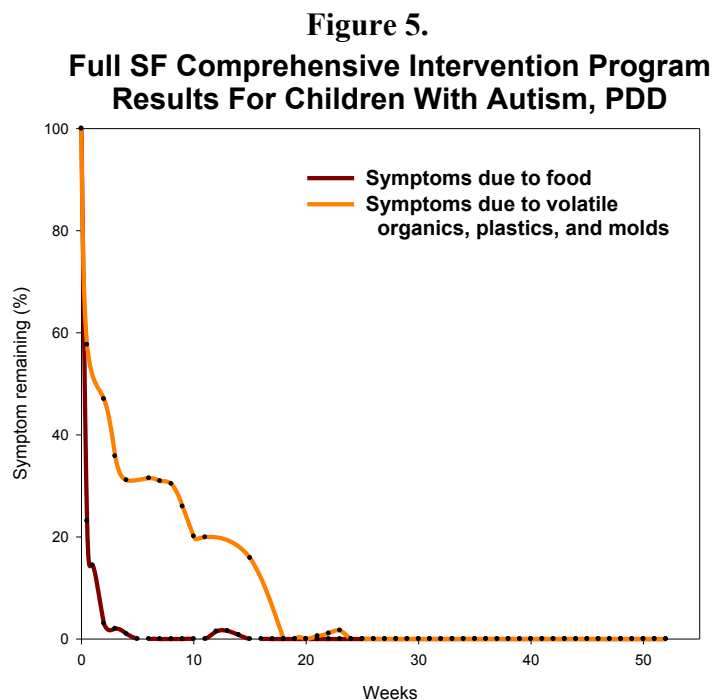
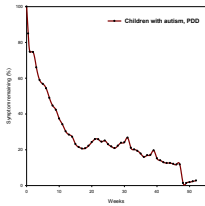


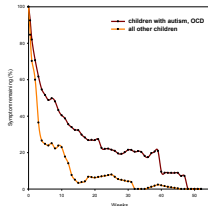
Figure 5, shows the combined results for children with autism and children with PDD. Children with PDD typically responded more quickly to the program, and symptoms of children with PDD often disappeared as rapidly as shown above for the food (brown line).

Figures 4 and 5 above include all physical symptoms and complaints. Often the autistic child may have a list of 20 to 30 symptoms and complaints. Many of these are severe. The figures above trace the averages of all of the symptoms for all of the subjects studied. Thumbnail graphics below show the results achieved for various symptom categories.

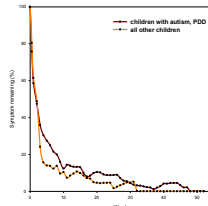
### Self stimulating behaviors



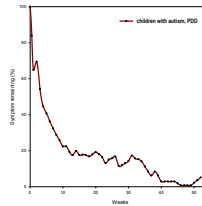
### OCD



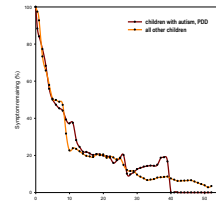
### Digestive system



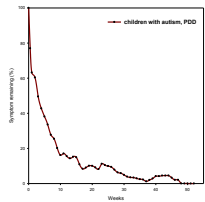
### Violence, aggression



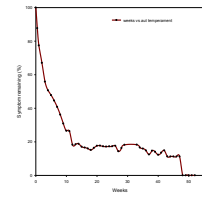
### Eczema



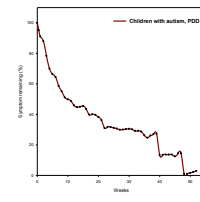
### Leaky gut



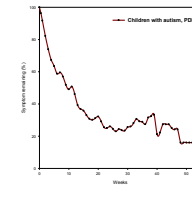
### Temperament/mood



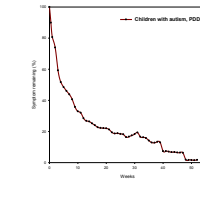
### Social interactions



### Sensory sensitivities

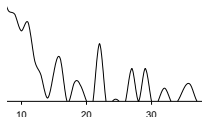


### Withdrawn/depressed



These graphs, while showing a steady decline, and showing that symptoms achieve the zero symptoms level that is so important, do not still fully show the power of the SF Comprehensive Intervention Program. Some parents made their environmental changes quickly, others very slowly. In all cases symptoms dropped rapidly when parents changed the environment rapidly, and symptoms dropped slowly when parents made environmental changes slowly.

## HOW FAST DO SYMPTOMS DROP WHEN THE ENVIRONMENT IS CHANGED?



## HOW STRONG IS THE RELATIONSHIP BETWEEN NON-FOOD SYMPTOMS AND ELIMINATING EXPOSURE TO ENVIRONMENTAL SUBSTANCES IN INDOOR AIR, PLASTICS, RESINS AND MOLDS ?

In case after case, once food-related symptoms were eliminated, there were symptom fluctuations. Every time the symptoms increased there was something obvious that had happened, such as a seeking behavior or someone coming near with scented products or outside smoke coming through the window. When the obvious cause was eliminated, the symptoms always disappeared again. This pattern was consistent and repeatable. In addition the symptoms of children whose parents made environmental changes quickly and dropped to 'zero' quickly, occasionally in a few weeks. Symptoms of children whose parents made changes slowly, dropped to 'zero' slowly, taking as long as a year. These observations suggested that the remaining non-food symptoms were due to environmental exposures.

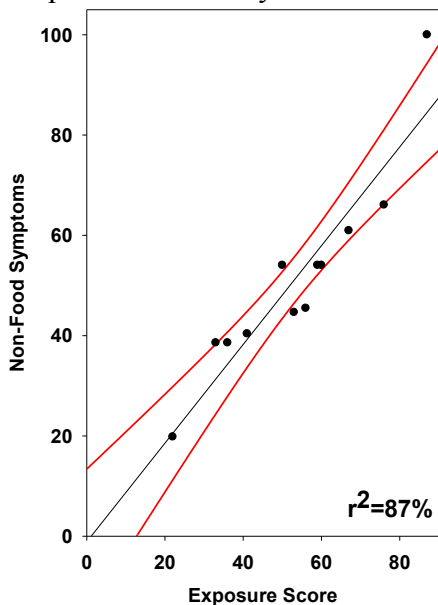
A method was devised to study the possibility that the remaining symptoms could be eliminated when environmental exposures were eliminated. If proven true statistically it would mean that in addition to foods, environmental exposures to indoor air, plastics, resin and mold were the primary cause of autistic symptoms and behaviors. It would also indicate that complete elimination of environmental exposures is an essential treatment for autism.

The method was to compare weekly for each study participant, the non-food symptoms and the weekly environmental exposures. For each individual, the symptoms and complaints were divided into two categories: those caused by foods and those not caused by foods; the symptoms not caused by foods were then compared to environmental exposure. Parents reported changes in symptom levels, unaware of which were food related and which were non-food related. As each individual progressed through the program, the environmental cleanup efforts and accidental exposures were reported at each appointment. An independent scientist, unaware of symptom levels reported by parents (this is called 'blind'), evaluated environmental cleanup efforts and accidental exposures and rated the child's overall personal exposure levels each week as an exposure score. The non-food symptom averages and the blind exposure scores were then compared.

Figure 6 compares non-food symptom ratings and exposure scores for a typical child in our program with severe autism. The exposure scores, x axis, are the independent variable, and the non-food (environmental) symptoms, y-axis, are the dependent variable. The data are not presented in a chronological manner. The highest dot might occur during the middle of the program when there was an intense accidental exposure. Presented this way, the data provides answers to the question, how do the non-food symptoms change when the environmental exposures were changed?

The answer is determined by whether the dots, representing the results obtained for each appointment, form a pattern. If the dots cluster all at the top, all at the bottom, or at random, then there is no relation between the two items being compared. If the dots form a pattern, this shows there is a relationship. Linear regression analysis is a statistical technique that is used to determine how closely two variables are related. This method generates a line that represents the relationship between the two variables. The red lines, 95% confidence limits represent boundaries within which 95% of the data was found, and is a measure of how close to the line, i.e., how precise, the data is.

