FREEDOM
ORANGE COUNTY INFORMATION

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July 12, 2004

Kathleen Self
Children's Advocacy Institute
University of San Diego School of Law
5998 Alcala Park
San Diego, CA 92110

Dear Ms. Self,

I nominate The Orange County Register series, Toxic Treats, for your consideration for the Price Child Health and Welfare Journalism Award. The series, which ran April 25 through April 30, represents excellent journalism and advances the understanding of child health issues. The series raised public awareness internationally of a problem affecting young children and has led to significant change.

The series showed how government health officials knew since 1993 that parents were feeding poisonous imported candy to their children. They knew the potential effects -- the learning disorders, the stunted growth, the brain damage. They knew the community being hit the hardest was one that was already overwhelmed with poverty and language barriers. But they did not release their research.

A two-year investigation found alarming levels of lead in Mexican candy. The Register uncovered 1,500 previously confidential government tests, and one of every four results was above the danger limit. We conducted our own tests of candy, ingredients and children who live in a Mexican village so toxic that 92 percent of them had tainted blood. We followed the toxic treats from seeds to store to Sacramento, where the problem has been largely ignored.

The series prompted action before a word was published. Prodded by questions from Register reporters, the FDA and California Department of Health Services issued their first candy warnings in years. The FDA announced plans to lower its regulatory levels for candy and advised the public to avoid the treats altogether. When the story hit, candy makers immediately pledged to adopt safer practices. The market for imported candy plummeted. The U.S. and Mexico announced initiatives to finally try to eliminate lead from candy. And the California Attorney General filed a lawsuit against some 30 companies to get lead out.

The stories - published in Spanish and English and posted online with an interactive Web site -- were picked up by media in Mexico and across the United States. Flooded with requests, the Register handed out 50,000 additional copies of its "Toxic Treats" poster showing photos of candy with a history of high lead results to schools, health departments and parents across the country. The Los Angeles Unified School District in June announced plans to print nearly a million copies to distribute to schools and students.

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Contributers to the story include reporters Jenifer B. McKim, Valerie Godines, William Heisel, Keith Sharon and Hanh Quach, photographers Ana Venegas and David Fitzgerald, graphic artist Molly Zisk and editors Mark Katches, Cathy Lawhon and Rebecca Allen. We appreciate your interest in our series and thank your for your consideration.

Sincerely,

Ken Brusic

SUNDAY
April 25, 2004

THE ORANGE COUNTY
REGISTER

SPECIAL INVESTIGATION | DAY 1

HIDDEN THREAT

Story by JENIFER B. McKIM, KEITH SHARON and WILLIAM HEISEL
Photos by ANA VENEGAS
THE ORANGE COUNTY REGISTER

The poison arrives in an ice cream truck, "Happy Birthday to You" crackling from a single speaker wired to the roof.

On this street in Anaheim, the neighborhood kids drop their bikes and balls and make a beeline for their mothers to beg for money.

Kids dart toward the truck from between parked cars. Moms give a quick thought to the dangers of traffic.

Soledad Lopez, a Mexican immigrant who is as cautious as any mom on this block, never once considers the dangers *inside* the truck.

The ice cream man rests his elbows on the counter. Lopez's daughter Diana, a pigtailed 2-year-old, scans the bright pictures of treats. She doesn't want Drumsticks, Fudgsicles or Bomb Pops. Diana wants Mexican candy.

Lopez has no idea that some of the imported candy on this truck is so laced with lead it can cause memory loss, behavioral problems and kidney damage if her daughter eats it regularly.

The California Department of Health Services has documented more than 1,500 tests of Mexican candy since 1993 – and one in four of those results has come up high for lead.

But the state has withheld this information from parents like Lopez, children like Diana and vendors like the ice cream man.

By the time the truck rolls down Diana's street in the spring of 2000, only a handful of people in state offices in Oakland and Sacramento are aware that the little girl's favorite candy has tested high for lead seven times.

Until today, the state's testing records have

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State kept tests from parents

FROM PAGE 1

not been made public.

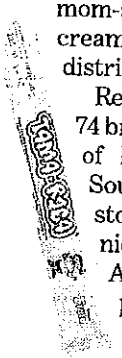
Orange County Register reporters spent two years investigating the problem: from the chili mills of Aguascalientes, where dangerous levels of lead exist in key candy ingredients; to the makeshift factories of Guadalajara, where unsafe manufacturing practices are routine; to the dirt-floor poverty of Santa Fe de la Laguna, where a village has become contaminated making packages for candy.

But perhaps the most troubling reason lead-tainted candy keeps poisoning children is that government regulators do next to nothing to stop it.

The Register obtained federal and state records that show:

- 112 brands of candy – most coming from Mexico – registered dangerous levels of lead over the past decade. In 101 cases, no action was taken against the candy makers. The results were kept confidential, and the candy remained on store shelves.
- Repeated high tests aren't enough to set off the state's warning system. California health officials issued seven public-health advisories for candy but have done nothing about 37 brands that tested high multiple times. One, the Tama Roca lollipop, tested high 28 times with no action.
- Even when preliminary tests reveal candy samples with dangerous lead levels, regulators haven't always followed up with more testing.
- The state makes no effort to notify candy companies in Mexico when their brands test high enough to harm a child. Candy maker after candy maker said they had no idea regulators had found lead in their products.

The mishandling of this public-health threat has left supermarkets, candy shops, mom-and-pop stores and ice cream trucks as unknowing distributors of toxic treats.



Tama Roca
Tested high 28 of 143 times

Register reporters bought 74 brands on the state's list of lead-laden candies in Southern California stores – from small ethnic markets in Santa Ana and Anaheim to places like Food 4 Less, Smart & Final, Ralphs, Vons and Gigante. Most of these same candies are widely available from the Oregon border to Mexico.

The Register tested 180 candy and wrapper samples and found high lead in 32 percent of the brands – including some brands regulators haven't bothered to test. Candies were counted as high if they met or exceeded the state's level of

concern for lead.

"Children are eating poison," said Leticia Ayala, who works for the San Diego-based Environmental Health Coalition, a nonprofit group that has urged the state to better regulate Mexican candies. "They can't just find that there is lead in candies and sit on the data. ... Parents need to know."

The Mexican government has had little success curbing the problem on its side of the border, and the country's top health official downplayed the dangers of candy in public statements made earlier this month. Other Mexican officials say they have been trying to regulate candy makers over the past few years – including testing candies and wrappers – and believe that the situation is improving. However, government resources are limited, and many candy makers operate without oversight.

In the United States, no one has a complete grasp of the problem. Officials from several other states where Mexican candy is sold said they conduct few, if any, candy tests. At the same time, hundreds of thousands of children at risk for lead poisoning are not screened by doctors each year, including at least 100,000 in California.

California is seen as a leader in testing candy. In 2002, the state worked with the U.S. Centers for Disease Control and Prevention to publish a groundbreaking report on the effects of lead-tainted treats.

But the state hasn't capitalized on its findings. Instead of a methodical effort to track bad candy, the health department keeps poor records of its own tests, doesn't log results from other agencies, and discourages county health workers from sending more candy samples for testing, records show.

Chaca Chaca
Tested high 17 of 38 times

Just last month – after repeated questioning from the Register – the state issued its first health advisory about candy in nearly three years, targeting Chaca Chaca, a popular treat made of apple pulp and chili powder.

But problems with Chaca Chaca were not new. The candy tested high 17 of 38 times from February 1998 to February 2003, with no state or federal action.

And the cases of lead-poisoned children connected to candy have piled up.

The state has estimated that as many as 15 percent of children in California who are poisoned by lead have eaten Mexican candy. That would mean about 3,000 children during the last three years.

State health workers say that regulating the fast-growing $620 million Mexican candy industry is fraught with problems because they have too few resources, they have no jurisdiction in Mexico, and the amount of lead in candy varies from batch to batch. The state also maintains that there are still bigger battles to fight with lead paint.

"We have a lot more responsibilities than looking for lead in candy," said Jim Waddell, chief of the state health department's Food and Drug Branch.

That does little to help children like Diana.

All spring, the 2-year-old leans into the ice cream truck and points to her favorite – Pelon Pelo Rico, a sug-

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ary candy with a chili kick.

Her mother opens the wrapper and places the poison into Diana's tiny hand.

HISTORY OF HAZARDS

Lead has been a documented health hazard for centuries – often called a silent epidemic because symptoms can go unnoticed.

By the 1930s and '40s, widespread childhood lead-poisoning cases prompted the paint industry to reduce lead in its products.

It wasn't until the 1970s that advocates and lawmakers launched an extraordinary public-health campaign nationwide with new laws and public awareness.

Lead was banned from house paint in 1978 and from gasoline in 1986. Today, lead-paint disclosures accompany the sale of all homes, and automobiles have been engineered to run on cleaner fuel.

As a result, the percentage of U.S. children with elevated blood-lead levels dropped from 88 percent in the 1970s to 2 percent in 2000. Statewide, the numbers have dropped dramatically from previous decades. But last year stricter reporting requirements went into effect, and the overall number of lead-poisoned children rose.

In Orange County, the number of lead-poisoned children has risen four out of the past five years. In 2003, candy was suspected as a source of lead poisoning nearly as often as paint, county records show.

About 90 percent of lead-poisoning victims in Orange County are Latino children. Statewide, the number is 75 percent.

Even at low levels, lead can impair intelligence. Researchers at Cornell University found a 7.4-point drop in IQ among children who were exposed to less lead than Diana.

"There cannot be a reasonable justification for having lead in children's candy," said Richard L. Canfield, a Cornell professor who helped direct the 2003 study. "It simply should not be detectable, and, if it is, we need to find out the source, find out how it's getting in there and take the appropriate measures to get rid of it."

KEEPING CHILDREN SAFE

A multilayered group of health-care workers and regulators tries to protect children from lead.

On the front lines are doctors and nurses, who screen at-risk children during annual physicals.

When they find high lead levels in the blood, doctors classify that child as a lead-poisoning case. County health workers then converge on the home, looking for the source of lead.

Investigators gather up likely culprits – paint chips, ceramic pots and candies – and send them to labs.

The state health department oversees the lead-prevention effort. Twelve years ago, the department created the Childhood Lead Poisoning Prevention Branch, a $20 million-per-year program based in Oakland.

The prevention branch works with another arm of the health department – the state Food and Drug Branch – to conduct tests and issue health advisories and recalls.

The job of testing candy has fallen to the state mostly because no one else does it. Part of a network of federal agencies responsible for the safety of the nation's food supply, the U.S. Food and Drug Administration does only limited testing of candy.

When dangerous lead levels are detected, advisories are supposed to be issued and bad candy is supposed to be ordered off shelves.

There have been success stories. Candy in clay pots –

tamarind jam contained in a tiny ceramic tea cup – is harder to find since the state warned the public about four of these brands. In some cases, the state has induced candy makers to change manufacturing methods.

But in lead prevention, breakdowns overwhelm successes.

MISSED OPPORTUNITIES

The health department has failed to establish clear standards for dealing with unsafe levels of lead. The state considers it a concern when candy registers 0.2 parts per million lead but rarely acts when candies surpass this threshold.

State officials have been reluctant to take candies off store shelves, saying it is impossible to single out candy as the source of lead without dogged follow-up testing and repeated high results.

The Register found that regulators often don't even try to build a case against candy.

Seventeen brands tested high in their only tests, but there were no follow-ups, records show.

Ten of Mexico's biggest candy makers – with brand names such as Montes Tomy, Limon 7 and Pico Diana – have had repeated high lead tests but have not faced federal or state sanctions.

One candy, Lucas Limon, tested high seven times out of seven tests in federal labs, but neither the state nor FDA acted.

The FDA has been even more unwilling than state regulators to go after candy makers.

"These are kind of borderline levels that we're seeing in the candy," Terry Troxell, FDA's director of the Office of Plant and Dairy Foods and Beverages, said in March. "You can imagine that if we took action you would hear from Mexico that we're being too stringent."

But lead levels found in candy are not borderline, the Register found.

More than 80 percent of the state and federal high test results show levels so dangerous that eating one piece could push a child past the FDA's recommended daily limit for lead.

Shortly after Troxell was asked about the agency's history of inaction, the FDA issued a statement April 9 telling parents to avoid Mexican candies. The message mentioned no candies by name.

POISONING CASES MOUNT

In California, state health officials have no hard-and-fast rules for taking action – and no clear strategy.

The history of Pelon Pelo Rico, Diana's favorite candy, underscores the inadequate regulatory efforts.

The candy tested high 11 of 59 times in government laboratories since 1994. It was suspected in a string of poisoning cases along the way, records show. But parents received no warning.

In 1994, investigators suspected that Pelon Pelo Rico poisoned two children in Los Angeles County. Then, in 1999, it turned up in connection with a lead-poisoned San Joaquin County child.

Diana began eating the candy in 2000. She ate it for a year before she was diagnosed as a poisoning victim. After investigators ruled out the usual suspects of lead paint and tainted soil, Pelon Pelo Rico taken from her home was tested in 2001. It was two times higher than the state guideline for lead.

That same year, tainted Pelon Pelo Rico was pulled from the home of a poisoned Sacramento boy. Investigators told the boy's mother candy was the likely cause.

To date, no action has been taken against the maker of Pelon Pelo Rico.

Joe Courtney, chief of care management and research for the lead-prevention branch, said there isn't enough evidence to prove Pelon Pelo Rico is dangerous because it often tests clean.

"You can't really look at Pelon Pelo Rico and say they have a problem," Courtney said.

Company officials say the candy is safe.

"I don't worry about lead in Pelon Pelo Rico," said Javier Arroyo, a spokesman for Grupo Lorena, the company that makes the candy, explaining that its own tests haven't shown high lead.

The candy has proved vexing. After the state conducted its tests, the Register tested 10 samples of Pelon Pelo Rico, and all were clean.

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More breakdowns than successes

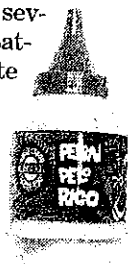
FROM PAGE 3

Arroyo said the company has been refining its manufacturing process and has made more changes in response to questions from the Register.

When pressed about how many high tests on a single candy brand it would take for the state to issue an advisory, Pat Kennelly, chief of the food-inspection unit, said he would need around 90 percent high tests from several parts of the state. Later, he admitted the state has no real threshold.

But parents say the rate of high tests for candies like Pelon Pelo Rico merits more aggressive action.

"They (state officials) aren't doing anything," said Maria Perez of Sacramento, whose son Jesus was poisoned in 2001. His blood-lead level shot up to nearly three times the federal guideline after regularly eating Pelon Pelo Rico and other Mexican candies. "If the candy has lead, they should make sure it doesn't come here. ... What else has to be done?"



Pelon Pelo Rico
Tested high 11 of 59 times

It's not that simple to penalize candy makers, Kennelly said.

"If we don't have that statutory threshold met because we don't have consistently high lead levels in the products, then you've got to test every single (sample) that you pick up at the store," Kennelly said. "And the resources to do that just really are nonexistent."

ANAHEIM GIRL POISONED

Pelon Pelo Rico doesn't look like poison.

Its plastic dispenser has a picture of a wild-eyed cartoon figure in a grass-green skirt.

It tastes like someone spilled hot sauce in a sugary fruit roll. When Diana pushes the bottom of the dispenser, out oozes tasty goo.

The little Anaheim girl in the pigtails sucks on the candy like a pacifier.

She can't taste the lead. But by eating enough of it over time, it can travel from her bloodstream to her bones, then to her soft tissue, where it can wreak havoc.

Diana begs her mother every day when she hears "Happy Birthday" tinkling from the ice cream truck. Two or three times a week, Like a scene from a science-fiction movie, white-suited health workers with protective masks show up at Lopez's Anaheim apartment. They scrape paint off walls. They brush up dust from window sills. They confiscate candy from the cupboards.

Diana is in danger.

Worse for Lopez, the source of the danger is somewhere in their home. Cesar Perez, Diana's father, feels pangs of guilt. A furniture painter, he thinks he must have contaminated Diana by touching her with his paint-stained hands.

Perez thinks his daughter is going to die.

STATE STONEWALLING

The state lead-prevention branch is ill-equipped to deal with nontraditional lead sources such as candy, e-mails and memos between health officials show.

Local health workers are discouraged from sending candy for testing after it

is confiscated from homes of lead-poisoned children. Other health workers are stonewalled.

In one 1994 case involving a Santa Ana child, an Orange County health worker noted the problem in dealing with a counterpart in Sacramento:

"She said that she discourages our focus on the candies and that if we have the state lab test candy, it will delay the testing of soil and paint, which she considers more important," Dianne Martinez wrote in her notes.

Martinez, who honed her powers of observation as a jail inspector, persisted and got the state to test three lollipops found in the home. All were high in lead.

The state urged other county health workers not to send candy, saying there were no resources to test more.

But candy samples collected by county workers kept coming, a backlog of untested candies accumulated and calls from the field went unheeded, records and interviews show.

In July 2002, Sigrid Anderson, a Fresno County health worker, sent a fax to the state with a picture of Chaca Chaca, a candy named for the sound a train makes.

Anderson's fax contained one simple question: "Is this candy hot?"

The answer should have been yes. State tests had shown the candy to be high in lead eight times since 1998. But Anderson didn't hear that answer – even after the candy registered high nine more times in the next few months in state and federal tests. A state toxicologist told regulators in a June 2003 e-mail that Chaca Chaca proves to be "nearly always positive from virtually every source we test."

Nine more months passed before the state took action.

With dozens of other candies, silence and confusion were the standard operating procedure.

In November 2002, a lead-prevention branch clerk used exclamation points to punctuate an e-mail to her boss about the barrage of candy-related calls she was getting from around the state. One health worker called from Sonoma County.

"He read me a list of the candies to be stuffed in a piñata, and two-thirds of them were ones we have tested and have come back elevated," the clerk wrote. "I don't know what kind of information I should be giving out."

Two months later, Jeff Lane, an Orange County environmental-health specialist, found two other candy brands in the homes of lead-poisoned children.

After county tests showed the candy to be more than twice state guidelines for lead, he asked the state for advice. He called. He e-mailed. He wrote a letter.

The state hasn't answered.

"I just want to know what we should do," Lane said.

One of the candies Lane found, Montes Damy, had tested high before.

COMPANIES IN THE DARK

Montes Damy
Tested high
2 of 4 times

Internal e-mails and interviews with state officials show a health department paralyzed by fear of lawsuits, although no candy company has sued the state.

"The company will come back with their own test results and sue us," Courtney said.

In a May 2001 e-mail, Courtney warned other state health workers to keep five pages of high-lead candy results confidential. Courtney noted that he already had been contacted by attorneys.

The lawyers for Pelon Pelo Rico were among them, records show.

"I would like to stress that these data are still in draft form and are not for further distribution," Courtney wrote. The state never did release the results.

This fear explains in part why state and federal regulators fail to communicate with the companies that make tainted candies.

One company, Dulces Vero, had to file a Freedom of Information Act request to find out about FDA testing of its own products. The Register found 49 cases where Vero candies tested high in government labs.

Nearly every company contacted by the Register said they were surprised to hear their products contained dangerous lead levels.

Virginia-based food giant Mars Inc. bought Mexican brand Lucas in 2001. Mars says it is so committed to food safety that it doesn't even allow lead-based materials into its factories and requires suppliers to certify that all ingredients are free of lead.

Mars officials said they learned from the Register that Lucas candies had tested high at least 17 times before Mars bought the Lucas brand.

"I was quite surprised," said Tim Anh, director of quality services for Masterfoods USA, Mars' snack-food subsidiary. "We know the FDA is monitoring this category of products, and we would have suspected if there was an issue they

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would have put us in detention. ... We have no issues. The product just goes right through."

CANDY A LOW PRIORITY

Courtney, the state's point man for the lead program, has been a passionate advocate for kids and, at times, ineffective.

He has seen the prevention branch chipping away at a problem that might take a sledgehammer to beat.

He works without a secretary in a department filled with temporary employees and interns. He spends 5 percent of his time on candy.

When the lead-prevention branch opened, candy wasn't on the forms nurses used to evaluate environmental hazards.

"Nobody was even looking at candy until we started testing it," Courtney said.

Courtney told the Register in earlier interviews that it was unacceptable if even one in 10 candies tested high. He has pushed for more testing, and he has tried to get more funding.

In an e-mail to a counterpart in April 2002, Courtney expressed frustration that candy tests were not being confirmed quickly. He wanted to use a private laboratory to alleviate the backlog and was told no.

"The children who are being affected are those who don't need additional disadvantages in their lives," Courtney said.

But Courtney also has dismissed positive lead tests and has praised the industry for making big strides, even as candies continue to test high.

Courtney is one of three top health officials who said he wouldn't allow his children or grandchildren to eat certain Mexican candies that have never been the subject of health advisories. Still, Courtney says, he can't just publicly condemn them.

"We can't tell people not to eat them. It would seem culturally insensitive," Courtney said. "We are still working on how to give out a message that is helpful and yet not overly broad and also not so vague."

Officials at the lead-prevention branch continue to struggle with their message.

After repeated questions, Courtney's bosses acknowledged that all Mexican candies pose a risk to children.

"As a policy, we have said this is an issue of eating something healthier and avoiding these candies," said Dr. Valerie Charlton, the lead-prevention branch's director. "It's the same with lead paint. We don't know that a person's specific house is an issue but we are raising an awareness about older houses in general."

But the lead-prevention branch – which lists as a top priority keeping the public informed about lead dangers – has nothing on its Web site about Mexican candies.

LESSONS LEARNED?

Today, when the ice cream truck with its "Happy Birthday" song stops in front of Lopez's apartment, she gathers up Diana and holds her close.

The other kids rush to the street, where a dozen candies that have tested high are available on the truck.

Diana isn't allowed to eat her favorite candy anymore. Lopez feeds her daughter more fruits and vegetables.

But sometimes, Diana still wants Pelon Pelo Rico.