**Figure 6.** Symptoms (non-food) Directly Related to Environmental Exposure In Severely Autistic Child



**Figure 7.** Symptoms (non-food) Directly Related to Environmental Exposure In Child with PDD

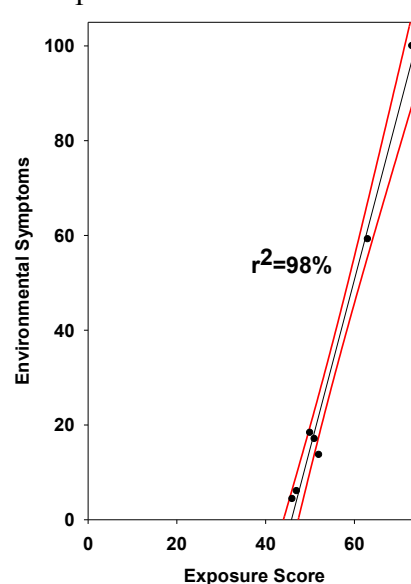


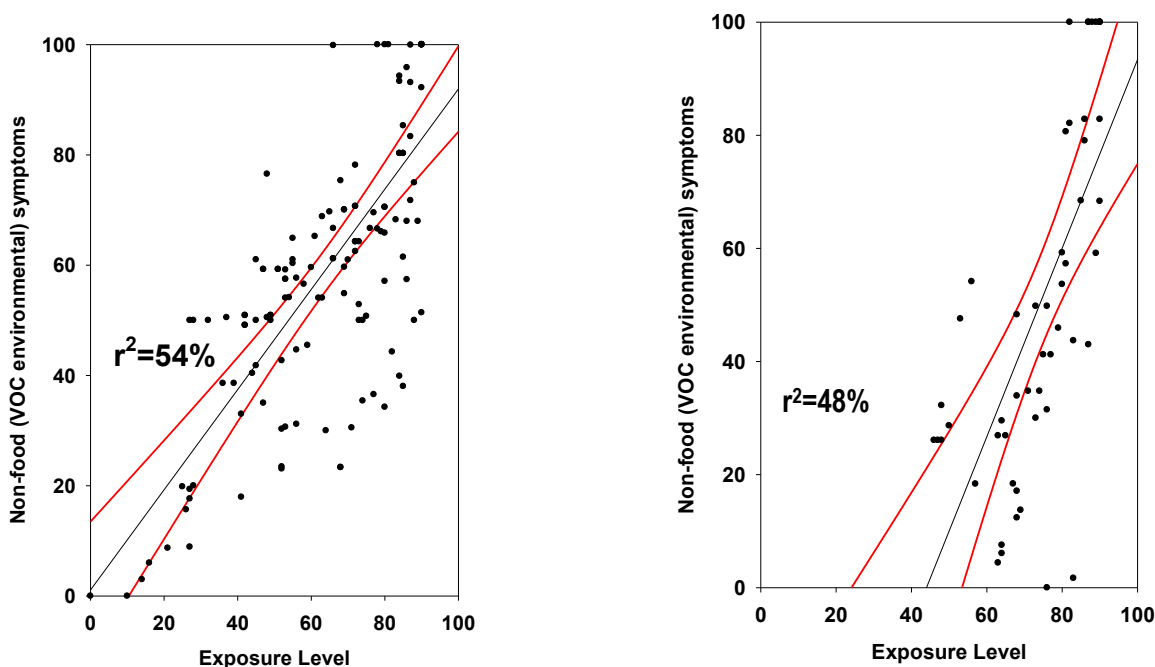
Figure 6 uses first order linear regression analysis to statistically answer the question: is there any relationship between non-food symptoms in this severely autistic child and the changes in environmental exposure levels, and how strong is that relationship. The black line in Figure 6 is the line that shows this relationship. It shows that as exposure levels dropped, symptoms also dropped, in essentially a straight line. The  $r^2$  value for this data is 87%, which indicates that 87% of the change in non-food symptoms is due to the changes in environmental exposure levels in the child's environment, the remaining 13% can be accounted for by variation in parental reporting of exposures and the length of time required for reactions to clear.

87% correlations are unusually high in the biological world. This means that when one encounters a correlation that is this high, then it is very strong and very important.

Figure 7 presents the results for a typical child with PDD. In this case, the drop in symptoms is even more rapid. For our typical child with PDD, shown in Figure 7, 98% of the drop in environmental symptoms was directly related to the changes in the environment. This means that essentially there is a one to one correlation between environmental changes and symptoms remaining after dietary changes are made, and the environmental exposures accounted for all non-food symptoms.

Figure 8 presents the combined results for 11 children diagnosed with autism. These data show the results achieved for 11 autistic children in the study whose food-related and non-food related symptoms could be separated. It was possible to separate food-related symptoms and non-food related symptoms only in those children who did not initially make environmental changes and dietary changes simultaneously. This data cannot be obtained from children currently entering our program since the dietary changes via the Special Foods Diet are made simultaneously with entering the clean room, thus making it impossible to separate food and environmental symptoms.

**Figure 8.** Symptoms (non-food) Directly Related to Environmental Exposure In 11 Autistic Children **Figure 9.** Symptoms (non-food) Directly Related to Environmental Exposure In 6 Children with PDD





In Figure 8 the greater scatter of the data is due to individual variation in reporting and individual differences in specific symptom severity. Linear regression analysis of the combined data indicates that the reduction in non-food related symptoms in these autistic children, was the result of the reductions in environmental exposure levels.

This data indicates another extremely important fact. Notice that the line in Figure 8 extends to '0'. The point at which the exposure is '0', the symptoms are also '0'. This tells us that for the autistic children studied, the point at which the environmental exposures were eliminated, was the point at which the symptoms of autism were eliminated.

Data with strong statistical correlations can be used to accurately predict results that can be expected for other autistic children, within the range in which data was collected. In this study the entire exposure range can be used, i.e. the entire graph of Figure 8 is a predictive tool with statistical accuracy for autism, since symptoms were recorded at high environmental exposure levels, midrange exposure levels, and at complete '0', i.e. full elimination, of environmental exposure levels.

Interpretation of Figure 8 and Figure 5 for autistic children who have not yet entered the program is as follows:

1. Two causes: food and environmental substances in indoor air, plastics, resins, and mold account for all of an autistic child's symptoms and complaints, including the physical and behavioral symptoms of autism.
2. An autistic child's food-related symptoms will be fully eliminated within the first 5 weeks of the program. Although there is great variation, this generally includes two thirds or more of the child's digestive symptoms, half of the remaining physical symptoms and about one sixth of the behavioral symptoms.
3. All remaining non-food related symptoms and behaviors will be eliminated when environmental exposures are eliminated by exposure reductions specified by the Special Environment Program, which includes creation of a clean room.
4. Many of the middle and upper data points in Figure 8 are increases in symptoms associated with the child's purposeful, intentional seeking efforts to compensate for reductions in environmental exposure.
5. When accomplished simultaneously and maintained consistently, in the time it takes for the last exposure caused reaction to run its course all autistic behaviors will be eliminated. The child will become peaceful, calm, happy, content, mellow, attentive, empathetic, loving, interested in parents family and friends, capable of understanding and carrying out commands, and eager to learn how to act in social contexts. There should be no signs of sensory sensitivity, self stimulating behaviors, pain, obsessive behaviors, or repetitive behaviors. The child will quickly learn to carry out appropriate bodily functions, and will begin assimilating and responding verbally, if not present previously.

In addition we find the autistic children experience strong reactions to low concentrations of environmental substances. A short duration exposure of a few seconds causes strong reactions often lasting 1-2 weeks or more.

To completely achieve the elimination of autistic symptoms and behaviors in autistic children one must completely eliminate exposure to environmental substances, plastics, resins and mold in the environment, in addition to foods. This is due to the fact that the predictive linear regression line (and

the data) extends fully to the origin. If the line had extended above the origin on the y-axis, i.e. symptoms remaining when exposure is '0', this would indicate that other factors were important in achieving symptom relief. This was not found to be the case.

These data and the experiences of participants in the SF Comprehensive Intervention Program leave the inescapable conclusion that once food and environmental exposures are eliminated in autistic children, there is no other factor left.

The data indicates that with the right diet and environment no child need be autistic. From Figure 8 we can predict that had environmental exposures always been maintained at '0', no symptoms of autism would have been present. A return glance at Figures 1 and 2 shows the increase in exposures to environmental substances and the increase in autism over the past 50 years. The incidence of autism was very low 50 years ago, and probably occurred in only rare instances when exposure to unusually moldy environments was prolonged and the child also suffered from food sensitivities.

Figure 9 presents the combined results for 6 children diagnosed with PDD. Linear regression analysis indicates that non-food related symptoms of children diagnosed with PDD are caused by exposure to environmental substances. When environmental exposures were reduced, the symptoms were correspondingly reduced. The steep slope of the line indicates that symptoms were reduced rapidly as exposures were reduced. The corollary, however, is that symptoms increased rapidly when exposures increased.

The linear regression line in Figure 9, dropped to '0' to the right of the origin. This means two things: 1) reduction in exposure to environmental substances directly associated with elimination of non-food symptoms in children with PDD, and 2) all non-food related symptoms were completely eliminated before the environmental exposures were completely eliminated.

Statistically one can rely on the results from Figure 9 as a predictive guide for children who have not yet entered the SF Comprehensive Intervention Program. It is possible to rely on the entire range of data, since the data extended throughout the range of the graph, and linearity was maintained throughout. When combined with the data from dietary intervention, the following can be accurately predicted for children with PDD:

1. Two causes: food and environmental substances in indoor air, plastics, resins, and mold account entirely for all symptoms and complaints.
2. All food related symptoms are completely and immediately eliminated within 3-5 weeks.
3. All non-food symptoms and complaints are eliminated by exposure reductions specified by the Special Environment Program.
4. When accomplished simultaneously and maintained consistently, recovery to normal behavior and symptoms should occur in the time it takes for the last exposure caused reaction to run its course. This means that the parents can expect the child to recover completely.
5. Children with PDD appear to be slightly less sensitive than children with autism. Therefore in many cases they should eventually be able to return to school with environmental accommodations and the diet, and be fully normal as long as all criteria are maintained consistently.
6. When exposure levels increase, symptoms will reappear suddenly and increase in severity rapidly, directly correlated with increasing exposure levels.

**Figure 10.** Comparing severity of symptoms (non-food) directly related to environmental exposure in children with autism and PDD

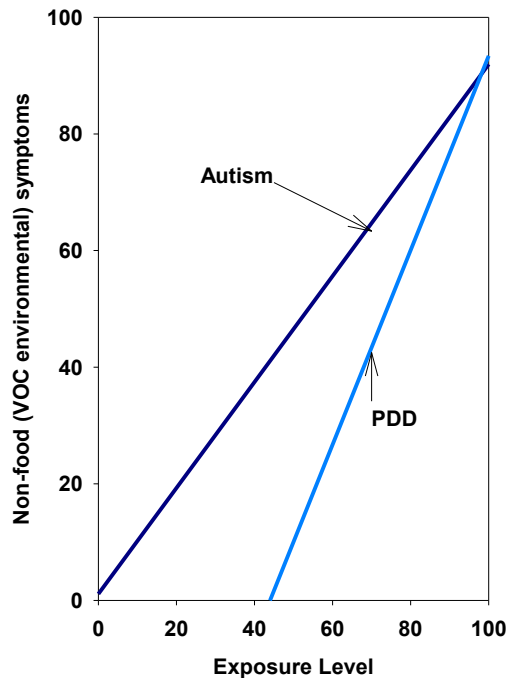


Figure 10 compares the effects of environmental substances in indoor air, plastics, resins, and mold on children with autism and PDD. The data show that individuals with PDD are generally less severely affected by environmental substances than are individuals with autism. However, for the less sensitive individual, once triggered, the symptom levels rise more rapidly than for autistic children. Notice that the slope of the line for children with PDD is steeper than for autistic children.

For Figure 10, linear regression of exposure levels and symptoms reveals a strong predictable correlation that cannot be explained by chance alone. For the dark blue line, autism, this relationship was especially significant ( $n=138$ ;  $t=12.53$ ;  $R^2=0.536$ ;  $P<.000$ ). For the light blue line, PDD, the data show a strong correlation

( $n=56$ ;  $t=7.06$ ;  $R^2=0.480$ ;  $P<.000$ ). Thus, there is little doubt that the relationship of exposure levels to symptoms is not due to chance alone; i.e., these data reveal a convincing and predictable pattern.

We have found that the older the child, the stronger the reactions become. The stimulation of the immune system, inability to fight infections, and continued interference by environmental chemicals in enzyme function, cause continually more severe reactions as children grow older.

The comparison of exposure and symptom levels is also useful as a predictive tool. With 4-5 data points, we are able to predict whether a child is severely sensitive and in need of prolonged full environmental restriction, or whether the reactions can be somewhat less severe after 5-10 weeks.

Throughout the research program only two variables changed: diet and environment. There is no other variable that accounts for the observed sustained reduction in symptoms.

### **HOW FAST DO OCD SYMPTOMS DROP WHEN ENVIRONMENT IS CHANGED?**

According to Figure 10, above, obsessive/compulsive behaviors should be eliminated by food and environmental changes without use of behavioral interventions.

To study OCD behaviors and better understand the role of environmental substances in ASD, while changes were made to the environment to fully eliminate chemical exposures, parents were directed to make no attempt whatsoever to redirect the child away from a repetitious activity, nor to scold or punish. In the study children continued OCD behaviors without redirection, and parents were directed to make sure no chemical exposure could occur. Filters were placed on toilets; plastic toys were exchanged for metal ones, and doors and light fixtures were washed and covered with foil.

Should a change in chemical exposure, alone, cause a behavior to be eliminated with no other attempt to influence, then that would indicate that the behavior was related to the chemical exposure not the physical object. Table III presents examples of OCD behaviors, the avoidance strategies utilized to eliminate associated exposures, and the changes in the behavior over time. Improvements were consistently achieved with environmental intervention alone.

**Table III. Reducing Obsessive/Compulsive Behaviors Through Avoidance Strategies**

<b>Behavior/ symptom</b>	<b>Initial rating</b>	<b>Avoidance strategy</b>	<b>Rating following intervention</b>	<b>Time required</b>
Rubbing head on door frame	3	Washing door frame with steam, followed by peroxide wash	0	1 day
Slapping right side of head with hands	7	Wash hands and face with distilled water	0	1 day
Smelling people inappropriately	5	Teachers, parents, caregivers to switch to child's soaps and other products, made with distilled water from foods on his diet.	2	7 weeks*
Obsessive toilet flushing	10	Carbon filter placed on toilet water line	1	1 week
Watches TV very close to TV set	8	Watches TV through glass; TV placed on opposite side of sliding glass doors	0	12 weeks
Chews on objects and toys	10	Substituted unfinished wooden toys similar in size and shape	1	2 weeks
Rolls objects obsessively with nose very close	10	Wrap the items in foil	4	13 weeks
Picks up sticks and peels them apart	10	Removal of all old moldy sticks in the yard, but leaving new sticks	0	3 weeks
Obsessive sifting	10	Switched to fresh, clean sand placed in metal container, in area of no carpet, on hard wood table with glass top	0	2 months
Eating dirt/sand	10	Eliminating exposure to moldy areas	0	3 weeks
Obsessed with opening and closing doors	10	Wrapped door with foil	0	3 weeks
Obsessed with writing words	10	Writing only with plain wooden pencils, no eraser	2	2 weeks

\* The time required was for caregivers and teachers to cooperate.

We have found autistic children are not obsessed with objects and rituals, they are obsessed with chemicals; obsessive behaviors maintain frequent exposure to high levels of environmental chemicals.

## HOW IMPORTANT ARE SEEKING BEHAVIORS IN AUTISTIC CHILDREN?

Careful observations of autistic children showed a new, undescribed behavior in autistic children. Repetitive behaviors aimed at increasing and maintaining chemical exposures in autistic children prior to starting the SF Comprehensive Intervention Program, are labeled OCD. Once the program has begun, in the clean room, and prior to the use of the clean room, in the partially cleaned up homes, a new behavior – seeking behavior – was observed clearly and consistently; this replaced the old OCD behaviors, which were quickly extinguished.