It has been almost three years since Diana's blood-lead level shot to 25 micrograms and investigators focused on candy.

Lopez and Perez still fear the effects of lead on their daughter. At 25 micrograms, lead has the potential to stunt growth, affect hearing and damage the nerves.

Her parents may never know if her development was slowed by lead. Experts say lead can live in a person's system for 25 years, and the damage can be permanent.

The lead in her blood stayed at a dangerous level for more than two years before it dropped to 8 micrograms in her last test.

Today, her parents look at her with a wary eye and some lingering guilt.

"If I hadn't given her those candies, she wouldn't have had that problem," Lopez said.

They wonder what effects the lead had on her developing brain. They watch her as she does her homework. Their kitchen table is anchored by a bowl of fruit. The only candy in sight is M&Ms.

Is Diana easily confused? Can she focus like the other children? Does she retain information? Should her IQ be 20 points higher than it is?

Like the parents of the estimated 3,000 California lead-poisoning victims who have eaten toxic treats, Diana's parents don't know those answers.

So far, teachers say Diana, who just celebrated her 6th birthday, appears fine.

The state's Lead Poisoning Prevention Branch, however, is not getting better.

Pelon Pelo Rico is part of a growing list of candies that have a history of lead but have not prompted health advisories or any other state warnings for parents.

One candy, Tama Roca, has tested high for lead 28 times in 11 years – more than any other candy.

Los Angeles County sent out an advisory against Tama Roca in 2002. Yet the state did nothing.

Another candy, Tablarindo, has tested high 11 times with no state action.

Pelon Pelo Rico, Tama Roca and Tablarindo and at least 52 other candies that have tested high for lead have an ingredient in common that the state has not investigated.

Chili.

Tomorrow: A key source of lead in candy can be found in the chili mills of Mexico.

Staff writer Valeria Godines contributed to this report.

CONTACT THE WRITER:
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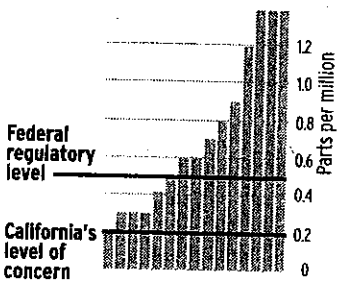
How the tests were done

The Register sent candy and wrappers to Forensic Analytical, the lab used by the state, to determine lead content.

Testing candy for lead

The Register tested 180 samples of candy and wrappers bought in Mexico and Southern California. Fifteen samples of candy tested positive for lead at these levels:



2 wrappers also tested high

Over the past 10 years, state, county and federal agencies have found at least 261 candy samples and 139 wrappers have tested high

California's level of concern: **0.2 ppm**

Federal regulatory level: **0.5 ppm**

102 candies tested from 0.2 ppm to 0.49 ppm

71 candies tested from 0.5 ppm to 0.99 ppm

62 candies tested from 1 ppm to 4.9 ppm

26 candies tested 5 ppm or higher

Source: O.C. Register database analysis

MOLLY ZISK / The Register

By JENIFER B. McKIM and WILLIAM HEISEL
THE ORANGE COUNTY REGISTER

The Orange County Register began buying and testing Mexican candy in October 2002.

A total of 180 tests of candies and wrappers were conducted on 25 brands at laboratories.

"Unsafe" lead levels are considered to be those that meet or exceed what state regulators call the level of concern.

The California Childhood Lead Poisoning Prevention Branch sets unsafe lead levels in a standard size (30 grams) candy at 0.2 parts per million and above. The FDA sets that level at 0.5 ppm.

Wrappers must register 600 ppm lead for the state to consider them toxic.

Ultimately, the Register testing found eight brands of candies at unsafe levels 17 times. That means 9.4 percent of the tests came back positive, and 32 percent of the brands had at least one positive test for lead. Federal, state and county laboratories over the past decade have found lead in one of

SETTING UP THE TEST: Vials like the one chemist Janyce Pham holds are used to test candy and wrappers at Forensic Analytical in Hayward. The Register spent about $5,000 testing candy. Test turnaround time was about five days. Photo: Omar Ornelas, for the Register

four candy and wrapper samples tested and in 46 percent of the brands.

The Register sent most of its samples to Hayward-based Forensic Analytical, a laboratory that tests candies for the state.

Testing experts were consulted to make sure Register procedures posed no risks of cross-contamination and that candies were stored and handled properly.

Candies were kept at room temperature at the Register building.

Each candy was placed in a resealable plastic bag and labeled with the brand name, place and date of purchase.

Samples were boxed and sent to Forensic Analytical, typically within days of purchase.

The laboratory used graphite furnace methods, the same method used in state tests.

Here's how it worked:

One gram of each candy sample was poured, packed or smeared into a centrifuge tube.

Deionized water and nitric acid were added. The candy then sat for hours, stewing on a sort of hot plate until it was reduced to liquid.

The samples were filtered into smaller, numbered vials to be put in the graphite furnace atomic absorption spectrometer.

A mechanical arm dunked a millimeter-wide straw into each vial, drawing some of the melted candy for testing.

The straw then released the test fluid onto a tiny graphite pan, which heated to a red-hot 1,600 degrees, the temperature at which the furnace's computer was able to register the lead content.

Anything above 0.2 ppm lead was a "hit."

It has taken the state months to get testing done on its candy samples – sometimes as long as 18 months.

Forensic Analytical produced results for the Register typically within five days.

The Register spent about $5,000 to test candy – part of a $9,000 testing initiative for this series.

All testing inventories and test results for the Toxic Treats series are available at **www.ocregister.com/lead/**

Staff writer Hanh Kim Quach contributed to this report.

Where lead goes in the body

Lead is a metallic element that is toxic to the brain and nervous system. The body mistakes lead for calcium. If the body does not contain enough calcium and iron, it is more likely to absorb lead. Lead poisoning occurs slowly, resulting from gradual accumulation after repeated consumption.

- Lead that is swallowed is absorbed into the blood from the small intestines.
- 15 percent of ingested lead is absorbed into soft tissue.
- The other 85 percent is absorbed into the bones.
- Lead in soft tissues can be flushed out in months, but in bones, it takes years.
- Some lead damage is irreversible.

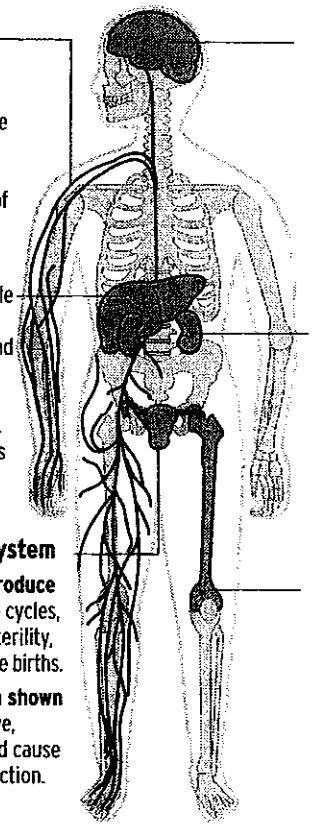
The bloodstream distributes oxygen throughout the body. Lead interferes with the blood's production of hemoglobin, which in turn disrupts the flow of oxygen to the tissues, causing anemia.

The liver is responsible for assembling and dismantling proteins and making amino acids. It breaks down old blood cells and recycles iron. Lead inhibits the liver's ability to produce proteins.

The reproductive system

In women, lead can produce abnormal reproductive cycles, menstrual disorders, sterility, stillbirths and premature births.

In men, lead has been shown to decrease sexual drive, increase impotence and cause abnormal sperm production.



The nervous system in a child is still developing to about age 7. Lead has been found to delay mental development, lower IQ, impair hearing and speech and cause depression.

The kidneys purify the blood before it is distributed in the body. The kidneys are not effective in removing lead from the blood. Kidney damage and failure can result.

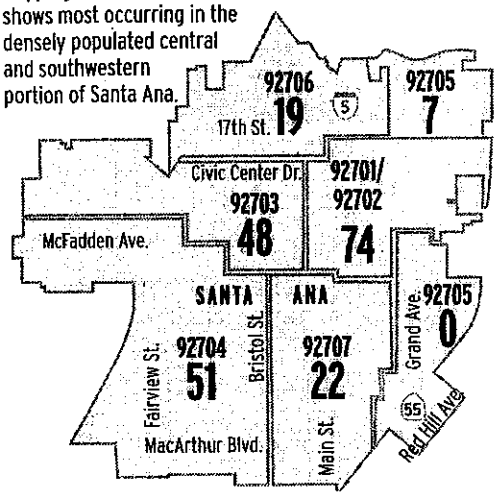
The bones store lead, where it can remain for years and slowly leach into the blood. When a woman becomes pregnant, the body transfers lead instead of calcium from the bones to the fetus.

Sources: www.lead-poisoning-resources.com; Register research

MOLLY ZISK / The Register

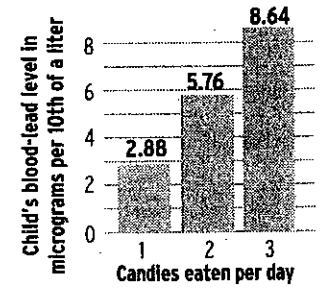
New cases in Santa Ana throughout the city

Mapping lead cases from 1992 to 2003 by ZIP code shows most occurring in the densely populated central and southwestern portion of Santa Ana.



The effects of lead

Eating candies with lead over time significantly boosts a child's blood-lead level.

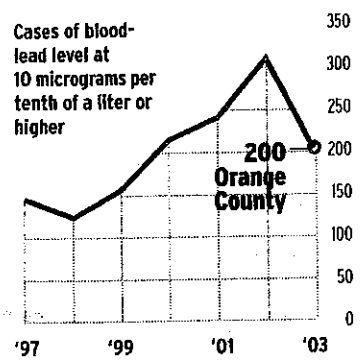


- The FDA estimates that for every microgram of lead ingested, a child's blood-lead level goes up by 0.16 micrograms per tenth of a liter.
- This shows a candy with 18 micrograms of lead – the median lead level in candies that tested high in state and federal labs.

MOLLY ZISK / The Register

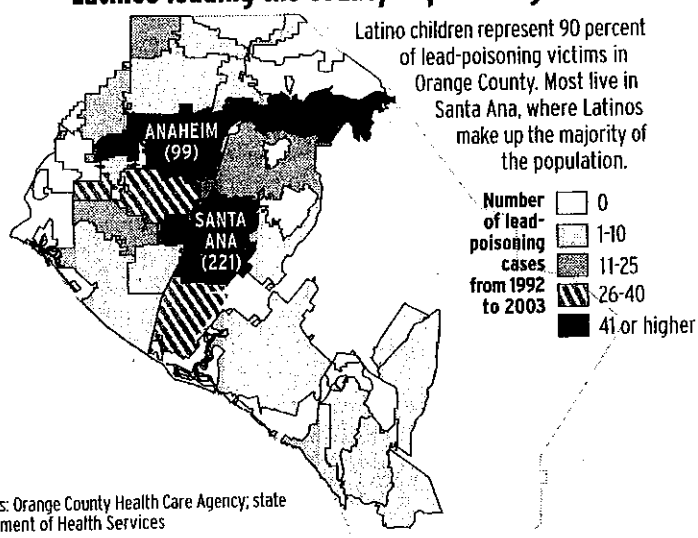
O.C. lead-poisoning victims

The number of Orange County children with lead poisoning increased from 1998 to 2002 before dropping in 2003. Statewide numbers have declined dramatically but began to rise in 2003 due to stricter reporting requirements.



Latinos leading the county in poisoning

Latino children represent 90 percent of lead-poisoning victims in Orange County. Most live in Santa Ana, where Latinos make up the majority of the population.



Sources: Orange County Health Care Agency; state Department of Health Services

SWEET INNOCENCE: For birthday girl Elva Alexandra Cardona, 2, right, the Pelon Pelo Rico she enjoys with cousin Giselle Yanez, left, is just a sugary treat. But the candy, which has tested high for lead 11 times, and others like it have increasingly been linked to poisoning of California children.

MONDAY
April 26, 2004

THE ORANGE COUNTY
REGISTER

SPECIAL INVESTIGATION | DAY 2

THE CHILI FIELDS

Chilies start out safe. But by the time chili powder reaches the Mexican market, it can be tainted with lead.

HARVEST: Fields like this one outside Ojo Caliente, Zacatecas, Mexico, produce chilies that are used throughout the country. The chili field is the first step in a process that ultimately leads to contaminated candy.

SEE PREVIOUS STORIES, CANDY- AND CHILI-TEST RESULTS AND MORE INFORMATION ONLINE AT WWW.OCREGISTER.COM/LEAD/

Story by VALERIA GODINES and JENIFER B. McKIM
THE ORANGE COUNTY REGISTER
Photos by DAVID FITZGERALD
SPECIAL TO THE REGISTER

This seems an unlikely place to look for the lead in candy that poisons children – here, where a miller opens a burlap bag, unleashing a river of maroon dried chilies into a chute.

At this mill in Aguascalientes, Mexico, the grinders pound for a few ear-splitting minutes. Then out spills the soft, red powder that will smother Mexican treats.

Here is exactly where the search should begin.

U.S. health inspectors have looked at many things to uncover the origins of lead in candy. They've tested the candy wrappers. They've tested the clay pots some candy comes in. They've tested the candy itself.

But neither U.S. nor Mexican health agencies have done compre-

SEE CHILI • PAGE 2

Few in Mexico realize dangers

FROM PAGE 1

hensive testing on chili, even though it is the ingredient used in most candies testing dangerously high for lead.

The Orange County Register hired a laboratory to conduct 55 tests of fresh, dried and ground chili bought in Mexico. More than 90 percent of the chili-powder samples tested high for lead, shocking Mexican federal and state health officials, who say they will investigate.

U.S. Food and Drug Administration officials were taken by surprise when told about the Register's findings and also said they would look into the matter.

To find how lead gets into candy, the Register traced the trail backward from stores to the fields of Zacatecas, collecting samples along the way – including soil, well water, fresh chilies and chili powder. Many candy companies get chili from Zacatecas, which produces nearly half of Mexico's dried chili.

The Register focused on *guajillo* chili, a 6-inch, plump green pepper. The chili, which turns red when it's dried, is used to give candy a sweet-tart kick. Fresh chilies the Register tested straight from the farm contained no lead. But by the time chili powder reaches the public market, where some candy companies buy their chili, much of it is tainted.

In many cases, half a teaspoon is enough to poison a child.

Lead, which harms young children most, can cause irreversible damage. It can lower intelligence and cause stomach pain and kidney damage. And lead poisoning often goes undetected because the symptoms can be caused by many other things.

Mexico, which only began phasing out leaded gasoline in the mid-1990s, is about 30 years behind the United States in preventing lead poisoning. There is no routine lead testing of children.

Tough lead regulations have been passed, but they are rarely enforced. Some advances have been made in raising general awareness of lead in ceramics. But when it comes to chili, few in Mexico know of the dangers.

As with lead in candy, there is no single source of lead in chili. But dirt and debris are major factors, the Register found.

To understand how lead gets into chili, you have to start at the beginning, in the farm fields, and follow the pepper as it makes the journey to the candy plants.

FARMS NOT THE CULPRIT

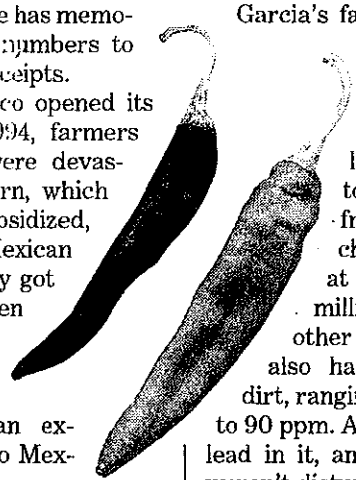
Jose "Pepe" Garcia Saldivar, a farmer in Zacatecas, has dealt with plagues, drought, floods and fungus. But lead?

He walks through his 5 acres of chili plants about 20 miles outside Ojo Caliente one September afternoon. Pests have damaged some of the guajillo crop, and a heavy rain has hit it hard. Garcia crouches to point out the damage. Then he looks up.

"If you do find any lead here, it would be good for us to know so we can do something about it," he said.

Garcia, 49, didn't choose farming. He was born into it, following his father's path. He doesn't know how to read or write, but he has memorized enough numbers to understand receipts.

When Mexico opened its markets in 1994, farmers like Garcia were devastated. U.S. corn, which is heavily subsidized, flooded the Mexican market. It only got worse when China, where labor is much cheaper, began exporting chili to Mexico.



"The buyers, the middlemen, used to come here and buy at a good price," Garcia said. "Now, the crops don't sell. It isn't worth anything. The government allowed this free trade, and it hasn't benefited us."

On this afternoon, Garcia, who usually wears a flannel shirt, jeans and work boots, is dressed up. He wears a beige cowboy hat, ironed shirt and nice pants. He wants to look professional when he sells his chili.

He takes his guajillo to a dryer about 10 miles from his farm. Despite making his best pitch, he loses money on his crops.

Again.

This is the fifth year in a row that's happened.

After he has sold his chilies, Garcia has no idea where they will end up. Maybe in a salsa bowl at a restaurant. Maybe in a family's kitchen. Maybe in a lollipop in the hand of an Orange County child.

Fresh chilies picked from Garcia's farm, as well as those from four other farms, showed no lead in laboratory tests. Soil from Garcia's chili field tested at 16 parts per million lead. Four other guajillo farms also had lead in the dirt, ranging from 18 ppm to 90 ppm. All soil has some lead in it, and lead experts weren't disturbed by the levels in these samples.

"It is unlikely that lead gets into fresh chilies in the fields because the vegetables and fruits generally don't take up metal from the soil," said Paul Bosland, a pepper expert from New Mexico State University. "Even if lots of lead was present in the soil, the leaves would absorb it, not the fruit."

But there are other ways lead finds its way into chili powder during the journey to the candy factory.

SELLING CHILI

Shortly after dawn, they arrive at the dryer outside Ojo Caliente. A parade of

beat-up pickups driven by tired chili farmers from all over the region rumbles through the concrete gate and parks on the weighing machine.

Cresencio Ortiz, wearing a belt buckle engraved with a fighting rooster, is waiting for them.

The 71-year-old flashes a big smile when a farmer approaches. Ortiz pulls out a thick wad of bills and begins peeling. In one minute, he becomes the owner of the chilies loaded in a truck.

Ortiz, a father of seven, is the middleman, buying the chilies from the farmers and then selling them to merchants or millers. He works at the dryer, which has 120 clients, some with two acres of chili and others with more than 100 acres.

It's high season on this September morning, and the 15 dryers in the Ojo Caliente region are in full swing. Men dash from one chili mound to another, comparing prices and quality. Threatening rain clouds make things more urgent, with workers yelling to get out the tarps to cover the chilies on the ground.

Drying season in Zacatecas has its rituals. It is a man's world. Middlemen from all over the state who haven't seen one another in eight months are happy to be reunited. They play cards to pass the time while the chilies dry. They share a smoke, sometimes a beer. They talk about their children, their grandchildren.

The dryers all look alike at first glance – concrete courtyards, some the size of football fields, surrounded by giant walls. What happens behind the walls depends on one important thing – where the chili is headed.

Chili heading directly to the United States or to Mexican companies with huge sales typically are cleaned thoroughly, inspected individually and packed into clean boxes. But tours of five dryers in Zacatecas revealed something quite different for chilies destined for small-time operators or local markets. They didn't get inspected individually. They didn't get packed into clean boxes. And they certainly didn't get washed.

It's cold at the dryer outside Ojo Caliente on this morning, but the men keep warm near the 10-foot tun-

SEE **CHILI** • PAGE 3

PICK OF PEPPERS: Chili products are for sale at markets like this one in Aguascalientes, Mexico. Some sacks contain a mix of sugar and guajillo powder used in sweets.

FROM PAGE 2

nels where hot air blasts over the chilies for 24 hours, sending a delicious smell into the air. Officials at the dryers say the machines are powered by unleaded diesel or natural gas, not leaded gas.

When the chilies emerge on the racks, they are dried a deep, rusty red. The men spread the chilies on the concrete. They put the nice-looking chilies in one bunch and the bruised in another. The chilies often stay on the ground for 24 hours.

They shovel the chilies into sacks. Then the workers, wearing their boots, climb into the sacks and stomp to pack them tight.

"Sure, it's not very clean," Ortiz said. "But you won't eat it like that. You'll clean them first."

Ortiz echoes a common sentiment in Mexico, where the burden of clean produce falls to the consumer. Antibacterial solution is sold alongside fruits and vegetables in markets across the country.

At this dryer, dirt clings to some of Ortiz's dried chilies, as well as to chilies in dozens of other piles.

Two of Ortiz's whole guajillos from the dryer were tested at a laboratory. One came up clean, another had 0.5 ppm lead.

The California guideline for lead in candy is 0.2 ppm. The FDA guideline for lead in most food is 0.25 ppm, but there is no standard for chili or other spices.

However, Richard Jacobs, a specialist at the FDA who has investigated lead in candy for years, said lead in food ingredients should not exceed 0.1 ppm.

Of three other whole guajillos from different dryers, two tested positive for lead.

On 18 additional guajillo samples, the laboratory rinsed the chilies and tested the runoff to determine whether dirt clinging to the chilies might be the source of lead. Four samples of the runoff contained lead.

It's the beginning of a problem that will get worse by the time the chilies leave the mill.

Ortiz and other middlemen have a big job ahead of them once they get the chilies out of the dryers. They'll pile the chilies into trucks and crisscross the country, going as far as Mexico City, 300 miles away. They have to find a buyer.

One of their first stops likely will be an hour away, in Aguascalientes, the capital of one of Mexico's smallest states, where Jesus Gonzalez works.

DIRTY CHILI

Gonzalez works in the heart of the agricultural market, one of Mexico's biggest. It's a city unto itself, complete with street names and restaurants.