The child's environment is changed so much in the SF Comprehensive Intervention Program that all of the old sources of exposure and all of the old frames of reference are gone. It is now easy to interpret correctly what the child is doing. The child can be observed 'casing' the new environment. This includes: 1) trying out old objects, getting confused when there is no smell, and no neurological effect, 2) wandering the room slowly, head up, sniffing the air, 3) following the scent to a new spot or item, and 4) spending a large amount of time in any area in which the child can detect a smell. The child's seeking behaviors tended to become especially intense and determined when reaction cycles to exposures no longer present were tapering off, about to end, and symptoms were beginning to drop. Even a brief instant in an area when there were still fumes was enough to cause a strong new reaction and cause another new reaction cycle to occur.

Brief exposure to very low levels of environmental substances was all that was required to cause a strong reaction in the autistic children studied. Autistic children, with an apparent heightened sense of smell, are able to smell substances at levels of part per *trillion* and below, and follow a scent to its source, where the levels are much higher. This may be the reason they have such effective seeking behaviors. It is quite possible that as the levels of chemicals in the clean room drop to very low levels, the child's ability to detect smells becomes greatly heightened. The child then spends large amounts of time in the small places (microenvironments) where the substances are the most concentrated. Examples include:

- Climbing all over caregivers wearing scented products not washed off well enough, burying faces in hair, neck, clothes, and screaming and crying when pulled away.
- Finding and spending most of the time near the tiny cracks and pin holes parents missed in the clean room.
- Making a play tent of clothing that still contains fumes, staying inside the tent for hours, and coming out with red faces, glazed eyes, and unaware of surroundings.
- Using body fluids to prolong exposures.

## HOW THE CHILDREN RESPOND TO THE CLEAN ROOM – The Final Seeking Behavior:

The process of clearing out, symptom falling, and maintaining a symptom free state

There is a definite sequence of stages that autistic children go through in the SF clean room. First we have been surprised to find that the children are not frantic to get out of the room. Instead they become intent upon finding every missed spot or elevated exposure source that has not been removed, and spending their time there. Then the children will frantically create new pollution sources using their own body fluids. Finally they will relax and enjoy the room and begin a sustained symptom-free state.

Apparently the levels of environmental chemicals are high enough outside most rooms that the children are met with such great pain and discomfort that they do not try to leave the room. Complaining and crying to get out of the room has not been an issue for the children in the SF Comprehensive Intervention Program. Apparently this is due to the fact that even though they are frantic to maintain exposure levels, they quickly feel so bad outside the room that they do not try to get out of the room. The room quickly becomes a place of safety, an oasis free of pain for the children.

It is also possible that the children are so intent at finding chemicals inside the room that they do not bother with what's going on outside of the room.

There is a sequence of steps that autistic children progress through in the clean room:

1) Stage 1: withdrawal. On the day the child enters the clean room, he will also start on the Special Foods Diet. He will initially progress through withdrawal related to the diet change and will also progress through withdrawal related to the dramatically reduced environmental exposures. Any family who has experienced withdrawal when changing to a gluten-free, casein-free diet, knows what this experience is like. For approximately one week the child will experience heightened symptoms; it is important to have the room as clean as possible, so the child goes through withdrawal only once. Withdrawal is discussed more in the Special Foods Diet booklet. Of note here, is the fact that there is little interaction with the room at this time.

2) Stage 2: stage 2 begins when the child completes withdrawal and begins to eat well. The child generally has completed the first week of eating well by the end of the second week, and then stage 2 environmental begins. Parents have a great deal of control over the length of this phase because this is the phase during which the child looks frantically for missed spots. This is not an intellectual exercise for the child, although one sometimes wonders. The children seem to locate by smell. They will pace the room and also wander at random to all areas of the room. They will run their fingers along every corner, seam and crack they can reach. They will get under everything they can. They will check floor, walls, everything, for any areas where the seal is broken or can be broken or peeled away.

If the children find any spot, they will visit these areas periodically, regularly, and sometimes spend all of their time in these areas, or they may spend time in these areas only for a few moments every few days. Children need only brief sniffs in these areas to maintain their symptom levels. Children's symptom levels will have fallen, but they will plateau until all areas such as these are found and sealed, and the child can find no new areas.

The end of stage 2 and beginning of stage 3 is marked by the child acting perplexed and confused. The child will walk to a spot, stand there and look confused; he will go sit down and then will walk to another area of the room. Again he looks confused and perplexed. Then he will finally go sit down and stay there. This signals the point at which no missed spots are present, and no chemical exposures can be found anywhere.

This becomes the challenge to parents to see how carefully and completely they can follow directions and completely eliminate all sources of exposure. Parents who manage to do this will be able to skip this stage. Only about 15% of parents so far have been able to skip stage two.

3) Stage 3: a child enters stage 3 when he can no longer find exposures in micro areas of the clean room. Stage 3 is the stage at which the child is most determined and purposeful about increasing exposure levels. There are no exposures at all and symptoms are falling rapidly. The child is determined and at some point realizes that the greatest source of chemical exposures is now himself. And this is true.

Levels of chemicals in the room are now extremely low, essentially not present. There are no environmental chemicals being introduced in the food, the water, the clothes, the toys, the floor, the walls, or the air. There are essentially no environmental chemicals in the air coming into the lungs.

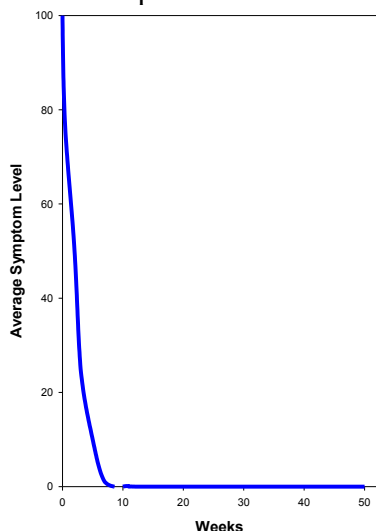
The balance now tips the other way. Levels of environmental chemicals in the child now are pouring out into the room. They are exhaled on his breath, in his sweat, urine and stool. This is a natural process of ridding the body of the chemicals that he has been inhaling and eating for many months or years.

In stage 3 the child realizes that he can maintain his exposures by spreading his body fluids around the room. This is the stage where parental assistance is most important. The children will spit on their hands and rub the spit all over themselves or over the walls. This facilitates environmental chemicals getting back into the air and breathed again by the child. In addition, any crevices in the walls where saliva or other body fluids are spread will become places that promote mold growth. Then moldy fumes as well as fumes from the body fluids will be in the air.

Parents are instructed to quickly wash the child and the walls, floors, etc, with soap and water from the program. This is the final stage of addiction, and for the length of one reaction cycle, the child must be prevented from playing with his body fluids and thereby creating new areas of exposure from his own body fluids.

When the child is unable to play with his body fluids for one full reaction cycle, this breaks the final exposure cycle, and the child no longer seeks out these fluids.

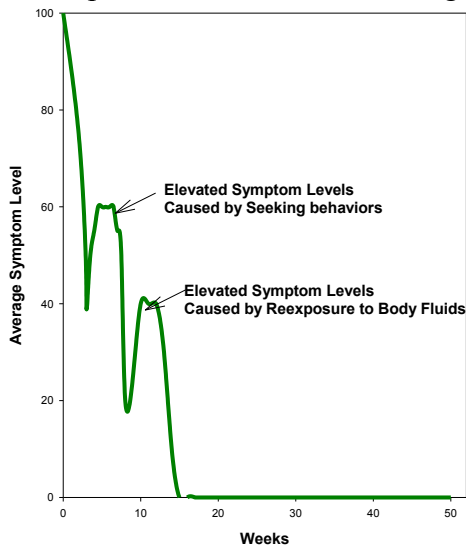
**Figure 11.** Symptom reduction in non-autistic individuals SF Comprehensive Intervention Program



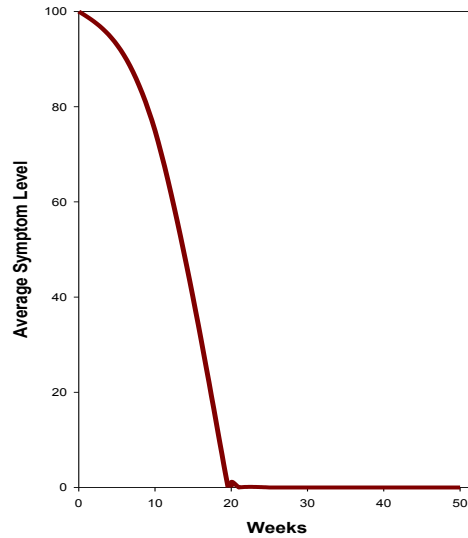
Seeking behaviors of stage 2 and exposure creating behaviors of stage 3 mark the end of autistic behaviors and physical symptoms. When both are eliminated, the symptoms disappear and the child enters the wonderful new world the diet and special environment create for him.

Figure 11, on the left, shows the typical response of non-autistic individuals who enter the SF Comprehensive Intervention Program. When the diet and pristine environment are consistently maintained, the symptoms disappear quickly and are maintained. This rapid drop in symptoms is possible because the reaction cycles are generally 1.5 weeks or less, and because there are neither seeking behaviors nor attempts to create re-exposures.

**Figure 12.** Symptom Reduction Observed in Autistic Children SF Comprehensive Intervention Program



**Figure 13.** Symptom Reductions Observed in Autistic Children with Long Reaction Cycles, SF Comprehensive Intervention Program



Autistic children follow the pattern of Figure 11 after the seeking behaviors are eliminated (stage 2) and after attempts to re-elevate exposure levels through spreading body fluids are eliminated (stage 3). Once the exposures stop, the symptoms drop for autistic children just as rapidly as for non-autistic children.

With autistic children, however, the extra problem of severe addiction to environmental chemicals, and the attempts to maintain their exposures, can cause delays of several weeks. Figure 12 shows the reductions in symptoms observed for most autistic children. The data show the purposeful efforts of severely addicted autistic children. The first and second symptom surges are largely under control of parents. When the clean room is free of cracks, gaps and pin holes, i.e., sealed thoroughly, the time delay caused by seeking behaviors can be essentially eliminated. Similarly, when the seeking behaviors end and the second symptom surge begins, parents can help to make this period very short.

Some autistic children, especially those whose autism is very severe, experience lengthy reaction cycles. This occurs when any one reaction lasts 2 or more weeks, even as long as 1-2 months. In these cases, the symptoms do not fluctuate rapidly because the reaction cycles are too long to allow this. In these cases, complete environmental control is especially important because one brief exposure can cause a return of symptoms for weeks. These children pass through the stages of seeking behaviors and attempts to cause reexposures. One can tell this because of the behaviors; however because of long reaction times, and disappearing symptoms associated with exposures that ended weeks earlier, there is generally a slow, steady drop in symptoms until the 'zero symptom level' is reached.



## **SUMMARY:**

The initial questions for this section were: How fast do symptoms drop when the environment is changed? How strong is the relationship between non-food symptoms and eliminating exposure to environmental chemicals in indoor air, plastics, resins and molds?

The answer is: the correlation between exposure to environmental chemicals and symptoms is so strong that from symptom levels alone, we can predict what the child's environmental exposure level is, and the severity of the effects of environmental chemicals.

Statistical ANOVA techniques indicate that there is essentially a one to one correlation between exposure to environmental substances and the symptoms not eliminated by dietary intervention.

The data (Figures 6-10) show that the remaining symptoms can be eliminated as soon as parents make the necessary environmental changes. Figure 11 indicates what is possible when parents follow directions fully and guard against seeking behaviors.

At the outset we will not know the length of the reaction pattern for a child, but this will become apparent quickly. If the day the child enters the clean room is the day of the last exposure, then symptoms will be eliminated according to the length of the child's typical reaction. Some children are fast reactors and symptoms will clear within about four days. More commonly for autistic children, is a delayed onset of 1-2 days, heightened reactive state for 3-5 days, and tapering of symptoms for another 3-5 days.

Figure 12 presents a typical pattern for families currently undergoing our program. We have found that once the clean room is ready and the child enters the room, adjustments to the room, addressing of seeking behaviors, redoing missed items, and addressing unforeseen situations has been taking several weeks. The slower drop to the zero symptom level represents the period of mistakes, and intense seeking behaviors that often occurs.

The required use of video tapes for our review and occasional site visits is helping in this area. Learning from mistakes of other parents can really help reduce the time. Some problems parents have encountered recently have included: 1) sealing walls and floors with foil, but forgetting the ceiling. 2) carefully following all directions, and then not closing the door, 3) leaving many puckers and gaps in foil, and having to repeat the job; 4) not having sufficient air circulation outside the child's door, 5) family members not carefully following the protocol themselves, and 6) bringing wooden toys assembled with wood glues into the room.

Once all of these problems are addressed and the environment is maintained consistently, the remaining symptoms drop as shown in Figure 12.

From experience we know that, in the case of the elimination of environmental exposures every autistic child will frantically seek out every way possible to maintain his exposure levels, including using his nose as a detector to lead him to any missed spots in the room, finding ways to loosen materials, and temporarily playing with bodily fluids, through which the environmental chemicals are also being excreted.

An autistic child who does not exhibit seeking behaviors is a child who has managed somehow to maintain his exposure levels in the room. A recent example of this is a child who initially experienced no withdrawal and essentially no change in symptom reduction. We found this child was doing two things: pacing in front of the door for hours, and making a tent of bed clothes and spending hours within the tent. We found that the door had not been sealed with metal around the frame, and the parents had purchased organic cotton bedding against our advice. Instead of no seeking behaviors, this child had sought and found two strong exposures: Environmental chemicals streaming through the cracks around the door frame, and polymerized phenolic compounds, gossypol, that remain in minimally processed cotton in high concentrations. The child spent hours daily on the bed and in the bed, and engaged only in self stimulating behaviors in those parts of the room.

The results of this study point clearly and convincingly to the reason why autism has increased so rapidly in the last few years: addiction to substances in the environment and an immune system response to substances in the environment. It is heartbreaking to record the frantic addictive behaviors of child after child.

This awful truth is that autistic children addicted through no fault of their own to environmental substances that have in the last few years become a way of life.

Autistic children have become innocent addicts, surrounded by substances that they did not seek and did not even know were there. Still the point was reached early on, when the sensation of pleasure of exposure was replaced by great discomfort, pain, anxiety and fear when the exposure was reduced. They liked the sensations too much, were unable to resist or avoid, and became interested in little else. The pleasure of spending time close to the TV, nose to nose with a plastic toy, or face to face with the flushing toilet was a greater source of pleasure than family, parents, the rest of the world, and awareness of sensations and sounds receded. The pain of reduced exposure was horrible, causing pains and irritation and fear that was more immediate and more important than family, parents, the rest of the world, and awareness of sensations and sounds receded.

The addictive response and the child's immune system are triggered fully at extremely low levels. The most effective way to protect autistic children from exposures is to create a clean room for the child and have the child stay in the protection of the room while starting the diet. This is by far the best for the child, and by far the easiest and cheapest way for the parents.

It generally takes several weeks after the program is implemented and the child is in the clean room to fully eliminate the exposures. Several additional weeks are often needed to eliminate exposure to substances in body fluids and break the addictive cycle. The full elimination of symptoms follows 2-5 weeks after the last exposure source has been eliminated. Thus from the data and our experience, full symptom relief is usually achieved and sustained in about 2-5 months.

## VIII

### **The SF Comprehensive Intervention Program for the Child With Autism, Asperger's Syndrome, or Pervasive Developmental Delay**

The SF Comprehensive Intervention Program is a highly effective program that eliminates symptoms caused by foods and chemical and environmental substances. The SF Comprehensive Intervention Program is designed to achieve results quickly, avoiding the costs of waiting years for results. The SF Comprehensive Intervention Program is a guided by counselors who are able to work intimately with participants to answer questions related to diet, and to direct the stepwise process of environmental change. For most children, five weeks is all that is necessary to demonstrate the effectiveness of the SF Comprehensive Intervention Program.