A typical weekday finds hundreds of produce trucks zooming through the parking lots, where traffic laws mean nothing. Men with slabs of beef draped across their shoulders like capes hurry to the butcher. Women bustle past, their bags brimming with chilies. Drivers honk in frustration at merchants who dash across the street without looking.

They all have somewhere to be, something to buy or something to sell. There is a sense of purpose, excitement. A big-city excitement.

Gonzalez drives into this chaos every day to get to the four chili stores he owns.

He is a devout Roman Catholic. Portraits of saints hang in his stores. During the Cristero war in the 1920s, when an anti-church government clashed with the Catholic Church, villagers were relocated to big cities. Gonzalez's family was moved from a small village in Jalisco to Aguascalientes.

Some say he has money, but he doesn't put on airs. He drives a rusty pickup and wears rumpled clothes. His nieces and nephews who work for him say he's like a father to them.

His clients include small stores run by mothers in their neighborhoods and restaurant owners. Gonzalez has sold to candy companies in the past. He also relies on opportunities. When bigger companies face a shortage from their chili suppliers, they come to him and other chili sellers to fill the gap.

Gonzalez doesn't just sell whole, dried chilies. He's also a miller, the only one in the market who mills year-round.

His mill is in a middle-class neighborhood near the market, behind a black metal gate. A house is at the entrance. Fighting roosters crow in wire cages near the back next to bags of chili that have been in storage for two years.

Three workers spend their days pouring chilies into one mill. They don't wear masks or gloves. And, like scores of other millers in Mexico, they don't clean the chilies before

SEE CHILI • PAGE 4

Tests after milling reveal lead

FROM PAGE 3

they are ground.

FATTENING PROFITS

More than dirt gets into the bags. A 110-pound bag of dried guajillo goes for about $130. Because middlemen and farmers get paid by the pound, they sometimes weigh down the bags, interviews with at least a dozen chili workers showed.

Mills screen out some debris with visual inspections and magnets. When Roberto Reynoso, a worker at Gonzalez's mill, is asked about impurities in the chili, he pulls out a car-battery connector, rocks, ball bearings and other debris that he found in the bags. Reynoso estimates that eight of 10 bags that come to the mill contain junk.

Because the bags aren't labeled and can sit in a warehouse for years before the chilies get milled, it is impossible to trace them to the farm or middleman when a problem is discovered.

The mills' screens don't catch everything. Sometimes nails, rocks and dirt get ground up with the chili. And the mill itself can be a problem, especially if it has parts soldered together with lead. Over time, parts of the mill get ground up with the chili.

The Register tested four chili-powder samples from Gonzalez's mill – three guajillo and one *chile de arbol* – and all contained dangerous levels of lead, ranging from 0.3 ppm to 1.3 ppm.

The Register toured five mills in Mexico and tested 25 chili-powder samples bought from major agricultural markets in four states – Zacatecas, Aguascalientes, Jalisco and Michoacán. Some candy companies go to these markets to buy chili in bulk.

Twenty-three of 25 chili-powder samples tested positive for lead, ranging from 0.3 ppm to 4 ppm.

At 3 ppm, a child would only need to eat 2 grams, less than half a teaspoon, of chili to exceed the daily maximum lead level considered safe. In some cases, that would be just one lollipop or one candy packed in a clay pot, a common container for sticky Mexican candy.

Gonzalez didn't blink when told about the lead in his chili powder. He pointed out that the mill has a magnet, which catches metal, although it doesn't attract lead.

He said the cost would be great to clean the chili and label every bag. Every peso counts.

"What else can I do?" he asked.

THE CHILI FIELDS

"We have to see what the problem is. There must be something in the milling process that is happening."

JESUS GONZALEZ NAJERA, MEXICAN GOVERNMENT OFFICIAL

"It is very common for people who sell bulk commodity to throw in dirt, rocks, depending on what the commodity is, so that they increase their profit margin by a few percent," said Stephen Rothenberg, senior medical researcher in Mexico who studies lead issues.

"What is surprising to me is that they are not washing the chili right before they mill it," Rothenberg said.

Mexican candy makers, however, weren't surprised.

"It's really dirty, dirty, dirty," said Maria de la Luz Garcia Cortes, whose family runs Fabrica de Dulces Cisne, a candy company in Morelia that has 40 employees. She said her company is careful to make sure the ingredients used are pure, and she won't let her children eat candy with chili unless she knows where it is from. "It has rats. They don't check it," she said. "You don't know how it is made."

Javier Arroyo of Mexican candy company Grupo Lorena, which uses sterilized chili for its products, said: "If you have dirty chili, you have lead."

A Register analysis showed that at least 79 percent of the Mexican candies testing high for lead in U.S. and California laboratories contained chili as a main ingredient.

Eliminating lead shouldn't be that difficult, experts say.

"I assume that if the soil attached to the chili was washed off, it should reduce the lead in chili powder by at least an order of magnitude," said Jon Ericson, a University of California, Irvine, environmental scientist who has studied lead poisoning among children in Tijuana.

CLEANING UP?

Mexican government officials initially denied there were problems with chili powder.

"I don't believe it," said Jesus Gonzalez Najera, a government agricultural official in Zacatecas who helps farmers with subsidies.

But when told about the Register test results, Gonzalez Najera became concerned and vowed to look into the matter.

"We have to see what the problem is. There must be something in the milling process that is happening," he said. "What is the cause? This sounds very bad."

Jose Luis Flores, a federal health director in Mexico, also was taken aback by the findings. He wondered if chilies dried in the sun were picking up dirt or if food coloring containing lead was being used in chili powder.

"When you tell me this, I say, 'Oh, goodness,' " Flores said. "Imagine how worried I am now."

In California, officials with the Department of Health Services initially said they couldn't act on tainted chili because they can't collect samples in Mexico.

But in an interview in February, they promised to work with Mexican officials.

"We know that some of these lead sources are in the ingredients, but that is important information to share with the Mexican officials so that as those assessments of risk factors are conducted the proper action can be taken," said Kevin Reilly, the state's deputy director of prevention services.

"I think that's valuable information, absolutely, and it should go into working with the ... manufacturers in Mexico on how to eliminate that as a potential source."

Although the FDA has suspected chili as a source of lead, U.S. officials also were surprised by the Register's high lead results in chili.

"If you have some good data that would help us along, that is one good thing

SEE CHILI • PAGE 5

FROM PAGE 4

that we would see from what you're doing," said Terry Troxell, director of the FDA's Office of Plant and Dairy Foods and Beverages. "We've looked at quite a few candy samples over the last few years, and most of the levels are below 0.25, and so I guess I'm a little surprised that you're seeing 4 parts per million in chili."

The FDA issued an April 9 warning about Mexican candy, citing problems with chili powder. The move came weeks after the Register asked the agency why it hadn't done more about the candy ingredient.

SETTING AN EXAMPLE

Not all chili milled in Mexico is contaminated. At a chili mill in an industrial neighborhood in Guadalajara, about three hours from Aguascalientes, things are done a bit differently.

The chili here isn't just cleaned, it's sprayed with chlorinated water. It doesn't touch the floor. Workers wear hairnets and aprons.

It is ground in sterile, stainless-steel mills that cost $15,000 each – more than seven times what some smaller milling operations pay for their equipment. Plastic curtains surround the mills to prevent dust from sifting in.

The chili leaves this building in labeled bags, so if there is a problem, the chili can be traced. Then, it is sent to a laboratory in Mexico City to be screened for lead, bacteria and other problems.

This isn't just any chili. It's chili going into candy headed for the United States. But that doesn't stop the lead-laced candy from ending up in the hands of Orange County children.

Tomorrow: Some candy companies in Mexico make two versions of their treats – one cheaper for local children and one more costly to meet U.S. standards. But both versions make their way to Orange County.

Register staff writers William Heisel and Keith Sharon contributed to this report.

CONTACT THE WRITER:
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lead@ocregister.com

REPAIRS: Sergio Eduardo Gutierrez works on a metal grill in a mill used to grind guajillo chili at a plant owned by Jesus Gonzalez in Aguascalientes, Mexico.

Salsa and other products appear safe

Tests show no detectable levels in most sauces and seasonings bought locally.

By VALERIA GODINES
THE ORANGE COUNTY REGISTER

Should you be worried about your salsa and cooking sauces in light of problems with Mexican chili powder?

Not really, lab tests and experts indicate.

The Register tested 25 U.S. and Mexican products made with chili – from Lawry's hot taco seasoning to Charitos corn sticks to Valentina Salsa Picante.

Twenty-four of the products, bought from Orange County stores, had no detectable levels of lead. One, Búfalo brand Salsa Picante, had 0.2 parts per million lead, but the lead level fell below U.S. Food and Drug Administration guidelines for most food.

The Register also tested products from smaller companies, including chili-covered peanuts and spicy pork rinds, which also had no lead.

In November, California health officials issued a health advisory about lead in fried grasshoppers covered with chili – a traditional Mexican treat. The grasshoppers imported from Oaxaca had high levels of lead.

Children are particularly susceptible to lead poisoning. But adults can be harmed by high levels of lead in their blood, which can make men and women infertile. It can also damage the fetus in a pregnant woman.

The amount of chili in salsa probably isn't a concern for adults, one expert said.

"The thought is that unless lead levels in your blood are extraordinarily high (in adults), you won't have any health effects," said Robert Lynch, an associate professor of Occupational and Environmental Health at the University of Oklahoma who has studied lead in Mexican candies.

"You have had the neurological development you are going to get. Most of the development happens before 7 years. My guess is for adults that it just doesn't matter. My guess is that (salsa) would get really diluted down to a level that it wouldn't be a problem," Lynch said.

"If kids were eating it, it could be a problem, but in this country, a lot of kids aren't eating that much salsa and hot sauce."

But they are eating a lot of chili-smothered candy.

"I think the stuff on the candy is a real issue," Lynch said.

Tests suggest lead introduced in powder

More than 100 samples are taken throughout the chili process – from field samples to ground chili – in four Mexican states.

By VALERIA GODINES
THE ORANGE COUNTY REGISTER

The Orange County Register examined chili because Mexican candy is often smothered in it, and health officials suspect it a major source of lead.

The Register traveled to four Mexican states, collecting more than 100 samples throughout the chili process – starting in the fields with soil and water and ending in Orange County stores with salsa products. Tests were done on 55 samples of fresh and dried chilies and chili powder bought in Mexico.

Chili powder is where lead appears to be introduced, according to test results and interviews with Mexican candy companies. More than 90 percent of the chili powder tested for the Register contained lead.

The chili powder samples were mostly *guajillo* because it's the type of chili used most often in Mexican candies. Six ground *chile de arbol* samples were tested as well because it occasionally is used in candy.

At an agricultural market in Morelia, Michoacán, the Register bought a sample of ground guajillo from a stall that sells to candy companies. The sample was sent to Forensic Analytical in Hayward, a lab the state uses to test candy. The chili powder had 1.5 parts per million lead. The state standard for lead in candy is 0.2 ppm.

A sample of tamarind, a common ingredient in many Mexican candies, was bought from the same market. It also had 1.5 ppm lead.

In July, the Register went to the agricultural market and a mill in Aguascalientes. Ten chili powder samples – eight guajillo and two chile de arbol – from the mill and stores in the market were tested. Some of each variety contained lead. Eight of the 10 samples ranged from 0.3 ppm to 1.3 ppm.

The samples were kept in individual plastic baggies, labeled and stored at room temperature. At the laboratory, samples were dissolved in a mix of nitric acid and deionized water, then heated. It's the same technique used for testing lead in candy.

It was unclear how the chili was being contaminated by lead, so additional testing was done on chilies as well as on water, soil, tamarind and other candy ingredients.

The Register went to Zacatecas in early September, during the harvest of guajillo chilies, to collect samples from the fields, dryers and agricultural markets.

On the advice of lead experts, during the collection of soil samples, a plastic spoon was used instead of metal to avoid tainting the results. Well water from the farms was collected in plastic bottles.

Since the Register could not obtain a fresh-vegetable permit from the U.S. government to send fresh chilies to the lab in California for testing, a laboratory in Guadalajara – *Centro de Investigación y Asistencia en Tecnologia y Diseño del Estado de Jalisco* – was hired. This is the lab used by many candy companies in Jalisco. The Register sent five fresh chili samples and three tamarind-pulp samples.

The lab extracted liquid from them and then used a technique called atomic absorption spectroscopy to analyze for lead content. It has a detection limit of 0.2 ppm (the same limit used at Forensic). None of those samples had lead.

In mid-September, more samples were collected in Zacatecas. Thirty-three samples – chili powder, soil, well water and whole dried chili – were sent to Forensic Analytical. Once again, the chili powder had the highest lead levels.

All of the 13 chili-powder samples tested positive for lead, ranging from 0.3 ppm to 3 ppm. The dirt had trace amounts of lead.

Two separate samples containing chili powder along with sugar, food coloring and lime were tested. One contained lead. The other did not.

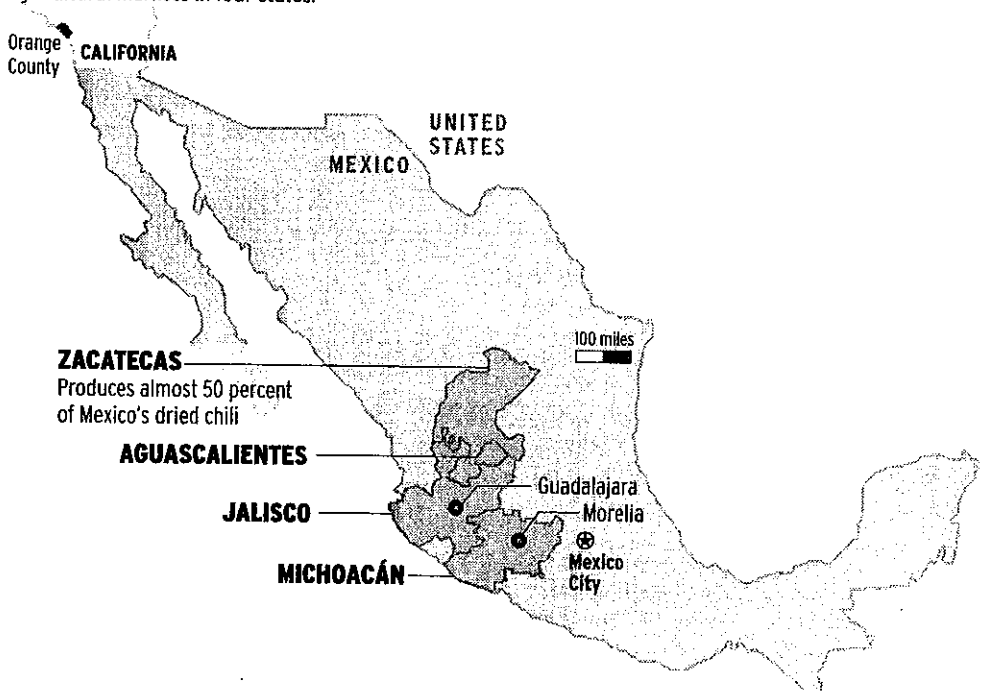
Of five samples of whole dried chilies, three contained lead.

The Register then sent 18 whole dried chili samples to the California lab. The lab put them in containers, rinsed them and tested the run-off for lead.

Of the 18 run-off samples, four tested above the lab's detection limit of 5 parts per billion. Then it tested the chilies after they were rinsed and found no lead. It appears the lead was caused by dirt clinging to some of the chilies.

Fertile soil for growing chili

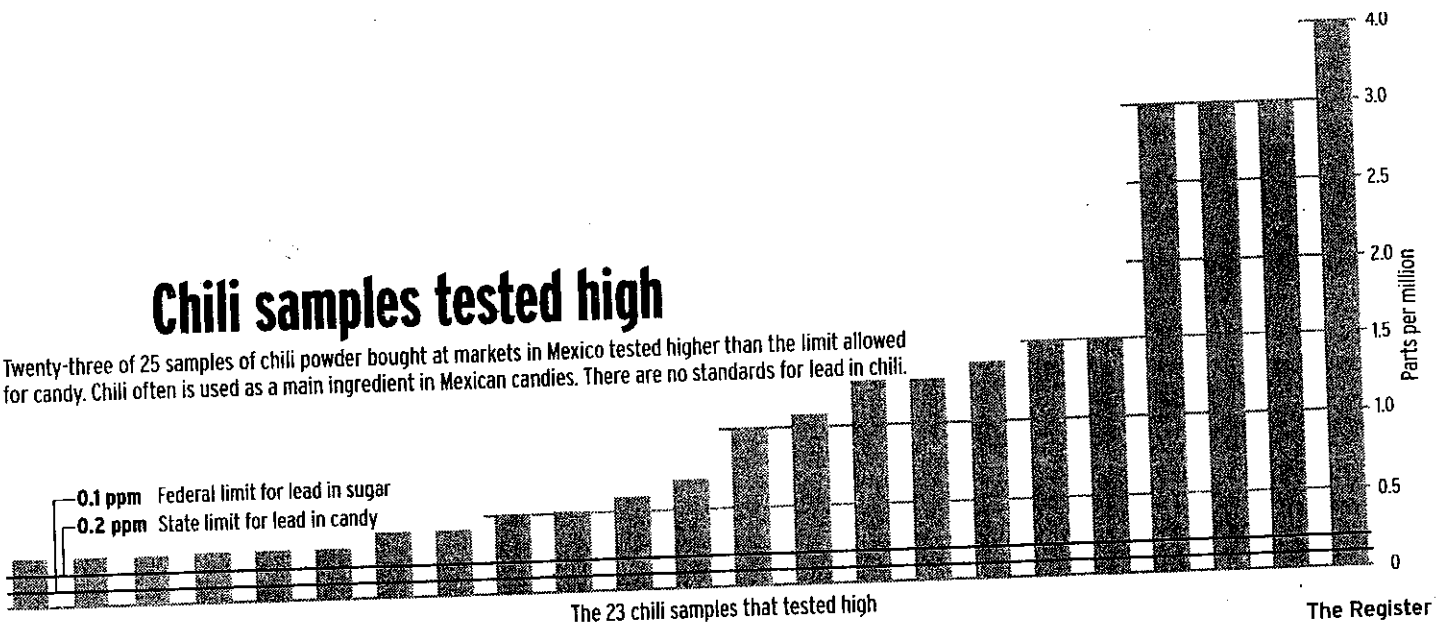
The chili fields are the first stop on the trail of toxic treats. The chili is bought by candy makers throughout Mexico. The Register bought chili powder samples at major agricultural markets in four states.



GROWER: Jose "Pepe" Garcia Saldivar farms guajillo chili at his ranch outside Ojo Caliente. The farms themselves are not considered sources of lead. Contamination occurs after the chilies leave the fields.

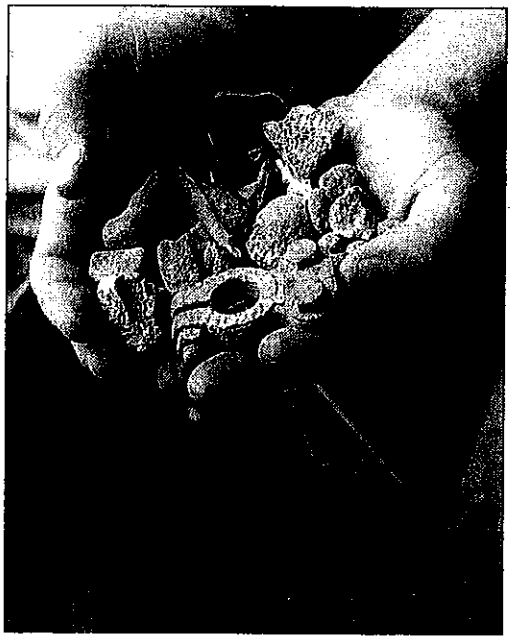
Chili samples tested high

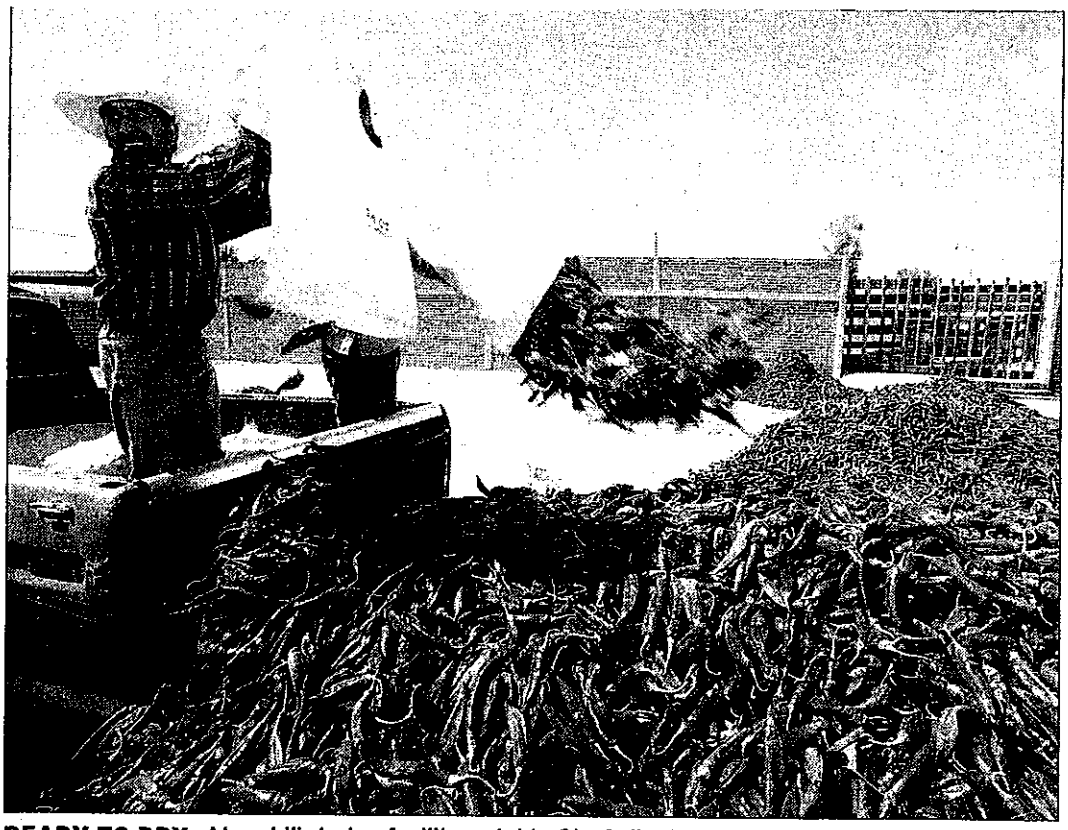
Twenty-three of 25 samples of chili powder bought at markets in Mexico tested higher than the limit allowed for candy. Chili often is used as a main ingredient in Mexican candies. There are no standards for lead in chili.