The SF Comprehensive Intervention Program achieves elimination of symptoms quickly and simply. The initial phase of the Program involves placing participants on the Special Foods Diet, while at the same time providing an allergen-free environment through the creation of a Safe Room in the home. This safe room approach has allowed us to achieve the same results for environmental exposures as we have achieved for years for food exposures. With this new approach it is common to achieve 90% overall reductions in symptoms by the end of the first five weeks. Environmental changes are continued until the child achieves and sustains a *zero symptom level* in all categories. The second phase of the program involves expanding the clean environment beyond the clean room while continuing the diet. This is a time of healing during which the immune system begins to heal. The last step of the intervention begins at about 6 months and involves diet expansion while maintaining the zero-symptom level.

The weekly assessment consultations are essential and are designed to guide you and your child through the entire program. These assessments are invaluable as they help solve any problems with compliance and assist with complicated issues. The specific guidance previously mentioned is so critical to a successful intervention that the SF Comprehensive Intervention Program is simply not available without these consultations.

#### **Step 1: The First Five Weeks**

When you sign up for the SF Comprehensive Intervention Program, implementation counselors will work immediately and directly with you to design a plan tailored to your child's specific needs and circumstances. The counselor will also guide the process of environmental intervention you will need to follow. You will make most of these changes prior to the time the child begins the diet.

After the first five weeks you will reach a decision point. We have found that this is a good time to assess the improvements you have achieved. Although other programs maintain you may have to wait as long as two years before seeing results, clients who follow the program achieve dramatic results within the first 5 weeks. This is because few reactions last as long as 5 weeks, and our program is all about completely eliminating the substances your child is reacting to.

All it takes to show parents personally just how much foods and environmental substances are affecting their children, is 5 weeks of full commitment to the program. Then the devastating consequences caused by foods and environmental substances will personally become reality. Our words will become true in your heart.

The clean room becomes a new center of family life. Parents join the child in the room, as well as brothers, sisters and other family members. As the child emerges from the addicted state and recovers from the immunological reactions, he becomes aware of and interested in family and social settings. The family in the clean room becomes the setting in which the child begins to reenter a social world and learn social skills.

## **Step 2: Reaching a Symptom-Free State, Maintaining the Diet, Expanding the Environment**

Environmental intervention continues in step 2 until seeking behaviors and reexposures behaviors are eliminated, the child's symptoms are eliminated and the 'zero symptom level' is maintained consistently.

The focus then turns to maintaining the 'zero symptom level' while enlarging the area that the child can safely enter without effect. In stepwise, sequential fashion, other areas are converted to 'safe' for the child. Now that a 'zero symptom baseline' has been achieved, the parents are directed to make the changes necessary to maintain this symptom level as other areas of the house are addressed, and the child's responses are used as an accurate guide.

Relatively few changes tend to be necessary in older homes (30 years or more) that have not been renovated in the last 10 years; more changes are necessary in new homes or homes that have been renovated within the past 10 years.

Fortunately the child's responses, in terms of return of symptoms, as well as our previous experience in working with other children, are useful guides that allow practical approaches to be utilized without jeopardizing the health of the child. Our emphasis is on providing practical, economic approaches that fully avoid environmental exposures without compromising the child's health.

## **Step 3: Expanding the Diet**

When the food and environmental triggers have been eliminated the child will reach a zero-symptom point. The diet and environment are maintained for the next four months as described above. At six months your child will be ready to begin dietary expansion, provided that the zero symptom level was reached several months earlier. It is now simple to determine the foods that fully agree with your child, and even subtle effects are easily distinguished.

During this step we will slowly and carefully direct the introduction of other foods into the diet. With the help of the Special Foods Staff you will select foods likely to maintain a zero-symptom level. The end of this step is the development of a long-term sustainable zero-symptom diet. The expanded diet represents the set of well tolerated foods available for a person and is maintained indefinitely.

## **Step 4: Maintain the Expanded Diet and Environmental Changes**

This final phase of the Comprehensive Intervention Program is one of long term maintenance, and feeling great, growing rapidly, both physically and mentally. Maintaining a well-expanded diet and providing the environment the child needs becomes routine, and the focus turns to catching up on everything the child missed out on, accelerated learning, and allowing plenty of fresh air, sunshine, restful sleep that also promote healing. In steps 1-3, symptoms are relieved because the triggers are eliminated. In step 4 the protected environment and diet are maintained while the affected enzyme

systems and the immune system itself undergo profound changes that ultimately achieves complete and full recovery.

## IX

### The SF Special Environment Program

**The SF Special Environment Program** is intended to be as great of a change in the environment as the Special Foods Diet is for foods. The goal that all achieve who enter the program is avoidance of the environmental chemicals from walls, furniture, carpets, personal care supplies, water, curtains, heating systems, clothing, toys, books, TV, computers, mold, mildew, etc. The air inside becomes sweet and fresh; and the rest of the air in the home will begin to smell strongly of chemicals when compared to the special room.

At this point in your reading, you should fully understand the importance of avoidance of environmental chemicals. You should also understand that the immune system can be triggered at and below the abilities to smell these substances, and these substances can be smelled at extremely low levels. You may not yet appreciate how much damage exposures at low levels can cause.

To explain this, we will start with a really low concentration of a musty smell, and look at it from the standpoint of what the cells of the body are exposed to. The chemical responsible for musty odor is detectable at concentrations as low as 0.00063 parts per *billion* (ppb). This seems so low, but a concentration of 0.00063 parts per billion actually represents 8,000,000,000 molecules inhaled in each breath, and 80,000,000,000,000 molecules inhaled every 24 hours!

The actual concentrations for most substances in indoor air are much higher. The average concentration of formaldehyde in homes is 26 parts per billion on average and the combined totals of the highest 20 volatile organic compounds average 1168 parts per billion as vapors in the air. For these substances in the average home and school, this amounts to 140,000,000,000,000,000,000 molecules inhaled into the lungs every 24 hours. This does not include the remaining 500-700 compounds also present in indoor air environments. These levels can be 250 times higher in new homes and following renovation.

Probably the best way to appreciate the importance of this number is to consider it in the context of the number of cells of the human body, estimated to average 50 million million. The number of molecules of volatile organic compounds alone is so high in the average home and school that there are more than 3,000,000 molecules for every cell in the body every day. If we allow for all of the 500 to 700 compounds actually present, and then levels occurring following renovation, the number rises to an estimated 1,000,000,000 molecules per cell.

Further consider that these levels will be especially high in the blood, since entry directly to the blood through the lungs is the primary exposure route. Levels in the blood will be particularly high since there is no detoxification method and virtually the entire amount is delivered to the rest of the body via the blood. This means that approximately 70,000,000,000,000,000,000 molecules of volatile organic compounds alone circulate through the blood in 24 hours. Red blood cells and white blood cells would be exposed to particularly high levels of these substances. This is high enough over time to begin to reduce levels of enzymes, and significantly impair their function.

Approximately 70,000,000,000,000,000,000 VOC molecules alone in the blood every day certainly would seem enough to stimulate and eventually overwhelm the immune system. To the immune system it would seem similar to a massive simultaneous invasion of 500-700 viruses. This causes

mobilization of immune resources, leaves insufficient resources for fighting infections, and attacks of inflamed tissues occur.

Once the immune system is overwhelmed, highly over-reactive, and attacking its own tissues, which is the case for each autistic child, the number of foreign environmental chemicals must be consistently eliminated in order to eliminate the stress on the immune system, and restore the levels of enzyme function.

How far is enough? How much reduction is needed? Our experience indicates that levels of volatile organic compounds and other environmental chemicals must essentially be eliminated. This means making no compromises, and developing a clean room that accomplishes this.

We have recorded demonstrated many times in our program that the 14,000,000,000,000,000 molecules inhaled with one breath are enough to trigger immune system reactions that may last for days. Recoveries of autistic children do not occur with partial changes, only with complete elimination of the symptoms.

There must be at least a  $10^6$  fold reduction in VOC's levels alone in *microenvironments* in the room – this includes cracks, interface between walls and floors, residues on clothing, and so forth. So that essentially the only environmental chemicals are from the child's own breath and the few from his foods.

The point of this is: there can be no partial solution. One cannot achieve the desired results by providing a clean environment 40% or 60% of the time! The number of molecules involved are so high that a reduction from 70,000,000,000,000,000 molecules per day to 35,000,000,000,000,000 molecules is meaningless.

The results we achieve are impressive, but only for individuals who fully follow our program.

So --- how do you do this? I can give you general information here, but not specifics. Every home and circumstance is different. An approach will be developed specifically for your situation. For example, a person living in a 200 year old home has very different circumstances than a person living in a 2 year old home. Houses and floor plans are different. There are different numbers of children. Some homes are large; some are small. Some children have severe physical issues including many therapists; some have medical equipment that has to be modified. All of these are problems that are addressed, but cause variation in the recommendations provided for each person.

The following are general things that you can expect:

You will be directed to select a room in your home. This may be your child's bedroom, or another room in your home. It must be possible to isolate the air flow to this room, so you will need to select a room that does not contain lofts or large open areas that lead to other parts of the home. Your child's activities will take place in this room, so make sure it is large enough to accommodate any therapies such as physical therapy or occupational therapies that you may be using. Also consider convenience and ease of access, since you will be going back and forth a lot.

Specific instructions will be provided once the room is selected. These will be adjusted according to the particular characteristics of the room. Try to select rooms with at least two sets of windows, the more the better; these will be useful for air circulation and so forth.

You will make many changes to this room, and the result will be that environmental chemicals, plastics, resins and mold in this room will be eliminated. Most parents accomplish these changes within a week or two.

All materials for the program must be purchased from Special Foods. We have learned that there is no place in the country where suitably pure materials for the program can be purchased. For example consider cotton. Organic cotton contains terpenoids particularly polymerized phenolic compounds that autistic children and the other participants in the program react to strongly. Commercial cotton is a veritable chemical wastebasket. Raw cotton is first treated with the equivalent of antifreeze, soaked with organic amine compounds including EDTA, repeatedly rinsed in tap water with it's high levels of chlorinated organic compounds, dried by direct exposure to natural gas fumes that saturate the fibers, sprayed with citric acid, and when dry completely coated with silicone.

Our company researches each material, and has it specially manufactured to our exacting specifications, often, new to the industries involved. Purchasing these special materials is absolutely necessary in order to eliminate all chemical exposures in the clean room.

Your child will live in this room. Plan for your child to sleep here, eat here, play here, learn here, and recover here. In addition your child in most situations will spent time playing outside. Plan to remove your child from school during the first 5 weeks. Therapies at home, including occupational therapy and behavioral therapies may also have to be eliminated. The child must not be exposed to fumes associated with the materials used by therapists, and scents associated with clothing and personal care products of counselors. The staff will tell you how to accomplish this.

You will need to arrange to be in the room with your child. This is essential because your child will go through withdrawal and will attempt to find areas of chemical exposure during this time. You will fully follow the child's protocol while in the room.

At the end of approximately 5 weeks, in most cases the parents report drops in symptom levels of 40-80%. Children are much more peaceful, calm, serene, mellow, and cooperative.

The child cannot return to school until all symptoms have been eliminated and the 'zero symptom level' has been reached and maintained. When the 'zero symptom level' has been achieved and maintained, we will be able to tell you what you will need to do to maintain this level in the school. We will provide you with a protocol for returning to school, if desired. You will be given a list of detailed instructions to present to the school. These will be entered into the child's IEP, and then must be fully followed by the school personnel. The changes must be fully agreed to and implemented before the child reenters the school.

The room will become the center of the child's world. After withdrawal is complete and there are no more cravings nor frantic attempts for re-exposure and the addictive cycle is broken, the child becomes acutely aware of how well he feels in the room and how painful his symptoms are outside of the room. Within a few weeks, the children feel so good in the room, and so bad outside of the room that they love being there.

The room becomes the family hub of activity, like a new recreation room. As long as the protocol is followed family members can and should be in the room much if not all of the time. This is a place of connection, reestablishing contact and communication if that has been missing, and a place of laughter and happiness.

Parents will be instructed to wait until all signs of autistic behaviors are eliminated before attempting behavioral intervention or accelerated learning. Only then will the child's mind be clear enough to respond fully.

At this point we will develop a strategy for modifying other rooms. Rooms will be selected in sequence and modified one at a time. As this happens, the area the child can enter will expand.

The reactions of the immune system generally stop within the first few weeks of full compliance with the program. Chronic infections generally clear within the first two months. Impaired enzymes return to normal within about 6 months. All inflamed and injured tissue heals by about 4 months. The child will make dramatic progress throughout this entire time. The child is generally ready to embrace his world joyfully in about 6 months. This is the time that accelerated learning including learning nuances of social interaction can begin.

## X

### **As You Begin The SF Special Environment Program:**

- 1) *Be sure you have read, signed and returned the program enrollment form.* This form indicates that the SF Comprehensive Intervention Program is also a research study, and that in exchange for use of the data generated in the study there will be no charge for consultations throughout the program. This form indicates that you understand that the SF Comprehensive Intervention Program involves comprehensive dietary changes and equally comprehensive environmental changes as the sole method of treatment during the program. This form also indicates your willingness to fully comply with the conditions and requirements of the program.
- 2) *Materials for the environmental program:* Materials for the SF Special Environment Program must be purchased from Special Foods; unless you are directed to a specific source outside of the company. It is becoming increasingly difficult to find pristine items, and we have had to have them specially made; others are very difficult and times consuming to find. For other items it is very difficult to know for sure whether they are what they should be. We require you to purchase materials from us so we can be sure that no materials interfere with your child's progress.
- 3) *Keep records:* Before beginning the Comprehensive Intervention Program, a staff member will help you take stock. How is your child feeling? What symptoms are being experienced? To help determine the extent and nature of the changes to come, they will help you create a symptom inventory just before beginning the SF Comprehensive Intervention Program. List everything your child is experiencing (every symptom and complaint whether you believe it is related or not) and assign a numerical value (0-10) for each to express the severity of each symptom. The staff will use this in evaluation of changes that occur throughout the program. This is also important because sometimes parents forget how bad things were in the beginning.
- 4) *Maintain a video record:* Before beginning the program video your child as he is in general and also document him at his worst. There is very little video record available for most children, and this record makes it easier to demonstrate the improvements your child will be achieving. Do your best to show clearly the most important symptoms. Do this as a way of saying 'good bye' to your old way of life, and entering a whole new era in which these problems will not be a part of your child's life.  
  
Make a video record of reactions; particularly try to catch your child's seeking behaviors on video. Include the details of your child's room, and include any thing you are having trouble with. Include your child's improvements and gains on your video.



Talk as you video and describe in words what you are capturing on film. Behaviors that are obvious in person are much harder to capture on film. So try to isolate the behavior if possible. For example one parent sent tapes of petit mal seizures present and not present, but the child was also jumping on the couch in the first shot and excitedly playing catch in the second. The seizures just looked like he was shrugging his shoulders. Isolating the behaviors (when possible) and telling what the viewer is supposed to notice as you take the films will help greatly.

Periodically the staff will request that you send us a copy of the tape for our use in our research program.

- 5) *If you encounter problems* while on the program, DO NOT implement your own solutions and do not contact individuals outside the program for advice. This will likely delay your child's progress. Symptoms are generally due to inadvertent exposures. Contact the staff who will help you figure out how to solve the problem without violating conditions of the program and causing needless exposures. The staff will help you identify the source and will tell you what to do about it. If you get bored (your child is not very likely to), if you have a leak around your windows, if a relative tries to undermine you, etc, we will help you with effective strategies developed from 20 years of experience. We will provide support and encouragement when you need that along the way.
- 6) *If you feel a problem has no solution*, it means you simply cannot figure out the solution. Contact your counselor and he will help you figure out a solution. Often a problem or issue you believe is insurmountable is actually relatively easily solved. These situations may require a redistribution of the responsibilities among family members, or other solutions. What is unfamiliar to you is most likely a routine

problem to us. Most important is to realize that the problem is insurmountable or overwhelming to you only.