Chili tested at Hayward-based lab, Forensic Analytical

JUNK: Objects like rocks and bits of metal – even car-battery parts – turn up in sacks of guajillo chili at a milling plant in Aguascalientes, Mexico.





READY TO DRY: At a chili-drying facility outside Ojo Caliente, workers like Pedro Gutierrez unload fresh peppers that will be dried by blasts of hot air from machines that are powered by diesel or natural gas. Dryers say they don't use leaded gasoline to fuel the machines.

TUESDAY
April 27, 2004

THE ORANGE COUNTY
REGISTER

SPECIAL INVESTIGATION | DAY 3

THE CANDY MAKERS

Use of lead-tainted ingredients in some candies made in Mexico raises ethical questions.

HANDS ON: A worker rolls Serpentinas candy at Dulces Moreliates in Morelia, Mexico. The Register found high levels of lead in the version meant for Mexico but sold in Orange County.

READ THE ENTIRE SERIES IN SPANISH THIS FRIDAY IN EXCELSIOR. FOLLOW THE SERIES IN ENGLISH AT WWW.OCREGISTER.COM/LEAD/

Story by JENIFER B. McKIM and WILLIAM HEISEL
Photos by ANA VENEGAS
THE ORANGE COUNTY REGISTER

MORELIA, MEXICO

Workers in the Dulces Moreliates candy factory flatten globs of sweetened tamarind and chili paste into long, sticky sheets. They roll them together tightly and cut them into slim, brown coils that look like sleeping snakes.

Hence, their name: Serpentinas.

Hair tucked under caps and faces masked, crews nearby prepare the wrappers – rolls of plastic designed with bright orange lettering.

Serpentinas are popular treats in Mexico and among Latinos in the United States. Orange County's ethnic markets, convenience stores and big chain stores all carry them.

But there is something dangerous about the way these candies – and others in Mexico – have been made.

SEE CANDY • PAGE 2

A game of Russian roulette

FROM PAGE 1

Something about the recipe.

Tests show that chili powder, tamarind and ink in wrappers all have had levels of lead that can cause brain damage in children who regularly eat Mexican candies. At least eight Mexican candy companies have been penalized by U.S. health regulators for producing candy that tested high for lead. State and federal agencies have issued public-health advisories, forcing stores to pull the candies off their shelves and change their candy-making methods.

But instead of cleaning their candies for kids everywhere, some companies have made a cheaper choice.

They sell candies that can be dirty and prone to high lead levels to kids in Mexico. When they make a product for export, they switch gears.

At the Serpentinas plant last summer, that meant workers scrubbed the candy-making machines. They pulled out stores of more costly, sterilized chili and clean apple pulp. They whipped up a different batch of Serpentinas – still a sleeping snake but without the poisonous bite. Then they wrapped the harmless candies in clear, transparent plastic, minus the toxic ink.

Same candy, two recipes.

One tastier, cheaper and often registering toxic lead levels for the Mexican market. The other more bland, more expensive and formulated to pass muster with U.S. health regulators for export across the border.

Both versions of Serpentinas, and many other candies made two different ways, are sold in Southern California markets, sometimes without the manufacturer's knowledge, an Orange County Register investigation found.

In the case of Serpentinas, the two versions come in different packages.

But in other cases, candies are packaged in a way that prevents parents from telling the difference between a clean candy and one that might poison their children.

And within any given bag of candy, each piece is different. The lead shifts and settles during the mixing of ingredients, so some pieces will test high while others will test lead free.

As a result, a simple candy purchase becomes a game of Russian roulette.

The U.S. Food and Drug Administration and California regulators have known about the problem of different versions at least since 2002, internal memos show.

Yet, they have not done comparison testing of the two versions, including Serpentinas. They haven't worked with companies in Mexico to make sure the two versions are easily distinguished. And they have done almost nothing to address the problem of these candies crossing into the United States.

Over the past three years the FDA, which screens food products at the border, has averaged fewer than four candy tests per month, according to records.

The Register tested 180 samples of Mexican candy for this series from 25 distinct brands. Eight brands, or 32 percent, had high lead levels.

For today's story, about 70 candy samples from seven brands were tested because they are made two ways. Some candies were bought in their original Mexican-market packaging. Others were bought directly from distributors and candy makers in

Mexico before the candies crossed the border.

Four of the seven brands measured high for lead in Register tests. In some cases, the lead levels were six times California guidelines. In all of these candies, the levels measured so high that a child's lead consumption would surpass acceptable daily levels, as set by the FDA, with a single treat.

Register tests of sister products meant for sale in the United States came out clean.

The few candy makers who admit to making candy two ways point to economics, cultural preferences and different food-safety requirements. Products shipped to the United States have to meet specific standards for cleanliness, food colorings and lead content. Mexico has similar guidelines in some areas but does not have the regulatory muscle to enforce them or to educate the industry.

Mexican health agencies lack the resources to license or inspect all the country's candy makers, and candy testing is rare. Mexico has taken action against candy makers when prompted by sanctions in the United States.

But the bottom line is this: Mexican candy makers don't believe their products pose any danger.

"We can argue back and forth about what is safe, but as always in business you try to do what you are told by your experts is safe and you go by that and try to serve whichever markets are available," said Luis Antonio de la Torre, the general manager of Mexican candy giant Dulces Vero's Texas subsidiary, which exports cleaner candy to the United States. "We are not trying to hide anything or trying to cut any corners."

Parents and consumer advocates say candy makers put profits before people's health.

"I don't think that Mexican kids are more resistant to lead than kids elsewhere," said Dr. Herbert Needleman, a pioneering lead-poisoning researcher at the University of Pittsburgh. "The evidence is clear on how lead damages kids. It's up to (the companies) to do the right thing."

MEXICAN CANDY SALES UP

Mexico is the birthplace of America's favorite candy: chocolate.

The Spaniards under Cortez found the Aztecs in 1519 sipping a cocoa-bean drink from golden goblets in religious ceremonies, believing it a divine gift.

Through Spain, chocolate spread around the world in different forms, with the first candy bars appearing in the mid-1800s. In Mexico, chocolate gave way to candies that made better use of some of the country's most abundant crops: sugar, chili and tamarind, a fig-like fruit that grows in pods.

Today, the country's roughly 1,500 candy makers range from mom-and-pop shops on rural roads to large companies with offices worldwide. Unlike the U.S. market, which is dominated by heavyweights such as Hershey and Russell Stover, more than 80 percent of Mexico's candy makers are small, family businesses.

Mexican candy companies can't depend on the domestic market, where candy consumption totals about $6 per person annually, one of the lowest per-capita spending rates in the Americas.

In the United States, that number is more than $50 per person, generating $15 billion in annual sales.

That's why, with the help of U.S. candy makers who have bought Mexican companies or built their own, Mexico has more than tripled its candy sales in the United States since the North American Free Trade Agreement went into effect in 1994. The Mexican candy industry is expected to grow to $880 million by 2006.

CLEANER CANDIES COSTLY

Mexican companies have a strong financial incentive to make two products.

The versions they make for Mexico cost less – as much as five times less for some ingredients, company officials and candy distributors say. If small companies were forced to make all their candies to a higher standard, some say, they would go out of business.

And the cheaper candies appeal to the local palate. Heavy-duty washing that oc-

SEE CANDY • PAGE 3

FROM PAGE 2

curs in U.S. versions not only eliminates dirt and lead but can dull the flavor.

Many companies declined to talk about the manufacturing process or, despite evidence to the contrary, denied that they make two versions.

But others defend the practice. Antonio Mora Mendoza at Dulces Moreliates says his company tailors Serpentinas to fit consumer demands and government regulations in each market.

Mexicans prefer tamarind. They like its distinctive tang and texture. But U.S. regulators have found tamarind to be dirtier than rules allow. Nearly 10 years ago, the FDA ordered all tamarind products stopped at the border. So, Mendoza says, he doesn't send tamarind products to the United States.

State testing records show that 45 percent of all Serpentinas samples have tested high for lead. One candy wrapper had among the highest lead results ever seen by the state: 15,000 parts per million. That's 25 times the state guideline.

Wrappers worry health advocates as much as the candies themselves because the toxic ink from the wrappers can leach into the candy. Kids also lick the gooey candies off the wrappers. A child chewing even a shred of that Serpentinas wrapper would exceed the daily lead-consumption limit.

When the Register tested two versions of the candy and their wrappers, a clear difference emerged.

The U.S. version of Serpentinas passed, but the Mexican version – bought in Orange County – showed lead levels twice what the state considers a potential health threat. The Register tested five samples of each version.

Mendoza, who represents the latest generation to run the small, half-century-old family business, says he doesn't believe the state of California's body of evidence against his candies.

He knows the candy-making process from the inside out. The former engineer hand-built some of the equipment used to grind, press and cut the candy.

He showed the Register his company's own test results, which found the candy to be clean.

"It's all good. It's well-made," Mendoza said in June. "(U.S. importers) ask me to send it differently."

But last month, Mendoza told the Register that he began using cleaner chili for both versions of his candy, although he continued to use tamarind and the colorful wrappers with ink on the plastic for the Mexican version.

Mendoza makes about 3 percent of his candy for export. Like most candy companies that make two different products, the vast majority of his candy production, at least in theory, goes to market in Mexico.

Vero, one of the largest Mexican candy companies, makes less than 5 percent of its candies specifically to meet U.S. regulations, company officials said.

But large U.S. distributors buy the Mexican versions across the border and truck it over. So do small-time entrepreneurs who deliver the goods to convenience stores and ice cream trucks around Orange County.

Unless a candy is the subject of an FDA alert, importers can legally bring it in. In most cases, candies pass through the border.

If distributors knowingly ship candies that contain high amounts of lead, they could face penalties, but the Register found no instances where this had happened.

This goes a long way toward explaining why parents in Southern California are more likely to buy the Mexican version of the candies.

MAKERS QUESTION TESTS

In the foothills of the Sierra Madre mountains, Efem Mexico takes extreme measures for candies headed to the United States. The company makes products under the Lucas brand name.

The Santa Catarina company buys chilies from farmers who meet strict guidelines. Chilies must be picked before they ripen so they don't have a chance to attract bugs and become dirty. They must be washed vigorously and dried indoors.

For Mexico, the chilies ripen on the plant. Then, without being washed, they are set in the sun to dry.

U.S. candy company Mars Inc., one of the largest private food producers in the

world, bought the Lucas product line in 2001. Mars officials insist their products do not and have not contained high amounts of lead.

But federal and state testing records show these Lucas candies tested high 20 times since 1994 – more than half the time tested. The candies include the popular Lucas Acidito, a chili-and-salt mixture children like to pour directly onto their tongues.

It's unclear whether Lucas candies have tested high since Mars bought the company. FDA tests provided to the Register show that three Lucas candies were high sometime between October 2000 and November 2002, but the records don't specify dates.

Mars officials said they had not been notified by the state or the FDA about high lead results.

Tim Anh, the director of quality services for Mars' snack-food subsidiary, said the company allows a little more dirt in its candies meant for Mexico because, frankly, more dirt means more flavor.

It's not that dirt tastes good, but washing chilies removes what are known as "flavor compounds," Anh explained. Unwashed, sun-dried chilies have more pop.

"The export variety is lower in insect fragments than the one that we sell in Mexico because of the regulations in the U.S.," Anh said.

Register tests found that unwashed chilies can be a source of lead, but Anh said the company's own tests on both versions of the candy have not shown problems. He declined to share specific numbers.

Lucas Acidito
Tested high 7 of 13 times

Another company that said it doubts California's testing numbers sits on a side street in central Mexico in the busy city of Morelia.

Industrial Dulcera Tasachi makes Chaca Chaca candy bars out of apple pulp and chili. The candy has tested high for lead in 17 state and federal tests since 1998.

The Register tested seven samples of this candy. The versions meant for Mexico tested high in lead twice. The versions meant for the United States showed no lead.

After repeated questions about Chaca Chaca from the Register, the state and the FDA issued an advisory last month.

Before the regulatory action, Chaca Chaca attorney Agustin Bracho would not acknowledge that his company exported the candy to the United States, let alone that it was making a special U.S. product.

But the company that has imported Chaca Chaca for sale in the United States tells a different story. Victor Reyes at Triunfo-Mex Inc. in the City of Industry said his company has imported Chaca Chaca bars since 1991, at times in loads as big as 300,000 bars a month.

Reyes said many candy makers do not want to acknowledge the dual products because it could damage their business in Mexico.

"Many companies fear they will hurt their brand," he said.

For that reason, companies also shy away from labeling products differently, he said. That makes it all but impossible for customers to know what version they are eating.

Triunfo-Mex's massive warehouse is a tribute to the success of the Mexican candy industry in the United States. It brings in more candy than any other independent distributor, candy makers and wholesalers say.

Relaxed in the company's spacious meeting room, stocked with tequila, champagne and cognac, Reyes said nearly 50 of his clients produce export-only products with cleaner ingredients and lead-free inks to assure easier passage across the border.

Reyes stopped importing Chaca Chaca last fall because he said the candy maker would no longer pay extra for cleaner chili.

"It is much more expensive for companies to do a product for export," Reyes said.

DIFFICULT TO DISTINGUISH

Despite the effort and expense in making two recipes, import and export versions can be hard to discern. Their labels often are the same, and, in some cases, the Mexican versions are dressed up to look like U.S. products.

Part of the reason is, again, economics.

Candy makers don't want to spend extra money on an entirely different package for the cleaner product. Companies that distribute the candy don't want them to change their packaging, either.

They hope Latinos who bought these candies as children in Mexico will want to buy them here now. It's why some Mexican candies – with pineapple wedges wearing sombreros, smiling bears and brooding cows – look quaint next to some of their slick American counterparts.

"A lot of my customers are

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One candy, two recipes

FROM PAGE 3

in their 20s or 30s, and they like these candies because they grew up with them," said Estela Gil at Carlo's Meat Market in La Habra, which boasts a wide candy selection across from the butcher cabinet.

Even the companies have trouble telling the difference between the two versions once they are on the shelves.

Vero might use higher-quality chili for candies heading to the United States, but Vero executive de la Torre acknowledged that the bilingual packages used in both countries are identical.

The one clue is a white paper square found on the outside of some candy boxes and bags.

It says in English: "Imported and distributed by Vero candies ... San Antonio, TX."

Super Palerindas
Tested high
4 times in 2002

The Register bought a box of Vero's Super Palerindas lollipops packaged like this and sold at an Anaheim store. Lollipops tested from this box were found to be free of lead, but the Mexican versions, which are much more prevalent in Orange County stores, showed high lead levels.

The Register found the Mexican version in dulcerias from La Habra to San Juan Capistrano. These candies also are widely available at grocery stores – usually in the same aisles as Snickers and Junior Mints.

IT'S IN THE BAG

There are dozens of firms around Southern California that buy the candy, put it in their own bags and sell it at a premium.

The re-bagging process can accomplish at least two key goals.

By putting an English label on the bag, a Spanish-only product becomes compliant with FDA and California labeling requirements. And by making all the bags uniform in size and shape, they can be more easily stacked on store shelves or hung on racks next to the checkout counter.

The twist is this: The candy maker no longer has quality control.

Chula Vista-based El Pecas buys Vero Mango lollipops, adds its own chili, then puts the candies in bags that don't identify them as Vero pops.

The Register tested 10 samples of Vero Mango lollipops that were not re-bagged by El Pecas – both import and domestic versions. All came up lead free.

But mango lollipops packaged by El Pecas had high lead levels.

El Pecas manager Mayte A. Flores said she was surprised by the results and intended to do her own testing.

"Every time we buy candy, we want to make sure we are not poisoning the kids," Flores said. "I don't want to hurt the kids."

But Flores did not test the candy on her own. Instead, she phoned Vero officials, who told her there were no problems. She said she took their word for it.

At Vero, de la Torre said he didn't know repackaging companies bought his candies and sold them as their own.

"I know with the product we import for the United States, we haven't had problems," de la Torre said. "I don't analyze products in Mexico and others that are being repackaged by somebody."

SUPERHERO PITCH

Candy lovers in the United States have been buying sweets made in Mexico for years without knowing it. It's simply a fact of the changing marketplace that more and more candy is made south of the border.

In 1969, Hershey opened one of the first U.S.-owned candy factories in Mexico. Since then, nearly all the major companies – Tootsie Roll, Nestle, PepsiCo – have opened plants there, mainly to take advantage of cheaper sugar and labor. They ship candies back to be sold in the United States.

Vero Mango
Tested high at 0.57 ppm lead in 2001

Customers probably haven't noticed a difference. Hershey's Giant Kisses still look like Hershey's Giant Kisses.

Similarly, when Mars bought Grupo Matre in 2001, it maintained the candy company's line of popular Lucas candies.

"They wanted to appeal to the Hispanic consumer, especially in the Southwest, where these are recognized brands," said Jim Corcoran, vice president for trade relations at the National Confectioners Association.

There are few bigger brands than Superman. His image and the images of other cartoon characters that have an international following are used by candy companies to make candies recognizable on both sides of the border. Winnie the Pooh, SpongeBob SquarePants and the Incredible Hulk are featured on Mexican candies that can be found in Southern California stores.

Superman sells small cups of Duvalin, a creamy candy that tastes like chocolate frosting. The candy is made by Joyco, which has offices in Miami and Naucalpan, Mexico. Bart Simpson sells a chili-coated mango lollipop for Vero.

Both Warner Bros., which owns Superman, and Twentieth Century Fox, which owns the Simpsons, struck deals for these candies to be sold only in Mexico.

Yet, the Register bought both these candies in Orange County. And both tested high in lead. The Duvalin candy has a U.S. version that did not test high.

Vero said it had an arrangement with Fox, but Fox would not confirm the deal. Warner Bros. said it intends to look into the quality of the Duvalin candy. Joyco's license to sell candies featuring Superman and his fellow crime fighters expired in October.

SELF-POLICING SUGGESTED

The uncertainty about how the candy is made and how much lead might be inside scares and infuriates parents like Jose and Lorena Beltran.

The Anaheim couple is cautious when it comes to their three young sons. They bought three car seats for each of their cars and three more for the baby sitter's car.

"You can never be too safe," Jose Beltran said.

When the Anaheim couple learned that the candy their kids were eating at a birthday party last November might contain lead at levels high enough to damage their still-growing brains, they were shocked.

Jose Beltran grew up in the San Fernando Valley and spent half his weekends in Tijuana with his grandparents, aunts and uncles. His kids eat some of the same candy he ate as a child. It is hard for him to fathom that the mango lollipop his youngest child loves might be toxic.

What's worse, Beltran said, is the decision by candy companies to make an inferior product for Mexico.

Duvalin
One of 5 samples tested high in Register tests

"They should care about all kids, not because of where they're from but just because we're all human beings," Beltran said. "It all comes down to greed."

Runako Kumbula, a lawyer at the consumer-watchdog group Public Citizen, said that without clear regulations, companies don't feel any urgency to make the same safe candy for the Mexican and U.S. markets.

"Morally, they're doing something wrong, but legally, perhaps they're not," Kumbula said. "There are lower standards in probably a zillion different areas in Mexico than there are here, and in some areas, they probably have higher standards. That's the way it is, and corporations are taking advantage of it."

Other health advocates for children said they've seen this pattern before.

"It's eerily reminiscent of the actions that the lead-paint manufacturers back in the early part of the 20th century took when they knew their product had lead in it and chose to market it anyway,"

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FROM PAGE 4

said Eileen Quinn, deputy director for the Alliance for Healthy Homes, a lead-poisoning prevention group in Washington, D.C. "They are acting with deliberateness to put profits before public health."

When told about the two-candies practice in late April, the governor of Michoacán, home to Morelia and one of Mexico's largest candy-producing states, responded with indignation.

"Someone's health is worth the same here or there," said Gov. Lazaro Cardenas Batel. "We should find a way to have the same quality level for the two sides."

Some companies have decided higher profits don't merit the risk.

Grupo Lorena makes its signature brand, Pelon Pelo Rico, with two kinds of chili. Like Mars, officials say that the difference in washing does not affect quality but results in a more spicy version for Mexico. Because of the Register's findings, the company said it intends to follow stricter guidelines to limit the amount of lead in its products.

The company has had a history of lead problems. California testing records show high lead results for the candy 11 times since 1994.

The company now tests its candy every day, said spokesman Javier Arroyo, and has not found problems with lead.

The Register tested both the domestic and export versions of Pelon Pelo Rico last year and found no lead in 10 samples.

Arroyo suggested that candy companies start policing themselves better. Tuna companies that make sure dolphins are not inadvertently caught in their nets stamp their cans with "dolphin-safe tuna." Candy companies could form a "Lead-Free Candy Association" with a similar aim, Arroyo said.

"But it's very hard to make all the companies forget about the fighting in the market and decide to solve something together," Arroyo said.

Alpro Alimentos Proteinicos in Mexico City makes a sweet-and-spicy powdered candy packaged in brightly colored wrappers at its plant.

General Director Francisco Canovas Corral said he struggled to improve the reputation of his candy company after California regulators found high levels of lead in wrappers in 1994.