- 7) *Childhood illnesses*: Occasionally children comedown with typical childhood illnesses in the middle of the program. Let us know at the first slight sign of any problem. We will help you distinguish between reactions and illness and will help you know what to say to your doctor. For example we can help you keep congestion associated with a viral infection from turning into an ear infection, but we need you to contact us early. If you need to see your pediatrician, we will advise you of this early before a problem becomes acute.
- 8) *Obtain your SF First Aid Kit*: For those occasional unavoidable problems, we have assembled a small first aid kit that you will purchase as you begin the program. The kit contains items such as a 20 cc glass dropper for use if the child should become congested and for other purposes, compounded Tylenol, peroxide in a glass bottle, and specially formulated zinc oxide ointment. Also included are instructions for various circumstances such as scraped knees, sunburn and so forth. You will be able to have items on hand before you need them, and will have instructions that help you with common circumstances and yet fully follow the program.
- 9) *Visits to your physician*: We encourage you to have a checkup and evaluation of your child by your pediatrician before entering the SF Comprehensive Intervention Program, although this is not required. Encourage your doctor to make detailed notes and records, and perform any tests he desires.

Once your child enters the program, contact us *prior* to return visits to your doctor. Your child will encounter environmental exposures in the waiting room and in the examining room that will cause a surge in

symptoms. In order for your doctor to observe the improvements you will see at home, and in order to protect your child from painful reactions, you will need to follow guidelines that we will provide.

- 10) *Pharmacy and medications*: when medications are required you will be directed to our compounding pharmacy. This pharmacy provides compounded medications completely free of all but the active ingredients in purest form, and also follows our stringent specifications regarding internal procedures, type of container, and packaging. You will obtain any medications needed from this source.
- 11) *Join the support group* for parents of children on the **SF Comprehensive Intervention Program**. Since the children will have similar albeit not identical

environments and diets, and parents have similar hopes and goals, it is beneficial to share experiences and to encourage each other especially through the first few weeks. Those considering this program will also be able to ask questions of individuals going through the program and those who have completed the program or are almost complete. At [yahoogroups.com](http://yahoogroups.com) you can sign up and become a member. Web address: [SpecialFoods@yahoogroups.com](mailto:SpecialFoods@yahoogroups.com).

Adults also enter the SF Comprehensive Intervention Program, as well as children with a great variety of conditions. You will also have an opportunity to ‘meet’ these people on line.

Do refrain, however, from giving or soliciting advice. This even includes sources for materials.

## XI

### What to Expect on the SF Special Environment Program

- 1) There are strong, important relationships between the dietary intervention and environmental intervention portions of the SF Comprehensive Intervention Program. The simple, clean room approach to environmental changes provides dramatic reductions in symptoms associated with environmental exposures, and along with the Special Foods Diet, removes a great burden from the immune system. One benefit of this for the environmental intervention portion of the program is that you will be able to directly observe the effects of chemical exposures on your child since all food-related symptoms will have been eliminated.
- 2) The SF Special Room is essential to the success of the SF Comprehensive Intervention Program. Plan on placing your child only in this room and outdoors throughout the program. After your child achieves a ‘zero symptom level’ in the Special Room, we will discuss a plan for expanding the special environment.
- 3) During days 3-9 expect withdrawal reactions. Your child may become quiet and seem listless, or all of your child’s symptoms may become more severe for a few days. Your child’s behavior during this time will be very similar to that of a drug addict undergoing withdrawal. Provide comfort and emotional support, give plenty of fluids, give him as much food as he will eat, but do not push foods. Withdrawal associated with foods is generally over by day 8 and the child starts eating well; however, withdrawal and cravings caused by chemical exposures will last until

seeking behaviors and attempts at re-exposure with body fluids have been eliminated. During this time expect that the child will employ all kinds of obvious and subtle strategies to obtain a little whiff of environmental chemicals. Report this to the staff so we can tell you how to eliminate these exposures.

- 4) Do not be upset if your child eludes you and succeeds in briefly being around something he shouldn't; discuss the problem with your counselor, then eliminate the source of the problem and do not let it happen a second time. Occasionally there are small areas that are not properly sealed; your child will find these and will spend virtually all of his time in these areas. Although this will prolong his reactive state a few days or more, this will help you identify problem areas to discuss with the staff.
- 5) Beginning with the third week, you should begin to look for very real signs of change/improvement in your child. A child who has not learned to talk is not likely to suddenly talk; that skill will probably have to be learned; however, directly related symptoms should begin to rapidly disappear. This would include OCD behaviors, tantrums, self-stimulating behaviors, sensory sensitivities, lack of awareness of surroundings, digestive symptoms, eczema, and many, many others.
- 6) Symptoms that seem to occur at random or that sometimes occur but then do not occur at other times are generally indicators of a chemical exposure. Report these to the staff.
- 7) Great emphasis will be placed on environmental changes and a full *zero symptom baseline* should be reached as soon as possible. This means no remaining symptoms at all from foods, volatile organic compounds, plastics, or molds.

The full zero symptom baseline is very important because it signals a complete shift of the immune system from an over-stimulated, hyper-reactive state to more normal functioning. When this is reached and sustained, the drop in symptoms is often abrupt and dramatic.

This is the point at which the immune system resources begin to be restored and the immune system is able to effectively attack and eliminate low level, chronic infections. This is also the point at which proper enzyme function begins to be restored.

- 8) After 5 weeks, we will evaluate your child's progress, you should see symptom reductions of 40-80%.
- 9) When a 'zero symptom level' is achieved and maintained, we will recommend a plan for expanding your child's special environment. Your child will still need to stay in his room, however we can now begin discussing how to modify other areas in the home, school, and automobile so that the areas that are safe for your child can be increased. Since the safe room you created initially is all that your child absolutely needs to be safe, there is some discretion and choice available to the parents over what areas to address next, and the time frame.
- 10) If you would like for your child to return to a school environment, then after achieving the 'zero symptom level' you will be provided with a detailed set of instructions for the school to follow and for transportation to and from school. The school must fully agree to these requirements and include them in the IEP. The environmental requirements must be in place before the child returns to school.
- 11) During the first 1-6 months, be alert for signs of any emotional strain in the family. Are you aware that sudden, spectacular improvement, including sudden elimination

of autistic symptoms can cause stress within the family? Individuals and families members of individuals who suddenly are able see or suddenly able to hear after many years, report great upheaval and great stress. It is a wonderful problem, but one to be anticipated and sensitive to, and there is a definite period of adjustment.

Why does this occur? Well for autistic children, one or both parents may have begun to identify themselves in terms of the child's dependence on them. Sometimes the ability to intervene and calm a child in the throes of a severe outburst or obvious pain, is personally very satisfying. The sudden lack of need to 'save' a child from a severe tantrum, because it is no longer occurring, represents a loss to some that is very strong.

Parental roles shift from coping and maintaining to ones of protecting and parenting. Even though this is wonderful, it means that the child needs parents in different ways. Even though there is a gain, there is also a loss. Some parents and relatives may not understand these normal feelings of loss and grief.

We are aware that issues such as this may arise; we will work with you through this important period of adjustment.

- 12) After 6 months in the program, the process of dietary expansion generally begins while the environmental requirements are continued. There is no chemical re-exposure phase, the sensitivities are too severe in children with autism, Asperger's syndrome, and PDD.

- 13) What then? **KEEP DOING WHAT YOU ARE DOING!** The improvements have occurred because you have not introduced foods or chemicals that caused the symptoms. **If you reintroduce problem foods and chemicals, the old symptoms will return quickly and strongly.**

- 14) Will my child recover eventually? Your child will continue with his expanded diet, and will continue with the environmental protections he needs. Your child can maintain what is a fundamental right of his – the right to live his life in a symptom-free state. Your child will feel terrific, have plenty of energy, and yet be serene, calm, cooperative, affectionate, and attentive.

Your child's immune system will continue to gradually heal, and given enough time, should fully return to normal. In time, given time to fully heal, your children should be able to resume an unrestricted diet, and unrestricted environmental requirements with no symptoms or problems of any kind.

The children following our program fully, have their labels removed, are able to learn and catch up to their peers, and show no lingering signs of their condition.

After the first year of the program, when the final diet and environmental requirements are defined, full recovery, which we define as a complete lifting of diet and environmental restrictions without adverse effects of any kind, generally requires an additional three to eight years.