The candies – Brinquitos – were found in the home of a lead-poisoned child in San Bernardino.

Canovas Corral was hit with regulatory action on both sides of the border, and the company shut down for nearly a year. After regaining its footing, the company began using organic, lead-free inks for all its products. Packaging costs doubled.

U.S. and California regulators hailed Brinquitos as an example of successful government involvement, internal state documents show.

Canovas Corral said that although he doesn't export directly, he knows his candy is sold in California.

"We can't control contraband," Canovas Corral said. "If I make a box of Brinquitos for Mexico, I won't be able to stop the candy from going to Tijuana and then San Diego. It's a serious problem."

One candy – the kind that comes in a lead-tainted pot – has been largely driven out of U.S. stores because of concerns about lead, but it continues to poison Mexican children.

In one of the cruel ironies of the developing world, though, this same candy helps keep hundreds of poor families in a Mexican village afloat.

Tomorrow: How children have been poisoned in a village in central Mexico.

Register staff writers Valeria Godines and Keith Sharon contributed to this report.

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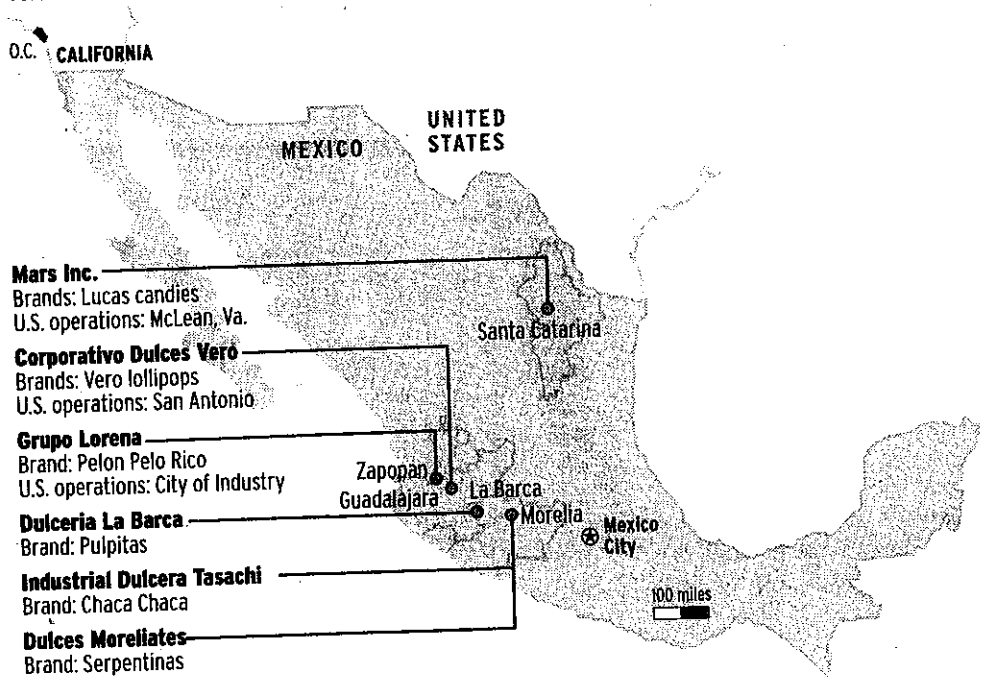
Cleaning candy for export

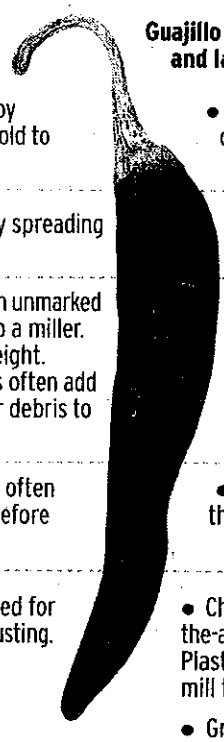
In the heart of chili country in central Mexico lie several candy makers – including some with U.S. operations. These companies make one version of their candies for their own domestic market and a cleaner version for the United States.



Chilies handled two ways

Mexico is home to hundreds of small farms where guajillo chilies are harvested, then taken to markets. The quality varies greatly depending on where they are headed. Chilies meant for the Mexican market often are inferior and dirtier than those going to the United States.

Guajillo chilies for the Mexican market	Guajillo chilies for the U.S. market and large Mexican companies
• Chilies are grown by several farmers and sold to different buyers.	• Major candy companies often buy chilies from only one grower.
• Chilies are dried by spreading them on the ground.	• Chilies are washed and dried.
• Chilies are packed in unmarked sacks for transport to a miller. Chilies are sold by weight. Unscrupulous dealers often add rocks, nails and other debris to increase the weight.	• Chilies are packed in marked bags for transport to the factory.
• Many small millers often do not clean chilies before grinding them.	• Chili seeds are removed and the chili is washed again.
• Some machines used for grinding are old and rusting.	• Chilies are ground in state-of-the-art, stainless steel machines. Plastic curtains surround the mill to keep out dust. • Ground chili is tested for bacteria and lead. • Chili is randomly quality tested.



Graphics reporting by VALERIA GODINES

MOLLY ZISK / The Register

SECOND TIME AROUND: Workers bag candy at El Pecas in Chula Vista. The company repackages candy made by Mexican candy makers under its own label. Register testing found high lead levels in candy with El Pecas labeling.

DANGER LURKS: Oscar Tapia, 8, left, and brother Jose Manuel Tapia, 5, scan the candy choices at Alicia Gomez's grocery truck at Cedar and Pine streets in Santa Ana. Like other vendors, Gomez offers a wide selection of Mexican candy, including some brands that tested high for lead.

WEDNESDAY
April 28, 2004

THE ORANGE COUNTY
REGISTER

SPECIAL INVESTIGATION | DAY 4

POISONED PACKAGES

Register finds lead-poisoned children in Mexican village where pots are made for candy.

TRADITIONAL WORK: Perla Patricia Fabian Ceja, 3, plays with her grandmother, Natalia Fermin Arredondo, 79, as Fermin kneads clay for her pottery. Perla's blood-lead level tested at more than 60 micrograms, considered extremely unhealthy.

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Story by VALERIA GODINES and JENIFER B. McKIM
Photos by ANA VENEGAS
THE ORANGE COUNTY REGISTER

SANTA FE DE LA LAGUNA, MEXICO

Griselda Maximo Guzman dunks her slender, bare arms into the bucket to stir the yellow glaze called *greta*. It looks like cake batter.

Pregnant and a little tired on this crisp fall day, she dips hundreds of small clay pots into the bucket.

The glaze is mostly lead, a poison that can cause miscarriage or brain damage when ingested or absorbed through the skin.

But this is how Maximo's mother glazed pots. And her grandmother. And her great-grandmother. Nearly everybody has done it this way in Santa Fe de la Laguna, a village in the central state of Michoacán. This is how they've made a living for centuries.

It's also how the village has been contaminated, becoming the saddest

SEE **POTTERY** • PAGE 2

The struggle to survive

FROM PAGE 1

stop along the trail of the $620 million Mexican candy industry.

Each year, families shape pots, glaze them and fire them in wood-burning stoves. Then, thousands of Santa Fe's little pots are filled with candy that turns to poison as it absorbs lead from the glaze.

The candy is a sticky pulp made from the pods of the tamarind tree. Using pots for tamarind candy is a long-standing tradition in Mexico.

The trail of lead-tainted candies extends to border towns like Tijuana and into Orange County. These potted candies are among the most dangerous.

They have been linked to poisoned children for a decade. They rarely are found in Orange County stores today but are readily available in San Diego. As recently as 2002, they were suspected in the lead poisoning of a La Habra child.

Candies poison children on both sides of the border and can cause depressed IQs and health problems. In Santa Fe, school officials believe the lead-based glazes have caused learning problems in children. And women say they've suffered stomach ailments, miscarriages and infertility.

All along the candy trail are problems that could be avoided if health officials would take action, if loopholes in America's food-safety laws were closed, and if Mexican manufacturers stopped producing tainted goods, an Orange County Register investigation found.

But nowhere is the lack of accountability more devastating than in this village of 6,000 people, many living in mud-brick houses, some starving as they try to make a living from the greta-glazed pots fired in their homes.

Without pottery making, Santa Fe's economy would collapse. Villagers say they have to churn out pots with greta because it produces the beautiful shine customers want. Mexican health officials say that they have more pressing health problems in a country where children in rural areas still die from malnutrition. And the village's residents say it is too difficult and costly to use nonleaded glazes.

Besides, many residents believe that lead isn't a problem because the symptoms could be caused by many things other than lead.

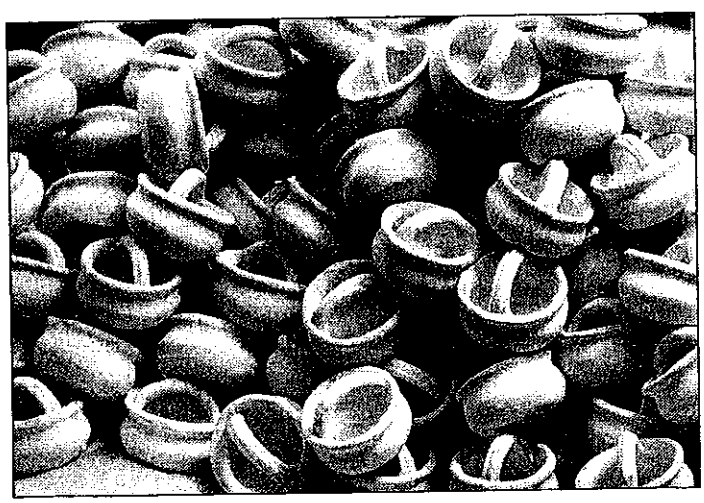
"They say it doesn't do damage, and they are fully contaminated with lead," said Virgilio Perez Negron Medrano of the Michoacán Department of Environmental Health. "Here, people who don't work, don't eat. They say, 'Better to die from lead than from hunger.' "

The Register visited the village in October and hired a medical team to conduct blood tests on the village's children. Of 92 tested, 87 were found to have lead poisoning – some up to 6.5 times the level set by the U.S. Centers for Disease Control and Prevention. The scope of the problem compares to some of the most serious lead-poisoning cases in the United States.

GRETA'S HISTORY

Santa Fe is a community of Tarascan Indians, where residents speak Purépecha first and Spanish second, if at all. Despite its poverty, the lakeside village has some minor fame in Mexico, as it once was a soap-opera set.

The origins of the Tarascans, who are believed to have thrived as early as 1100 A.D., are unclear. When the Spanish arrived in the 1500s, they found a people at war with the Aztecs, a culture with its own language and specialized skills in metal work. They also found the Tarascans making pots.



CANDY CONTAINERS: Greta-glazed pots wait to be fired in the Maximo home. Pots like these are filled with tamarind treats, and some end up for sale in the United States. Potters say customers prefer the shine of a leaded glaze.

The descendants of those Tarascans make all sorts of pots today with greta's distinctive sheen – for cooking, storing food and decoration. They also make them for candy.

One candy business alone buys nearly 260,000 tiny pots a year from the village's potters, whose skill with the lead-based glaze dates to Spanish colonial days.

The Spaniards, trying to make amends after slaughtering thousands of Tarascans during the conquest, introduced greta as a gift.

Even today, the look of a greta-glazed pot is regarded as special, and little is done to reduce the risk to the potter and consumer.

In 2003, the Mexican government regulated the use of the glaze in pottery, but the rules haven't been enforced. An indefinite grace period has been granted to give potters time to adjust.

State health workers are frustrated because they say that businesses promised not to sell the greta used in indigenous communities.

"But we are seeing that the greta is still there," said Perez, the health official in Michoacán responsible for educating potters about the dangers of lead-based glaze in this state of about 4 million residents.

Perez has conducted workshops to teach potters how to use nonleaded glazes, but with 20,000 families making pots, he hasn't been able to reach more than a fraction of them. He has faced threats and anger from potters afraid of losing their livelihoods.

Hundreds of miles away in Guanajuato at a factory that makes the glaze, workers wear masks and protective clothing and get their lead levels tested every six months.

But most potters in Santa Fe are not tested for lead poisoning. Nobody here wears masks, gloves or protective clothing. Few understand the effects of lead poisoning, even though the bags of greta are printed with serious warnings not to breathe it, to wash hands after using it and to keep it away from cooking areas.

The warnings are in Spanish, a language most of the potters can't read.

Many mothers know greta is bad because their grandmothers shooed them away from it or told them stories about a young child who died after eating it.

But few know that exposure to lead can cause kidney problems, learning disabilities, seizures and infertility. Few know that lead can seep into bones, staying there for years, causing irreversible damage.

And few know that children are most at risk.

CHILDHOOD DANGERS

Potter Griselda Maximo Guzman's son Tariacuri, named after a king of the Tarascans, is a typical 5-year-

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old. He plays with plastic wrestling figures that litter the dirt floor of his home.

The bright-eyed youngster enjoys drawing farm animals, artwork that his mother proudly displays on the walls. He also plays soccer, throwing his 40-pound body into the game with all his might.

He was born a month premature and had trouble breathing. His mother, who is pregnant with her second child, said that today he's generally a healthy, happy child. His teachers have told her that he's bright.

On this October day, he keeps Maximo company while she glazes pots in their home. In Santa Fe, pottery making is a family affair, with grandmothers crafting the pots by hand, mothers and children glazing them and husbands selling them across Mexico at festivals.

Maximo's husband isn't here to help. He, along with other men from the village, are on a monthlong pilgrimage to the Basilica in Mexico City to pray to *La Virgen de Guadalupe*, walking by day, sleeping in fields at night.

While Maximo works on the pots, Tariacuri sits nearby. Although he has no apparent symptoms of lead poisoning, his lead levels measured 47.2 micrograms at the Register's October testing clinic.

HANDMADE: The Maximo family glazes pots by hand with a lead-based glaze. Families in this village have used greta since the 1500s. Economic circumstances make it difficult to switch to a nonleaded glaze.

Lead is measured in micrograms per tenth of a liter of blood. Anything 10 or more is considered unhealthy, and some scientists say that smaller amounts can be harmful.

Children with blood-lead levels like Tariacuri's are at great risk, experts say.

"Unfortunately, with a blood-lead level of 47, a lot of kids may not have symptoms while the lead is insidiously eating away at their intellectual capacity," said Howard Hu, professor at the Harvard School of Public Health. "Some kids may have symptoms, and there will be things like headaches, listlessness, some abdominal pains, irritability – very vague symptoms, which make it difficult for clinicians to suspect."

Of the 92 children tested at the clinic, only five had normal levels, and two of those were borderline. Fifteen tested at a level where IQ, hearing and growth could be affected; 28 at a level where nerves are also affected; 23 at a level that can weaken bones; 10 in the range that also decreases the body's ability to make red blood cells; two at the level that also would cause stomachaches; and nine at the level where problems also could include kidney damage and anemia.

The families were surveyed to help determine the source of lead. Nearly all the families work with pottery, and almost all work with the lead-based glaze. Most have their children nearby at some point while they're working, which raises their exposure.

The clinic's results shocked lead experts in the United States.

"That's outrageous. That is flabbergasting," said Robert Lynch, an associate professor of Occupational and Environmental Health at the University of Oklahoma, who

has studied Mexican candy linked to lead.

"Those kids are in severe trouble," he said. "Those kids are going to have marked problems, when you spend your first seven years of life with a lead level of 60. We think that with a level of 5 you now have problems. The level should be zero."

Jose Luis Bautista Cortez, director of one of Santa Fe's elementary schools, says about 70 percent of the 213 students suffer from learning problems. He believes lead may have something to do with it, although many things, including language barriers and poverty, contribute to learning problems.

LEAD STILL SELLS

The problems with potted candies have been known for a decade. California issued a health advisory in 1993, when high lead levels were found in Picarindo candies in glazed ceramic pots made in Morelia, about an hour's drive from Santa Fe. One teaspoon of that candy exposed children to 70 times the Food and Drug Administration's daily recommended limit of lead.

Some changes have been made as a result of state advisories: Fewer potted candies are making it to California than a decade ago, people who used to buy and sell them say.

But factories still grind out the greta glaze and ship it to the potters, who continue to poison themselves and their families. And candy packagers continue buying the lead-glazed pots and filling them with fig-like tamarind jam. A sales representative from one of Mexico's largest candy companies estimates that 15 percent of all tamarind candy in Mexico still comes in the traditional ceramic pots, many of which are made with the lead-based glaze.

In Michoacán, one of Mexico's poorer and more rural states, neither the state health department nor regional hospitals have the resources to test for lead, even though the state is a center for traditional pottery.

Michoacán health officials said they don't need a clinic to tell them there are high lead levels in Santa Fe. They are well aware of the problem there and in surrounding villages.

But they point to limited resources and stretched budgets.

"There are bigger priorities – malnutrition, diabetes, bronchitis," said Joel Nicolas Martinez Cruz, director of the General Regional Hospital No. 1 in Morelia, the capital of Michoacán known for its traditional candies. "In the hospital, we don't have

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Balancing health and survival

FROM PAGE 3

technology to test blood."

In Santa Fe, children still starve. The local doctor says she has 50 cases of malnourished children, five of them so grave they might die.

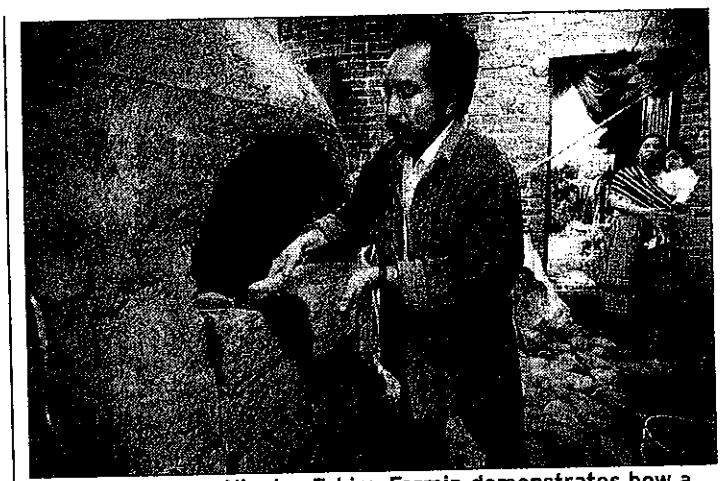
In response to the Register's findings, the state government plans to regularly provide foods heavy in iron and calcium, which reduce lead absorption, to children and pregnant women in Santa Fe.

Maximo frowns when the doctors tell her about Tariacuri's high lead levels at the testing clinic. They explain the effects of lead poisoning at high levels – slower mental development, stomachaches, kidney damage. They urge her to give him more iron and calcium.

She remains quiet, uncertain. Could greta really be that bad? After all, it's been used by her family for generations. And many Mexicans even use it to cure stomach pains or as a contraceptive.

But it is that bad. The glaze is mostly lead. Four months pregnant, Maximo now is concerned about how it might affect her unborn child.

Maximo, who attended school only to sixth grade, began making pots for candy when she was 12, crouched on a dirt floor beside her mother. They fetched the clay from a field outside the village and then dried it on their sunny doorstep. In the kitchen, they kneaded the clay, flattening it into a tortilla shape and then molding the pots by hand.



ALTERNATIVE: Nicolas Fabian Fermin demonstrates how a lead-free kiln works, as his wife, Maria del Rosario Lucas, and daughter, Ana Luisa, watch. The family built the kiln in their back yard after deciding not to work with lead. So far, they say, it has been an expensive decision.

People here earn about $2.50 a day making pots. There are 650 family-run pottery workshops. Only five of them use nonleaded glazes, and even they acknowledge that they are losing money because nobody will buy their pots. They don't shine like the pots with greta.

Maximo doesn't know how she could stop using it. The customers demand shiny pots and don't want to hear about lead poisoning. And if she doesn't make them, her neighbor will.

It comes down to supply and demand. And there are definitely people who still want her pots.

Women like Doña Mecha.

VENDORS' STORIES

One of the most successful people in Santa Fe isn't from Santa Fe. She isn't Tarascan. Doesn't speak Purépecha. And doesn't spend her days crafting or glazing pots.

Mercedes Ramirez Campos, known as Doña Mecha, buys pots from the women in the village and sells them. Originally from Veracruz, she married a local man and set up shop. Her store sits on the highway that cuts through Santa Fe, beckoning tourists with decorated coffee mugs, brilliant plates and shiny water jugs.

The store also is stocked with hundreds of the tiny

pots that go to five clients who pack them with tamarind candy mixed with chili powder, another source of lead. Judith Sarmiento, a Michoacán woman, buys 260,000 pots a year from Doña Mecha.

Sarmiento's potted treats, under the name Dulce de Tamarindo La Colonial, are sold in San Diego and Tijuana, where many Mexican-American families go to stock up for children's parties.

The Register hired a laboratory that found lead levels of 26 parts per million in the candy packed into the pot.

To check the effect of leaching from the pot, the lab also tested the candy scooped from the edge of the pot. It had lead levels of 100 ppm – 200 times the limit for lead in candy set by the FDA.

State and federal regulators have not tested La Colonial candy, records show.

A mother of two, Sarmiento is proud of the candy-packaging business that she and her husband have built. They have 12 employees and just bought a computer. They are shocked that their product contains lead.

It comes as no surprise to Doña Mecha, who has heard about lead in greta.

"What are they going to do for work?" she asked. "Because there was a time when people weren't going to work because of the lead, but frankly I felt bad for the people. What are they going to eat? What are they going to do? Because this is their livelihood. Now, they say that it's doing damage, right? ... I have not died. Here I am."

She's a pragmatic businesswoman. She's going to keep buying the pots because they're going to keep making them. The village can't change all of a sudden, she says. Not after all these years.

QUITTING ISN'T EASY

Why don't the potters in Santa Fe simply use non-leaded glazes that are avail-

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Dulce de Tamarindo La Colonial

The candy is packed in clay pots made in Santa Fe de la Laguna. The Register tested it three times and found high lead levels each time.

FROM PAGE 4

able? It seems so simple.

It's not.

Efforts by Mexican state government workers and nonprofit organizations to get villagers to abandon greta have been unsuccessful.

They pushed the potters to wear gloves, but the artisans insisted they need to feel when the greta has reached the right consistency before glazing pots.

The state holds workshops to urge the artisans to use gas stoves rather than wood stoves, because gas burns at a more even temperature needed for nonleaded glazes. They also demonstrate how to use those glazes.

None of it has worked. Few people attend the workshops. They are battling more than 500 years of history, cultural denial and economic barriers.

Maria del Rosario Lucas is a 40-year-old mother of two who works with a small group of women educating the village about the dangers of greta. The group is called Uarhi, which means "woman" in Purépecha.

The women, with little education, recently learned Spanish so they could give speeches about greta. But not everyone wants to hear them. When they gave a television interview about greta, villagers lashed out at them, saying that business was bad enough already.

The reaction didn't stop the Uarhi members, who say they personally know the dangers of lead.

Lucas and her doctor believe she lost her baby because of lead poisoning. She had a miscarriage in the second trimester. "Lead kills your baby, little by little. Don't use it," the doctor told her.

Another woman in the Uarhi group believes she suffers from infertility because she sells greta from her home.

A third one believes she became sick with daily vomiting and weight loss because she, too, sells greta.

The women began making nonleaded pots, but it was like learning a new craft. They have spent the past year losing oven after oven of pots as they experimented with the nonleaded glaze.

One batch stuck to the racks because they didn't account for different formulas with the new glaze. The next batch came out discolored. And the next looked scratched.

When they tried to sell some of the slightly damaged mugs, they were turned away. The women now sip coffee from these mugs at their regular meetings.

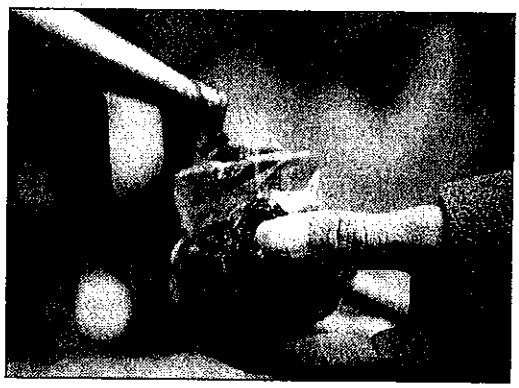
Villagers say the nonleaded glazes are more expensive, not as readily available and need higher, more exact temperatures in gas ovens.

One gas oven costs 60,000 pesos – roughly $6,000 – several years' wages for a family. Nearly everyone here uses earthen stoves that burn wood at much lower and less exact temperatures.

They also say that experimenting with the new glazes is time-consuming, resulting in lost wages and a family not eating for a day.

But Michoacán state health workers dispute this. They say the nonleaded glazes are available, cheap and can be fired in wood stoves.

Perez, the state worker in charge of educating potters, says that residents are sim-



TRIPLE THREAT: Tamarind-chili paste in clay pots, like these from La Colonial near Morelia, is a popular treat, but the pots, chili and tamarind have been found to have lead.

ply making excuses.

"No, it's not true. They haven't experimented. It can be learned in two or three sessions. It is an excuse. Those who have experimented will tell you that it is possible," Perez said. "There are other glazes."

The women in Uarhi, meanwhile, have changed their education campaign, focusing on children in elementary schools. Best to start educating the coming generation of artists who might be more open-minded.

"We want a better life than our parents had. We want our children to have a better life than we have," Lucas said.

THE TRAIL CONTINUES

As evening falls in the village, men descend from the verdant hills with their burros, carrying stacks of firewood for their kilns. As they clamber down, they view the misty lake and twinkling lights from a neighboring village.

A candle-lit religious procession snakes its way through Santa Fe's cobblestone streets.

In the plaza, the heart of the village, women sell fish caught from the lake. Elderly men park themselves on benches, while grandmothers bustle past to the church.

Young men are noticeably absent from the village. Most have gone to the United States, to places like California and Oregon, to earn more than they can selling pots. A few young men this evening cluster on street corners, drinking beer and looking bored.

Mothers heading home from the corner store are bundled in traditional striped shawls, called rebozos. Children skip and hop alongside them.

Scores of trucks loaded with pots pass the religious procession. They rumble past the plaza, the elderly men nodding off, the grandmothers fingering their rosary beads, and the young men slouching on the street corner.

The trucks are headed for Morelia, where candy makers will pack the pots with tamarind-chili paste.

Morelia isn't always the final stop, though.

Sometimes, these candies end up in the United States.

Tomorrow: A porous border and conflicting regulations make it easy for lead-laced candies to get into the United States.

Register staff writers Keith Sharon, William Heisel and news researcher Michael Doss contributed to this report.

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The process for detecting poison

The Register teamed with a clinic in Santa Fe de la Laguna to test blood-lead levels.

By VALERIA GODINES
and JENIFER B. McKIM
THE ORANGE COUNTY REGISTER

The Register linked candy that tested high for lead to clay pots made in Santa Fe de la Laguna, Michoacán.

That prompted the Register to test for lead in the village. The Register hired a doctor to conduct the tests and worked with the Mexican government's National Institute of Perinatology, which works on prenatal and early human development.

The Register also paid some of the expenses of a medical team. The team conducted tests on 92 children in Santa Fe on Oct. 4. The results showed that 87 children had high lead levels – anything at 10 micrograms per tenth of a liter of blood or higher. Some children had more than six times that amount.

Seven children tested at 65 micrograms, but their lead levels might have been higher because the equipment used at the clinic could only test to 65.

The Register's findings show children with lead levels comparable to one of the worst lead-poisoning cases in the United States. In the 1970s, officials found that hundreds of children near a smelter in Kellogg, Idaho, had levels of 40 micrograms and above.

At the clinic in Santa Fe, a blood-lead analyzer provided by the Mexican government was used so mothers could get results immediately.

Mothers and their children at the clinic were read a consent letter explaining how the Register planned to use the test results.

Other equipment at the clinic included two test kits to draw blood. The Register spent $800 on the kits to test a maximum of 96 children, but a few tests had to be repeated, leading to 92 results. The clinic was planned for two days, but the demand was so high testing was finished in a day.

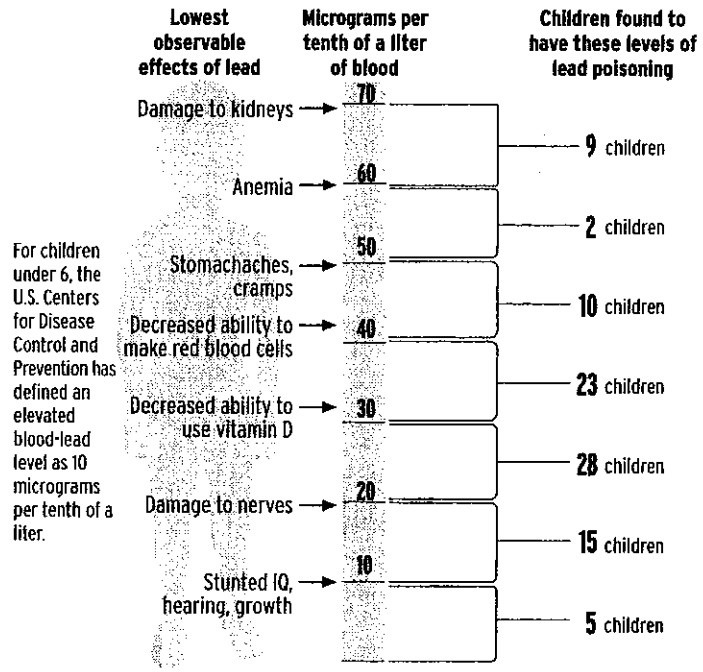
The medical team first surveyed the families, asking about exposure to lead, diet and symptoms of lead poisoning.

Children were weighed and measured. Doctors drew blood by pricking the kids' fingers. The blood was mixed with chemicals and placed on a sensor strip. Results came in 20 minutes.

Specialists explained the results to mothers. The Register consulted experts about

Testing children's lead levels

The Register tested 92 children ages 1 month to 11 years for lead poisoning. 87 had high lead levels.



Source: Register research

MOLLY ZISK / The Register

compensation and decided not to pay families, but children were given toys, such as stuffed animals, balls and cars that ranged in value from $2 to $5.

Children were tested because they are harmed more from lead poisoning, and no widespread lead testing of children had ever been done in Santa Fe. The target age was children 6 and younger, but a few older children came to the clinic.

A team of 20 people – from doctors to nurses to nutritionists to academic researchers – worked at the clinic.

A nurse fluent in the local language provided translation.

Doctors and nurses provided consultations with mothers, explaining the need for more iron and calcium in their children's diet.

The Register also tested glazed pots from this village at the University of Texas, El Paso. The university did this for free.

The testing, which involved putting a solution into the pots and testing the solution for lead, showed varied results.

Some of the pots had little lead, while one pot showed lead levels at 190 parts per million. California sets its guideline for lead in candy at 0.2 ppm.

"I absolutely would not want a young child putting these items in his or her mouth," said Nicholas Pingitore, the environmental scientist who oversaw the pottery testing.

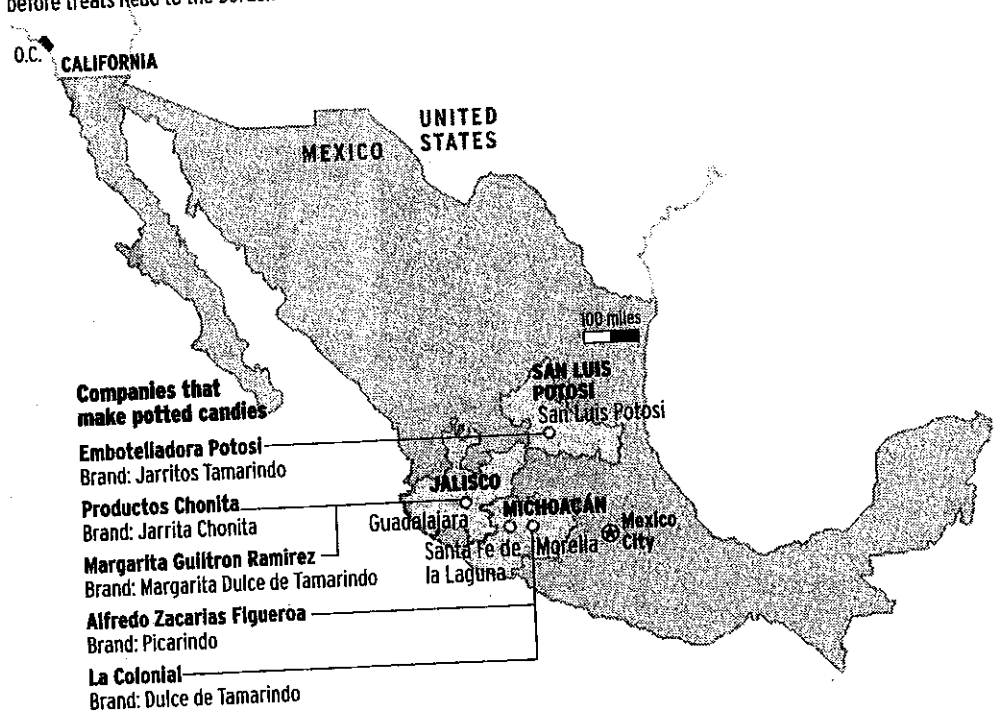
A sample of the powdered lead oxide called greta, used as a pottery glaze, was sent to Hayward-based Forensic Analytical for testing.

The results show it was 60 percent lead.

Register staff writer William Heisel contributed to this report.

Packaging candy in pots

Candy comes in wrappers and bags, but some Mexican candy comes in clay pots made in little towns like Santa Fe de la Laguna. Several companies package candy this way. The packaging of candy is the next stop on the trail before treats head to the border.



THURSDAY
April 29, 2004

THE ORANGE COUNTY
REGISTER

SPECIAL INVESTIGATION | DAY 5

POROUS BORDER

Regulators can't agree on which rules to follow to stop the flow of tainted candies into the United States.

CANDY LAND: Guadalupe Marquez Gonzalez stocks several brands of Mexican candy at La Tapatia Mega Dulces in Tijuana. La Tapatia is one of the largest candy stores and warehouses in the city.

READ THE ENTIRE SERIES IN SPANISH THIS FRIDAY IN EXCELSIOR. FOLLOW THE SERIES IN ENGLISH AT WWW.OCREGISTER.COM/LEAD/

Story by WILLIAM HEISEL and JENIFER B. McKIM
Photos by ANA VENEGAS
THE ORANGE COUNTY REGISTER

TIJUANA, MEXICO

This place is kid heaven.

La Tapatia Mega Dulces, in the factory district, is stocked floor to ceiling with every imaginable type of Mexican candy: chocolates, lollipops, jelly pots, soft candies with hard centers, hard candies with centers that squirt when you bite into them.

A store-sponsored, weekly TV show features a man dressed as a giant mouse going on adventures around town. Advertisements give viewers a glimpse inside the store: kids wide-eyed and giddy, staring up at the towering stacks of candy.

Vehicles with U.S. license plates fill the parking lot. Big trucks load up for sales in California. Parents pack their trunks

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Regulators face hurdles

FROM PAGE 1

with bags for birthday parties and weddings in San Diego, Orange County and Los Angeles.

Manager Manuel Ramirez knows that some brands of candy in his store have tested high for lead in U.S. regulatory labs. He knows that they've been stopped at the border and turned back. But, as much as he knows his business wouldn't exist without kids, as much as he is a father with young kids of his own, he is a businessman.

California Department of Health Services records show that more than 80 Mexican candy brands have tested high for lead in the past 10 years. When told this, Ramirez shrugs.

"How am I supposed to police the international distribution of candy from my one store here in Tijuana?" he asks. "I do what I can, but I only can act on hard evidence."

Mexican regulators say they can't do much about the problem either. They don't have enough money to correctly license the candy makers, let alone inspect their factories.

At the border, U.S. agents have the staff to inspect only a fraction of the trucks carrying candy from factories and from stores like La Tapatia.

And, in the United States, store owners and county health workers say they can't act on evidence that hasn't been provided to them.

In a two-year investigation, The Orange County Register found that regulators can't agree on which rules to follow, who should enforce them and whether to share findings with people who can keep poisonous candies from kids. All the while, candies continue to be sold throughout California that contain enough lead to violate even the most liberal safety guidelines.

State and federal regulators acknowledge that their efforts need improvement. But they emphasize that they are working in uncharted territory. It has taken more than 40 years for government agencies to find effective ways to fight lead in paint and in gasoline, and those battles still aren't won.

Research into the widespread presence of lead in candy not only is relatively new but it has one significant barrier to overcome: the problem doesn't start on U.S. soil. It starts where U.S. laws and regulations have no power.

It starts in Mexico.

RESOURCES LACKING

The streets in Morelia are pocked like a mouth full of cavities. Last spring, two environmental health workers drove these streets in a little red truck, stopping abruptly at pot holes, gingerly squeezing down narrow roads, politely asking for directions from taxi drivers and store clerks, all in search of a candy company licensed by the state of Michoacán.

The central Mexican state's Environmental Health Department has registered roughly 32,000 businesses. Inspectors try to check them for obvious health hazards, but even finding those businesses can be a struggle.

"We can't verify all the companies that exist," said Gerardo Mendoza Ramirez, the chief of the Michoacán Environmental Health Department.

This particular hunt ended at the brightly painted doors of a small candy factory, Fabrica de Dulces Cisne.

The company's salted tamarind-and-chili products are abundant in Orange County stores, although candy makers say they don't export. The candy has not tested high in California, but similar tamarind-and-chili candies have shown high lead levels.

On the day Michoacán health workers came calling at Cisne's doors, though, they weren't even given the opportunity to check for problems. An employee, through closed doors, politely said that workers had gone home. No one could answer their questions.

Coming back the next day was not an option. They had other tasks to do.

This type of encounter was nothing new to Mexican health officials, who acknowledge their inability to effectively track and regulate the booming candy industry.

"We don't have a lot of people. It can take a year to visit a factory that is registered," Mendoza said.

Staff isn't the only resource in short supply. For tracking and inspecting those 32,000 companies, the 10 employees in the department's central office share one phone and two computers, which often are on the blink. The office has one fax machine that requires a signature from the director to use.

Companies are supposed to tell the state in writing where they are operating and what they are producing. But there is little follow-up.

Virgilio Perez Negron Medrano, one of the workers trying to contact Cisne, said it's difficult to even find established addresses. Imagine what it's like when companies provide false addresses, he said.

The Michoacán government isn't sure how many candy companies exist. The state has registered fewer than 10 companies in the capital but candy makers – many of whom have been in business for generations – say numbers are at least three times that.

They're hard to find because so many of them are small. Unlike sophisticated candy companies in the United States that operate on massive industrial campuses, many candy makers mix batches in their garages, cook them in their kitchens and ship them from the nearest post office, which is often many miles away.

Even if candy factories are found and candy is sampled, Mexico doesn't hold companies accountable for making products with excessive lead.

The chief health official for Mexico told reporters two weeks ago that fears about Mexican candy had been overblown. His comments were prompted by a U.S. Food and Drug Administration press release telling parents to be aware of lead in Mexican candy.

"You would have to eat enormous doses for an acute intoxication to occur," said Mexican Health Secretary Julio Frenk in an Associated Press account.

The government has been working on setting standards similar to guidelines in the United States, said Jose Luis Flores, director of surveillance for the Mexico Ministry of Health.

Flores said that after the poisoning of a Costa Mesa boy in 2001 that was linked to candy, the Mexican government tested candies nationwide and found that there was a problem with lead in wrappers. But candy testing in Mexico is not routine, and health agencies don't track children who may have been poisoned by lead in candy.

When told about the U.S. tests of Mexican candies, Flores responded with surprise.

"If there's a problem they should tell us so we can identify who's the factory owner," Flores said. "Communication should be improved."

Flores maintained companies are raising their standards even without strict government oversight.

"I think the quality of Mexican candy has improved a lot," he said. "The candy is eaten principally by Mexicans, and we are very interested that Mexican candy doesn't have lead."

Jorge Vazquez Narvaez coordinates the Michoacán health department's efforts within the Morelia city limits from a satellite office a few blocks from the state's main office. He said last year that no companies have permission to export outside the state. To do so they must fill out the proper paperwork and pass an inspection.

The quantity of Mexican candy that ends up on Orange County shelves is beyond his control, Vazquez Narvaez said.

"It goes as contraband," he said, smiling. "How many Mexicans are over there? It's clandestine."

AN EASY CROSSING

Manuel Ramirez's candy warehouse in Tijuana is a

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15-minute drive from the border.

Ramirez knows many of the products – including some chili-covered tamarind lollipops and tamarind in clay pots – are not supposed to be sold over the border because of U.S. regulators' concerns about lead and filth. He tells clients if they are planning to buy a big shipment they could have problems at the border.

Officials there acknowledge they catch only a small percentage of shipments being sent, but any large loads may attract attention.

Customers usually can avoid inspection altogether by stashing a few boxes of candy in their trunks and driving through the border checkpoints that tourists, not importers, use.

If they're not intending to sell the candies, they likely won't run into trouble, but some small-time candy merchants do take the risk, assuming they won't be caught.

Ramirez estimates that about 20 percent of his sales are meant directly for export to the United States. Regardless, as long as he sells within Mexico and doesn't ship directly to the United States, he is within the law.

"We are acting in a legal manner," he says, walking among the shelves packed with more than 1,000 brands of candy. "We aren't trying to hide. But we can't stop people from buying our product."

Rose Lucero-Stirk is one of those customers.

The 27-year-old Orange woman loaded up her Ford Expedition with candy last November, with her mother and 5-year-old son Dylan in tow.

She pulled out a big bag of Pelon Pelo Rico, a candy gel that is pushed through a tube and licked off the top. Dylan already had torn a hole in the bag and made a mess of one of the candies.

"He's not supposed to have them every day," she said. "But this is his favorite."

Lucero-Stirk, like many of Ramirez's customers, buys candy in Mexico for one reason: it's cheaper. She can buy 36 Pelon Pelo Ricos for less than $3 at La Tapatia. At the Food 4 Less near her home, $3 would buy six candies.

Pelon Pelo Rico has repeatedly tested high for lead in California tests, but Lucero-Stirk, like most parents, would have no way of knowing that. The state has not revealed its cache of test results.

TREATS FOR TRIP: Rose Lucero-Stirk of Orange and son Dylan picked up Mexican candies at La Tapatia in Tijuana. Lucero-Stirk stocks up on Mexican candy during visits to the border.

Regulatory confusion

The Food and Drug Administration and the state of California have different and contradictory regulations for what constitutes too much lead in candy. The federal government also has few – and varying – limits for lead in foods. Here are some examples:

California guideline for lead in:
Candy 0.2 ppm

FDA regulatory level for lead in:
Candy 0.5 ppm
Most foods 0.25 ppm

Federal level for lead in:
Sugar 0.1 ppm

The Register

One of her favorite candies, Tama Roca, a chili-coated ball of tamarind on a stick, also has tested high. The state hasn't revealed those tests either.

"The only thing I've ever heard about are the jellies that come in those little jars," said Lucero-Stirk, referring to candies in clay pots. "When I was little I ate them like crazy, but I won't let Dylan eat them now."

Tama Roca
The wrapper has tested as high as 24,600 ppm lead, 41 times state guidelines.

After learning about the potential high lead content in some of the candy she and Dylan had eaten, Lucero-Stirk said she intends to have her son tested for lead. His teachers have noticed that he has developed a speech impediment, and she's worried there might be a connection.

She'll be tested, too, she said. For her, the situation might be more urgent. She is a surrogate mother. She carried twins to term for a Los Angeles couple and was recently impregnated a second time, after she stopped eating the candy. Candy taken from her home and tested by the Register showed no lead.

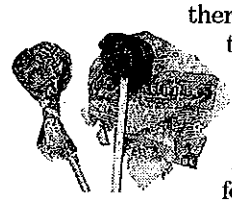
"How can the state know about this and not tell parents?" Lucero-Stirk said. "It's scary."

Many Mexican candy makers who insist they don't export say they sell a significant amount of candy in Mexican border towns like Tijuana. Still, they say they are surprised so much of their product is jumping the border.

"We sell in Tijuana. We don't send it directly to the United States," said Gerardo Barron, owner of the small, Jalisco-based candy company Dulmex Dulces Mexicanos. "But someone is buying it and passing it. We don't know who it is."

Dulmex specializes in tamarind and chili candies and was nearly run out of business three years ago when one of its lollipops, Bolirindo, was the subject of a public health advisory in California.

Barron says he has since fixed the problem. He separated his candies from their ink-laden wrappers by putting them first in clear cellophane with the label wrapped around, like a cigar. In California's testing data, there are no records of the company's products testing high since 2001, but the health advisory remains on the California health department's Web site and on sites nationwide.



Bolirindo
Tested as high as six times federal guidelines.

Like other candy makers, Barron said he doesn't know how his candy gets into the United States. Some call it "contrabando hormiga" – or ant contraband – describing the small, repeated passages across the border.

Last spring, Contra Costa County officials tried to track down a distributor selling black-market prescription drugs and Mexican candy to shops out of his car. The county shut down a local market for selling prescription drugs illegally, but they could not find the distributor.

The store owners "showed us an invoice for prescription drugs and candy," said Joe Doser, senior environmental health specialist with Contra Costa Environmental Health. "No name, no address. He was a fly-by-night, going store by store."

CANDY RARELY TESTED

At the tourist and pedestrian border in Tijuana, U.S. Customs, not the FDA, runs the show.

Customs agents allow people coming into the United States to bring up to $2,500 worth of merchandise if it's for personal use. But agents may question people with

packages worth less if they suspect the goods are meant for sale. Those travelers are sent through the commercial border, according to Vincent Bond, press officer for the U.S. Bureau of Customs and Border Protection.

Federal officials, however, can't check every car, nor are they focused on the importation of illegal candy, Bond said.

Now that the customs agency and the FDA are part of the Department of Homeland Security's push against domestic terrorism, candy doesn't hold a candle to al-Qaida.

"Our primary focus is anti-terrorism and terrorists. We are really focused on that, making the nation safe," Bond said. "The traffic backs up for hours. You have to use risk management ... and allow traffic that appears to be legal and law-abiding pass so you can concentrate on vehicles that need more thorough inspection."

Eight miles away at the Otay Mesa commercial border, federal regulators, while far better equipped than their Mexican counterparts, are still outmatched.

FDA compliance officer Vincent Iacono watches as trucks line up along the dusty road leading to the border, a transnational traffic jam that lasts all day.

Some 3,000 to 4,000 trucks pass daily at Otay Mesa. It is the state's largest commercial border with Mexico and second only to Laredo, Texas, in truck volume for all U.S.-Mexico crossings. That means in a typical shift, the 20-member staff has a maximum of four minutes per truck.

It should come as no surprise that on average, FDA workers inspect about 2 percent of all merchandise that crosses the border, according to FDA officials.

About three years ago, because of growing concern over lead, the FDA launched a plan to step up testing of Mexican candies.

It sounded good in theory, Iacono said, but border staff do not have equipment to test the candies on the spot. Samples must be sent to Kansas City or San Francisco, and Iacono's staff may not hear about results for weeks. The agency did not provide specific turnaround times for testing.

While samples are being tested, trucks are allowed to go on to their destination,

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Who shoulders responsibility?

FROM PAGE 3

under the agreement that they hold their wares until the samples have been cleared by the FDA. The agency doesn't always check shipments later to make sure they weren't parceled out and sold.

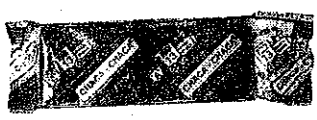
The FDA stopped a shipment of Chaca Chaca candy bars in 2002 for being "poisonous" but rescinded the order after high-lead tests could not be duplicated, Iacono said. Other candies, too, are allowed to be sold because the FDA can't find consistent high levels of lead.

FDA officials say one or two high lead tests are not enough to prompt federal action. But FDA testing records reveal a deeper problem. When top agency officials say candy is not one of their highest priorities, they're right. The agency rarely tests for lead.

The FDA did not respond to repeated requests for comprehensive copies of its testing records, but one report shows that between October 2000 and November 2002, there were 66 federal lead tests on candy, an average of a little more than two tests per month.

In seven different cases, the agency found that eating fewer than two candies would be enough to push a child past the FDA's guideline for daily lead consumption. Yet no action was taken. An additional 31 candies were tested just once with no follow-up testing.

Like most of the FDA's testing results, these were not shared with California regulators. The FDA does not have a mechanism for regularly distributing its testing results to state and county health agencies.



Chaca Chaca
The candy had an average high test of 0.43 ppm lead from 1998 to 2003.

"If we had some different type of situation to deal with where there was product tampering or something like cyanide put into a candy product, that would be a very different type of situation," said Michael Kashtock, an FDA safety adviser who has long been involved in the candy issue. "The state, local and federal governments would all participate in the response to that."

When the FDA put the company Candy Pop on its import alert list in August 2003 following high lead

tests, its border agents knew to start looking for the company's candies immediately. But county health inspectors would not be on the lookout for it on store shelves or in the homes of lead-poisoned children because the FDA does not send those alerts to health officials.

The candy that prompted the import alert was Vero Super Palerindas. The Register found it in Orange County this week.

REGULATORS' PREDICAMENT

Health experts say the standards themselves are part of the problem.

> Lead is one of the best understood, best studied and best monitored toxic chemicals.

It was banned from house paint in 1978 and from gasoline eight years later. Faced with a mountain of data on lead's connection to health problems, the U.S. food industry voluntarily quit using lead solder to seal food cans in 1991.

An active base of private, nonprofit and government officials work to track lead in the air, in the water, in paint and in food. But standards for how much lead is harmful continue to lag behind the science, experts say.

"All the new evidence is indicating that low-level lead exposure, even at very minimal amounts, affects the IQ, creates learning problems, creates behavioral disorders," said David Rosner, a Columbia University researcher who has written extensively about lead in consumer products. "The question isn't, at what level can we allow lead to be in food? The question needs to be, can we allow any food product to be sold that shows even traces of lead?"

Candy was among the first foods to draw researchers attention to lead – more than a century ago. In Europe, candy was being sold wrapped in lead foil. And in some cases the candies themselves were being dyed with leaded inks.

As technology made lead detection easier, the rules toughened.

The current federal standard for candy is 0.5 parts per million lead. It stems from the old standard for sugar.

The amount of lead allowed in sugar was lowered to 0.1 ppm four years ago by a different federal agency, the Institute of Medicine, but the candy standard has not followed.

Why not? The sheer size of the FDA and the myriad rules it must follow in making policies prevent it from acting quickly. It issued formal instructions to the candy industry in 1995 and now feels bound to them.

"We are sort of restricted by the policy we established by formal rule making and letters to industry," said Richard Jacobs, a metals specialist in the FDA's San Francisco district office. "That is the predicament."

The process of changing those rules likely would last several years and require multiple hearings and opportunities for the industry to make comments.

"Maybe some of these children have been seen to have clinically elevated levels, but frequently you can't associate that with the candy. It may be something else in their environment," said Terry Troxell, director of the FDA's Office of Plant and Dairy Foods and Beverages.

The Register reviewed many of its findings with Troxell on March 2, including the conflicting standards.

Three weeks later, the agency issued a letter to candy makers telling them it intended to take steps to reduce exposure of children to lead in candy. It did not explain how this goal would be accomplished or how quickly.

Researchers and public health advocates said the evidence is clear and should prompt swift action.

"If the guideline is 0.1 for sugar, then there's absolutely no reason for it not to be 0.1 for candy," said Gerald Markowitz, a City University of New York history professor who works in tandem with Rosner on lead research.

The differing regulations don't stop with sugar. Most other foods and some ceramics have a 0.25 ppm standard, half the candy standard set by the FDA.

A family could have a bowl full of candies on the table. Both could test at 0.4 ppm lead. The bowl would be con-

sidered in violation of FDA guidelines. The stuff that kids actually eat would be considered safe.

California health department officials, as far back as 1998, have asked the FDA to tighten its standards. A state toxicologist wrote in an e-mail that year to the FDA that the limit should be lowered to 0.1 ppm.

State officials have long been concerned that the federal guideline of 0.5 ppm conflicts with another FDA guideline setting the maximum level of lead a young child should consume in a day. That guideline is 6 micrograms.

How are the two rules at odds?

The FDA found out in March when it decided to put Chaca Chaca, a Mexican candy bar made in Morelia, on its import alert list.

For more than a year, the FDA ignored test results that showed the candy testing at between 0.2 ppm and 0.3 ppm lead.

It had the California health department asking for guidance on how to deal with its own lead results for the candy and the Register asking why nothing had been done to deal with 17 high lead tests in six years.

"The tests weren't as high as our action level for regulating a candy, but we hadn't taken into consideration the weight," said Joe Baca, director of the Office of Compliance in the FDA's Center for Food Safety and Applied Nutrition.

Chaca Chaca weighs about 40 grams. When the FDA multiplied the parts per million result by the weight of the candy, it found that children eating just one candy bar would be consuming more than 10 micrograms of lead. State tests showed some Chaca Chacas contained nearly 30 micrograms of lead.

It's math like this that has prompted the state Childhood Lead Poisoning Prevention Branch to be more aggressive when it comes to testing candy.

The state uses a lower guideline of 0.2 ppm, knowing that candies like Chaca Chaca could test at that level and contain more lead than the FDA allows.

In state and federal testing records, more than 90 candy samples fell into the gray area from 0.2 ppm to

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0.49 ppm.

The chances that a single candy testing in that area will deliver a powerful lead punch are pretty good. In 65 of those samples, it would take just one piece to surpass the federal consumption guideline. In all but six cases, it would take fewer than two candies to reach that same level.

Underscoring the confusion among regulators, two brands tested below 0.2 ppm a total of four tests, but because they weighed so much, they, too, were beyond the 6 microgram guideline. Both of those candies ended up being the subject of state and FDA health advisories.

THE RAP ON WRAPPERS

It's not just the content of the candy that can be tricky. FDA officials and state health regulators also can't get a good grip on wrappers.

The California health department uses an unofficial level of 600 ppm – the same level considered high for paint – to screen lead in candy wrappers. More than 130 wrappers and other containers have tested with high levels of lead since 1993, state and federal documents show. That's about 23 percent of all those tested.

State and federal officials say they can't go after a candy based on a wrapper test unless the candy tests high, too. The Register found this isn't always true.

In the case of a Filipino candy called Storck Eucalyptus Menthol, the state issued an advisory after just two wrappers tested high. State records showed no signs of lead in the candy.

Storck Eucalyptus Menthol
Wrapper tested at 26 times state guidelines.

FDA tests later revealed lead as high as 0.8 ppm, prompting the federal agency to put the candy on its short list of candies to be stopped at the border.

In other cases, the state and the FDA haven't followed up on high wrapper tests at all. A Pinta Rojo lollipop wrapper tested at 15,000 ppm lead in May 1995 – one of the highest test results ever found. But there are no records of subsequent tests, and it continues to be sold in California.

More than a dozen other candies followed the same pattern. High wrapper tests with no follow-up.

"There is no doubt that lead is dangerous to children, that lead is in foils and wrappers, that the lead leaches into the candy and that children absorb that lead," City University's Markowitz said. "It seems just outrageous that we would still be having a discussion about whether lead should be allowed in wrappers."

The FDA says that because wrappers aren't a food, they fall under the Consumer Product Safety Commission. After a year of questioning by the Register, the commission said last month that it is researching the wrapper issue.

To understand where lead in candy fits on the FDA's priority list, one need only look at the agency's list of recalls and "safety alerts."

Unlike the import alerts they send to border agents exclusively, these are distributed to health workers in county and state offices nationwide. The FDA typically issues hundreds of these a year. From 2001 to 2003, the agency publicized one health warning about tainted candy.

Iacono says he still sends to FDA headquarters in Washington reports of candies with levels of lead lower than the 0.5 ppm guideline. He hopes that doing so will help build a case for a stricter standard.

Iacono said that as part of the sampling effort, the agency picks candies it hasn't seen before. It also stops tamarind candies to look for excess dirt and insect parts.

Last summer at the border, FDA investigators Tammy Milks and Jeffrey Sloan opened boxes of candies to take samples for lead testing.

Before deciding which candies to sample, Sloan said, the agency takes into consideration two things: the size of the shipment and the amount of the workload at the federal lab.

When a reporter pointed out a candy that failed to detail "artificial colors" on its label as required by law, Sloan said, he would let the shipment pass because it was only about 50 cases.

"We don't want to overburden the labs," he said.

Asked if the team would be picking through candy boxes if reporters hadn't been there, Sloan looked up and said: "Possibly. ... Probably."

OTHER CANDIES TARGETED

In May 2002, the FDA did take legal action against a

candy – but not because of lead.

FDA agents went to an Irwindale warehouse in Los Angeles County and seized all gelatin candies made by Sheng Hsiang Jen Foods in Taiwan. The cause? The candies, which were sold in small cups, weren't dissolving quickly enough in kids mouths, causing at least three choking deaths nationwide.

Following stories in the Sacramento Bee about the candy, the agency launched a lengthy campaign to drive these candies out of the market.

Rick Gomez, the manager of Gosa Toys in Santa Ana, remembers state health workers looking for the cups in his warehouse.

"They were pretty worked up about it," Gomez said. "I had to get rid of all of them. I guess if there's a problem, they figure it out and do something about it."

Gomez said it was hard for him to reconcile that experience with what the Register revealed to him: that the state and FDA had compiled records of more than 100 types of candy that have tested high for lead and that more than half of those candies are available in Gomez's store.

The heir to his family's candy business was nothing short of stunned.

"Even if they have a candy that's tested high one time, they should tell people like me about it so we can decide whether to take something off the shelf," Gomez said. "How can they be all concerned about kids choking on one candy and not care about them being poisoned by all these other candies?"

A bill requiring the disclosure of candy test results was unveiled in Sacramento last year.

It started with so much hope, but supporters soon learned that it isn't easy to force change in the Capitol.

Tomorrow: A San Diego activist begins her campaign to rid candy of lead after an Orange County boy is poisoned.

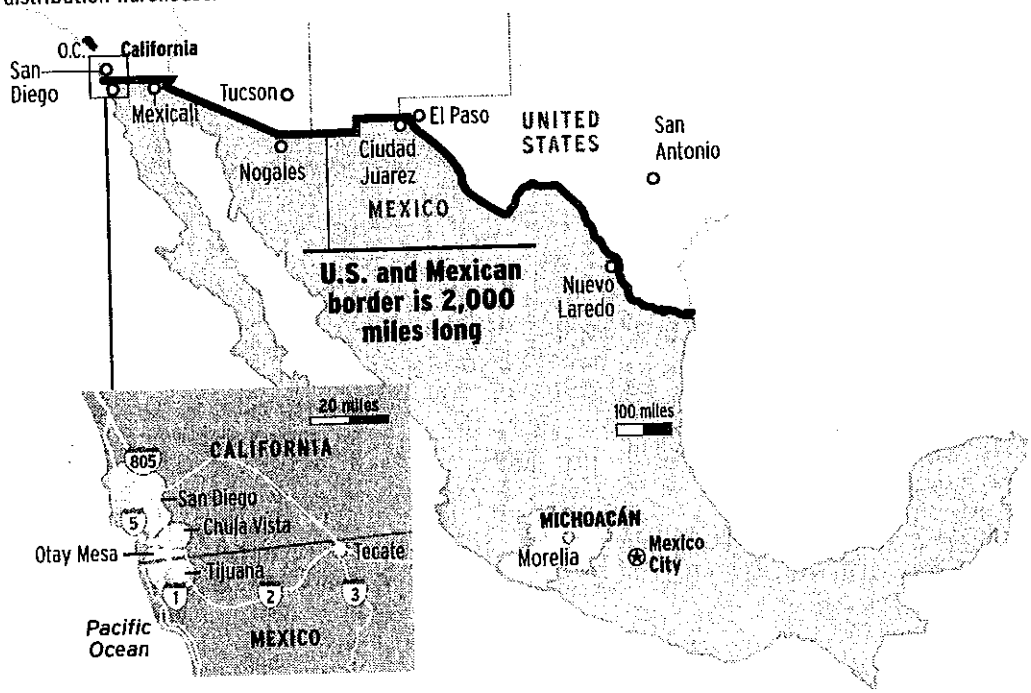
Register staff writers Valeria Godines and Keith Sharon and freelancers Kim Calvert and Zaynah Moussa contributed to this report.

CONTACT THE WRITER: (714) 796-3615 or lead@ocregister.com

A LITTLE INDULGENCE: Frank Salcedo Jr., center, of San Bernardino buys some of his favorite Mexican candy to take home at La Tapatia Mega Dulces in Tijuana.

Crossing the border

After the candy is packaged, it is sent to the border. Candy comes across California's 150-mile border with Mexico in a variety of ways: in someone's trunk or suitcase for a birthday piñata, gift or store shelf, or in a truck traveling to a distribution warehouse.



FRIDAY
April 30, 2004

THE ORANGE COUNTY
REGISTER

SPECIAL INVESTIGATION | DAY 6

SEARCH FOR ANSWERS

Fight for laws is hampered by budget problems and cultural resistance.

ACTIVISTS: Leticia Ayala, left, and Luz Palomino go door to door, warning families about the dangers of lead. They took their fight to Sacramento last year, focusing on lead in candy.

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Story by KEITH SHARON, JENIFER B. McKIM and HANH KIM QUACH
Photos by ANA VENEGAS
THE ORANGE COUNTY REGISTER

Don't be surprised when the naked women show up.

They've asked one another how far they would go to finally get someone to listen.

They have laughed about how they would walk into the state Capitol in Sacramento carrying bags of poisoned Mexican candy. How they would stand in front of the Legislature and – whoosh. The dresses would hit the floor. They're that frustrated.

These 10 community activists, or *promotoras*, are tired of losing their battle to protect the children of California from the toxic treats the state government usually ignores, treats that the Mexican government says are too difficult to regulate.

Last summer, the women from

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Working to make a difference

FROM PAGE 1

the San Diego-based Environmental Health Coalition were the principal supporters of legislation that promised sweeping changes to the state's lead-prevention program – a $1.2 million expansion that would increase candy testing, establish clear procedures for issuing health advisories and make lead levels available to parents and health-care workers.

But the promotoras got a hard lesson in Sacramento politics.

U.S. candy industry lobbyists tried to convince lawmakers that the federal government was taking care of lead in candy – even though the federal government had no such plans. The lawmakers, facing a massive state budget deficit, chose to believe it.

And the state's lead-prevention branch – with its primary mission of protecting children from the dangers of lead – didn't testify at all. The agency's silence bothered the promotoras the most.

The leader of the promotoras, 31-year-old Leticia Ayala, started the fight to change the law with little more than hope. Today, she still has it.

But what happened in between has tested her resolve, her wits and her belief that government can make a difference.

AN ACTIVIST'S FIGHT

Ayala is not married and doesn't have children, but she's as passionate as any mom when it comes to keeping lead away from kids.

She started with the coalition in 1993 as an office manager, working her way up to the position she currently holds, director of the Campaign to Eliminate Childhood Lead Poisoning. The coalition is a nonprofit group that tries to engage the San Diego community on environmental issues like the protection of wetlands, the banning of toxic pesticides and the eradication of lead.

For more than three years, Ayala has been trying to force-feed the dangers of lead in candy to anyone who will listen.

In 2001, a health advisory about a Costa Mesa boy sparked Ayala into activism.

The boy had a dangerously high blood-lead level. When investigators tried to figure out why, the usual suspects – house paint, contaminated soil, antiquated pipes – were nowhere to be found. What they discovered was Bolirindo, a popular chili-flavored tamarind candy.

The state immediately issued the advisory and ordered Bolirindo pulled from store shelves.

If Bolirindo were tainted, Ayala thought, what other candies also were dangerous?

She remembers calling the state Department of Health Services to ask about the potential for finding lead in other candies.

"They said, 'We haven't been systematically tracking candy,' " Ayala recalled.

What she didn't know at the time was this: The state had been tracking lead in Mexican candy since 1993. The Orange County Register found records of about 1,500 tests showing one in four candies were higher than the state's danger level for lead.

State guidelines set the "level of concern" at 0.2 parts per million lead. A child who eats 0.2 ppm in a standard piece of candy would be exposed to 6 micrograms of lead, which the state says is dangerous.

Ayala decided to begin tracking candy herself.

During national Lead Poisoning Prevention Week in October 2001, Ayala and her group went to the *dulcerias* along San Diego's Imperial Avenue, a street that would not look out of place in Tijuana.

Ayala and the promotoras sent more than 30 samples of imported candy to the state for testing.

The preliminary results confirmed what Ayala feared. Seven candies tested higher than the state's guideline for lead.

But the state said it needed to do more follow-up testing before it could take any action.

Next, Ayala did two things activists do – she got mad, then she decided to do something about it.

"It's outrageous," Ayala said. "It really hits you when you see all the candies on the shelves. It burns you."

Ayala and her promotoras started a campaign in San Diego to educate store owners, parents – anyone who would listen.

It was the same kind of public education drive that the health department often engineers with brochures, hotline phone numbers and statistics.

But education campaigns often don't reach much further than the parents who show up for the presentation.

Ayala decided to try to make a bigger change.

She drove south to Chula Vista and marched into the office of Juan Vargas, a state assemblyman.

When Ayala arrived, she met his communications director, Tanya Aldaz, who was eating Chaca Chaca, a salty candy with a history of high lead tests.

Ayala started the meeting by saying that Chaca Chaca had tested high several times for lead.

"Tanya's eyes got big," Ayala said.

LAWMAKER'S EYES OPENED

Juan Vargas remembers the oranges.

His family – he was one of 10 children – were so poor growing up in National City near San Diego that at times their only food was the oranges his mother could pick off neighborhood trees.

He also remembers the candy. His favorite was made with tamarind.

"My father loved them too, and he would buy them for me," Vargas said. "Especially during Christmas, I used to eat those things like they were going out of style. And after Easter, I used to eat those things by the pounds."

The day Leticia Ayala came into his office was the first time Vargas learned that tamarind candies could be tainted.

He couldn't believe it.

"It's like finding out milk has lead in it," Vargas said.

Assemblyman Juan Vargas sees an uphill battle this year to regulate candy.

Vargas' story is an inspiration. He overcame his family's poverty and attended the University of San Diego, Fordham University and Harvard University, where he earned a law degree. He spent five years studying to be a priest. He has worked at a hospice with dying patients. He worked with gangs in East Los Angeles. He worked at a homeless shelter in the Bronx.

He won his Assembly seat in 2001, and it wasn't long before he was up to his suit pockets in candy.

With Ayala's help, Vargas wrote AB256, the food-safety bill that asked for $1.2 million to allow the prevention branch to do more candy tests.

Convincing lawmakers wasn't their only hurdle.

DENIAL DOMINATES

It is tough to change a law, but it might be tougher to change a culture.

La Habra parents Violeta and Victor Estrada found out years ago that two of their girls, now ages 11 and 13, had lead poisoning. A health nurse told them about the dangers of Mexican candy.

The Estradas said they still eat it. The 11-year-old, Jessica, listed tamarind candies in clay pots, which have tested high for lead, among her favorites.

"I like them all," said Jessica, whose blood-lead level tested high 10 times from 1994 to 1998.

Violeta Estrada said she felt ignorant because she hadn't kept her daughters away from the candy. She also said she is unhappy such candies are so easily available.

Victor Estrada said part of it has to do with lack of information.

"We are poorly educated in this," he said.

Some people don't want to stigmatize their culture.

Gloria Bonilla, another La Habra parent, didn't tell her son, Javier, what poisoned him. She is sure it was the imported, clay-potted candies she bought him daily from the neighborhood candy truck. Not only have the candies tested high for lead, but the pots, with their lead-based glaze, are particularly dangerous.

But Bonilla said she doesn't want her children to associate negative thoughts with her home country, Mexico.

"I won't forget who I am or where I'm from, but if (candy) is bad for my kids, I won't give it to them," Bonilla said. "I love my country, but I don't want my kids to get sick."

Instead, the single mom tries to avoid the candy truck. She takes her children to church, the library or a park after dinner when the truck

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FROM PAGE 2

stops along her street with its distinctive tune that makes her children jump.

Sometimes, despite what she knows, she lets them buy the treats anyway.

"There are times when I can't avoid it," she said.

Many Latinos do not believe that a treat they have enjoyed for generations could be harmful.

Lead-poisoned children don't look sick. But studies have shown that, even at low levels, lead poisoning is associated with decreased intelligence, impaired behavioral development and stunted growth, according to the U.S. Centers for Disease Control and Prevention.

Juan Rivas, store manager for Northgate Markets in Buena Park, sells a large array of Mexican candies, which are some of the most popular products in the store.

"I have a lot of nephews; they consume it here, and none of them are retarded," said Rivas, who loves to eat the sweet and sour candies himself. "We consume them in Mexico. Nothing has ever happened there."

But experts say eating lead can cause serious health problems.

Downtown Los Angeles candy merchant Benjamin Santoyo refuses to believe that.

"It's not true," said Santoyo, whose shop, El Cora, joins a cluster of stores and open markets filled with candies, piñatas, fresh fruit and dried chili that draw small business owners and shoppers from Los Angeles and Orange County. "If there was lead, people wouldn't buy it. Everybody would die in Mexico."

The heavy-set owner jokes that every time people hear about lead in candy, his business improves.

"They are curious, they want to eat lead, they say lead is good for the blood," said Santoyo, whose inventory included tamarind in clay pots and other brands that the state has found with high levels of lead. "(Tamarind in clay pots) sells the most. They say, 'Oh, tamarind with lead, how good is it?' "

BUDGET WOES HURT BILL

Last spring and summer, AB256 zipped through the Legislature.

It passed through the Assembly Health Committee with a 15-6 vote. Passed Appropriations, 18-6. It passed the Assembly floor, 46-27. It passed the Senate's Health and Human Services Committee, 10-2. The Sierra Club declared its support.

Ayala and Vargas were on a roll. They believed, both said later, that the bill was a slam dunk.

Ayala and Vargas testified before state committees four times. Each time, Ayala brought her plastic bag of lead candies and talked about the health risks associated with eating lead.

She asked someone from the state health department to join her at the microphone. But she was informed that because the department felt the bill was too expensive, no one would be testifying with her.

Each time, she endured the legislators' attempts at humor. They jokingly chastised her for not bringing enough candy for everyone on the committee to eat.

Ayala didn't laugh.

Lawmakers voted for the bill. Saving kids from the dangers of lead was a no-brainer, it appeared.

Until the money came up.

In a year when the state faced a $38.2 billion budget deficit, the cost changed everything. The Senate Appropriations Committee estimated the Vargas bill would cost $650,000 to get started and $525,000 per year to run.

The money issue threatened to kill the bill, especially among legislators who had eaten this candy.

"I've eaten them during my lunchtime, and I'm still alive," said Bob Pacheco, R-Walnut. Pacheco, the former vice chairman of the Assembly Health Committee, voted against the bill. "It makes it pretty difficult for me to look at it and say, 'Well, jeez, they're pretty bad,' when I've eaten them all my life. I just couldn't see justification, nor did I see sufficient proof."

The only other arguments against the bill came from Hershey Foods Corp. lobbyist Dennis Loper, and Kristin Power, a lobbyist for the Grocery Manufacturers of America. Hershey makes much of its chocolate in Mexico. The company also had one of its candies test at the level California regulators consider a safety concern in July 2001, records show.

Loper and Power were brief in their comments about the Vargas bill, speaking for less than a minute.

Both said state legislation was unnecessary because the federal government's Bioterrorism Act allowed U.S. Food and Drug Administration investigators to stop contaminated candy before it crossed into the United States.

Assemblyman Bob Pacheco doesn't see a problem with candy he grew up eating.

"Ultimately, the FDA has the responsibility of removing (adulterated candies)," Power said.

Without investigation to see if the FDA's bioterrorism mandate truly included checking candy, the Senate Appropriations Committee voted.

Ayala was in Costa Rica at the time. Although she wanted to be in Sacramento for the outcome, she had scheduled a vacation and couldn't change the plans.

She gave a friend her e-mail address and told him to contact her as soon as the vote was final.

LEAD GETS OVERLOOKED

The Bioterrorism Act, created in the aftermath of Sept. 11, 2001, pumps money into the FDA to stop terrorists from contaminating the U.S. food supply.

It allows the FDA to hire additional inspectors and testing technicians. It requires foreign companies to register with the FDA. It requires that the companies notify the federal government before shipping foods into this country.

But its main goal is to stop sabotage – not lead in candy.

The Bioterrorism Act ranks the contaminants inspectors are after. Top rankings go to anthrax and botulism, because they are extremely deadly. Secondary rankings go to salmonella and E. coli bacteria, which, to a lesser degree, can cause death and illness.

Lead, which does most of its damage with repeated exposure over time and is mainly a threat to children younger than 6, is listed only as a potential agent that could be used by terrorists in an attack. In reality, experts say, lead isn't likely to get much attention.

"There is nothing to make us think terrorists are poisoning California's children with lead," said Calum Turvey, director of the Food Policy Institute at Rutgers University. "If lead wasn't being detained prior to the Bioterrorism Act, it won't be detained now."

Before the act, the FDA screened about 2 percent of the food coming across the border. How much food is screened now? Two percent. And there is no plan for additional screening of food, said Sue Challis, customs spokeswoman.

Dr. Georges Benjamin, executive director of the American Public Health Association and former health secretary of the state of Maryland, was adamant that California legislators made a mistake if they believed the FDA would take care of the problem of lead in candy.

"The state has a responsibility to its citizens first," Benjamin said. "Don't rely on the federal government to regulate what comes into your state. The FDA doesn't have the resources either. The Bioterrorism Act is not going to help. The FDA is looking for anthrax and plague."

Even when told that leaded candy falls through the holes of the Bioterrorism Act, some lawmakers said food protection is still a federal responsibility.

Assemblyman John Campbell, R-Irvine, said adding new state employees, regulations and reporting guidelines won't improve the situation.

"Duplication of effort doesn't help anybody," Campbell said.

With this bill, the voting ultimately didn't matter. It was deemed too expensive in the Senate Appropriations Committee.

Even AB256 supporter Sen. Dede Alpert, D-San Diego, said the bill never had a chance because the health department was in such a crisis that it was laying off workers, not adding them.

"How would we have enough employees to do this?" said Alpert, who lives near the border. "As worthy

as this is, there are other programs in existence we can't figure out how to fund.

"It's sad. You would want there to be a federal solution because this is an international problem. But the border people have enough problems with drugs, weapons and now terrorism. (Candy) will be at the bottom of their priority list."

THE FIGHT CONTINUES

Leticia Ayala was in an Internet cafe in Costa Rica when she got the e-mail.

It was a description of what had happened to AB256 in the S nate.

he never got past the opening line: "It's best you don't read this."

So, she didn't.

"I almost cried," she said.

Vargas had tried to get it passed. He cut the bill drastically, hoping that the reduced spending would salvage some of the testing program. He tried to make it a two-year bill, meaning it could be voted on again the next year when the state's fiscal picture might be rosier.

Neither tactic worked.

The bill died.

It was stripped of its content, and it became a bill to fund three public works projects in downtown San Diego, including an upgrade of the state government building.

TAKING THE INITIATIVE: Leticia Ayala and her neighborhood promotoras collected more than 30 candies from San Diego stores to test for lead. Seven candies came up high, prompting them to take their fight to the state Legislature.

The cost of the public works projects: $472 million in state money.

In the end, AB256 had no mention of candy or lead or danger.

The gutted bill passed. And the only reason it passed, Alpert said, is that the state had to spend no new money to pass it. The bonds to pay for the bill were sold more than a decade ago.

Ayala didn't blame the legislators, the lobbyists or the FDA.

"The Department of Health Services – they're the bad guys," Ayala said.

The state sees itself quite differently.

The health department's Childhood Lead Poisoning Prevention Branch issued its first statewide candy advisory in May 1993. It has sent seven advisories in 11 years to health offices around the state.

"California has been a pioneer of raising the issue of diverse sources, including candy," said Dr. Valerie Charlton, the head of the lead-poisoning prevention branch. "We see ourselves as having opened this whole discussion and whole issue. We inform our local programs. We talk about it in articles. We use it in our educational materials."

The health department is in such a cost-cutting mode, however, that it has asked

SEE **ANSWERS** • PAGE 4

Holding out hope for change

FROM PAGE 3

that three health-care bills that passed last year now be repealed because they are too expensive. The bills would affect Medi-Cal for Native American tribes, stem-cell research and regulations for tissue banks.

'DO THEY CARE?'

Ayala said the state is indifferent about her Latino community.

"Do they care? ... I know what their answer is," Ayala said.

Vargas took the point a step further, imagining what would happen if there was a threat to a more affluent community.

"One of the things that's true and sad is poor communities ... their issues are seldom heard," Vargas said. "And if they are, they're given sort of the back seat to other issues. What if we found out there was a particular type of perfume that was incredibly expensive and being used in Beverly Hills? And if you used it every day for a month, you could endanger your health significantly. A bill that would target that perfume would sail so quickly through the Assembly, Senate and to the governor. There would be a press conference in Beverly Hills within a week. It would be an urgency measure.

"That's just the truth of the matter, and it's sad."

A few miles from the state Capitol in Sacramento, Maria Perez lives with her 4-year-old son, Jesus, whose lead poisoning was linked to Mexican candy. The legislative process has gotten quite frustrating for her.

"They don't care about Latinos. That is why they haven't done anything," Perez said. "How many more children are going to get poisoned before they deal with the issue?"

State officials said that far from ignoring Latinos, the lead program has focused most of its resources on keeping Latino children safe from lead. State officials said about 75 percent of all lead-poisoning victims are Latino and most of those victims live in older housing where lead paint is more prominent. The state's lead-poisoning prevention branch devotes most of its time to those paint cases.

"That is such the antithesis of everything that we stand for that it surprises me," said Charlton, the director of the lead-prevention program, responding to charges of racism.

"Everything we address in the program deals with things that would be of concern for lead exposure to children and to Latino children in particular. I would flip the question around to people who might say you're not addressing candy because it's a problem with Latinos. Which of the things that we address would they say are not of concern to Latinos?"

The program has a $20 million budget, most of which is passed on to coun-

ties to test children, evaluate homes for contamination and educate parents and children about lead threats.

Because the branch wants to ensure that kids are tested regardless of their immigration status, it has a small, separate program that funds testing of low-income children outside the Medi-Cal system. The state also certifies laboratories to perform lead testing to increase the number of places where testing can be performed, particularly in rural and low-income urban areas.

"And we know that the majority of the cases that we get are Hispanic," Charlton said. "All of our materials are bilingual. We have been working with two Latino groups that have been very active in this area as we develop our strategic plan."

Money – not racism – is the sole reason for its inaction, the state said.

"Because of the state's dire financial condition, the department staff did not spend much time on the proposed legislation because there's no funding to implement it," spokeswoman Lea Brooks said.

Don't think Ayala let it die there.

She persuaded Vargas to introduce another bill this year. Vargas and Ayala are working on final language of the new AB2297.

Still, Vargas doesn't see much hope.

"Everyone's telling me it's going to be so hard because we don't have support," Vargas said. "It makes it tough."

He called the battle for AB256 "a good starting point. It's not the ending point."

Ayala and her promotoras are even more determined to win this time.

Even if it takes getting naked.

Staff writers William Heisel and Valeria Godines contributed to this report.

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A roadmap for reform

More than two dozen ideas emerge to make candy safer for consumers on both sides of the border.

THE ORANGE COUNTY REGISTER

How do we make candy safe for all children?

We asked that question of many of the 500 people interviewed for this series.

With every solution came obstacles: money, limited personnel, lack of clear regulations and political will – here and in Mexico.

More than two dozen recommendations emerged from sources during the course of this investigation.

CHILI GROWERS IN MEXICO

- **Clean chilies before they are dried and milled.** Washing would eliminate dirt, which contains lead.
- **Implement a better tracking system.** Labeling chili bags at the farm would enable regulators to trace them.
- **Abandon rustic mills.** Closing these mills would eliminate contamination that occurs when parts, which are sometimes lead-soldered, disintegrate and mix with chili.

CANDY MAKERS IN MEXICO

- **Require lead-free certification.** Companies should require proof from suppliers that all ingredients – including chili, tamarind and packaging – are lead-free.
- **Use only washed, sterilized chili.** Setting high standards would pressure the chili industry to eliminate lead.
- **Create a lead-free trade group.** It could conduct tests and certify candies as lead-free.

POTTERY MAKERS IN MEXICO

- **Teach nonleaded glazing techniques.** Communities should try to master new glazing methods so they can phase out leaded glaze.
- **Reduce exposure to lead-based glazes.** Wear protective clothing if nonleaded glazes are not an option. Wash hands after glazing, keep workstations out of the kitchen, and don't let children or pregnant women work with the glazes.
- **Create a demand for nonleaded ceramics.** Teach customers through advertising campaigns that the shine they like on pots comes with significant health risks.

REGULATORS IN MEXICO

- **Strengthen oversight of candy companies.** Require more testing of candy companies and providers of chili, tamarind and packaging. Boost effort to inspect candy makers.
- **Educate candy makers and their providers.** Train candy makers and providers on ways to reduce lead.
- **Enforce regulations on lead-based glazes.** This could help escalate efforts to change potters' practices.
- **Screen children and pregnant women in potters' villages.** Provide follow-up treatment once screening results are in. Increase medical resources in rural areas.

REGULATORS IN WASHINGTON, D.C.

- **Strengthen the U.S. Food and Drug Administration's ability to test and hold candy.** Test candies at the border and keep shipments until testing is complete so regulators don't lose track of products.
- **Allow FDA to inspect Mexican candy makers and their suppliers.** Help overmatched Mexican health officials regulate and educate candy industry through on-site inspections.
- **Set one official lead limit.** Create consistent lead limit to allow for uniform regulation. Consider weight of candy and a lowered lead limit in sugar as part of analysis.
- **Create an official level for lead in wrappers.** Provide limits to allow federal and state regulators to require nonleaded wrappers.
- **Improve communication.** Federal and state regulators should share data internally and notify Mexican officials, who could work with candy makers to change manufacturing methods.
- **Educate consumers on both sides of border.** Publicize how candy can cause lead poisoning to pressure businesses to change.

REGULATORS IN CALIFORNIA

- **Test more candy in California.** Increase testing to achieve a more accurate picture of the threat.
- **Follow up on high tests.** Create a complete and convincing record of high lead in a candy to make it easier for the state to issue advisories without fear of litigation.
- **Establish protocols.** Decide how many times a candy must test high to prompt an advisory.
- **Make tests public.** Create a public Web site listing lead-testing results to better inform parents, health-care workers and vendors.
- **Encourage county tests.** Test candies found in the homes of lead-poisoned children to identify new problem candies and better track the problem.

HEALTH-CARE PROFESSIONALS IN CALIFORNIA

- **Screen all at-risk kids.** Make it easier for children to get tested in doctors' offices, rather than referring families to labs.
- **Widen definition of at-risk children to include those who eat Mexican candy.** Include questions about candy consumption when screening children for lead poisoning.
- **Educate public about candy dangers.** Create warnings to be placed in health clinics, stores and schools.

PROGRESS TO DATE

Some changes have occurred on both sides of the border after repeated questions from the Register during this investigation.

- **Grupo Lorena conducts internal testing.** The candy maker started to aggressively screen for lead after the company found out from Register reporters that its candy had tested high numerous times.
- **Dulces Moreliates stops using dirty chili.** The company announced in February it would use only sterile chili for all products.
- **Consumer Product Safety Commission studies lead in wrappers.** The federal regulatory agency said in March that it has launched a study of lead in candy wrappers nearly a year after telling reporters it had no information on the topic.
- **Chaca Chaca taken off market.** Three weeks after the Register showed lead findings to the state, the Department of Health Services and the FDA issued in March the first health advisory on candy in three years.
- **FDA considers lower candy limit.** The agency in March sent a letter to candy makers saying it will start the process of setting a lower "acceptable level" for lead in candy. The move came three weeks after the Register interviewed top FDA officials.
- **State changes tracking system.** The state in March sent counties new follow-up forms for lead-poisoned children. The forms specify candy as a source of lead rather than listing it under an "other" category.
- **The Register steps up publication of advisories.** Like many newspapers, the Register has paid little attention to state advisories about candy. In March, the Register decided it would give future advisories more exposure. When the state issued its Chaca Chaca advisory, the story appeared on the front page.
- **FDA issues statement on candy.** Without identifying brands, the agency said in April that parents should be prudent about feeding their children candies from Mexico. The agency's statement mentioned chili powder, clay pots and tamarind as lead sources in candy.

Steps taken to investigate lead dangers

An Orange County Register team spent two years reporting the problems of lead in Mexican candy. The story started – as do most good investigations – with an intriguing finding from a reporter covering her beat. Here is a window into the reporting dating back to the first discovery 2½ years ago.

November 2001: Reporter Jenifer B. McKim, who covers children and family issues, obtains paint chips at a Santa Ana child-care center while working on an investigation about safety hazards at day care. The Register tests them and finds high lead content. This triggers an idea to learn more about lead poisoning. The idea is set aside until the child-care stories are finished.

May 2002: McKim obtains county reports on lead poisoning. They show a significant number of children likely have been contaminated by Mexican candy.

October 2002: McKim shops for Mexican treats with the idea of testing a couple of brands. Samples are sent to a laboratory in Virginia, and one comes back with surprisingly high results.

December 2002: The paper switches laboratories, hiring Forensic Analytical to handle testing – the same lab that screens candy for the state. Two of the first 10 candies show high lead levels. McKim and her editors develop a testing strategy.

April 2003: The state turns over its database of candy tests – five months after the initial request. But the records are incomplete.

May 2003: McKim and photographer Ana Venegas fly to Michoacán, where several candy makers are based. They bring back a sample of tamarind and ground chili bought where a local candy maker gets ingredients. Both samples test high. While in Michoacán, McKim and Venegas visit Santa Fe de la Laguna, a village where pots are made using toxic glaze. Some popular Mexican candies are packed in these pots. Suspecting that the children are lead-poisoned, a plan is drafted to conduct tests in the village.

July 2003: Reporter Valeria Godines, who works in Mexico, travels to Aguascalientes with her husband, freelance photographer David Fitzgerald. She sees bags of chili weighted down with rocks, nails and battery parts. Eight of 10 chili samples obtained test high. California turns over 3,675 pages of documents, including testing records of candies and e-mails showing efforts to keep positive test results from local health workers. Through these records, McKim finds names of lead-poisoned children. Reporter William Heisel begins building a database of government candy tests. He pieces together testing documents to identify candies that have been found to contain high levels of lead.

September 2003: Godines heads to Zacatecas and obtains more chili. High levels of lead were found in much of the ground chili. Heisel visits candy warehouses and stores in Tijuana.

October 2003: Working with health officials in Mexico, Godines sets up a testing clinic in Santa Fe de la Laguna. The Register pays the expenses of the clinic and obtains consent from parents to use the results. Almost all of the 92 children tested had high blood-lead levels.

December 2003: The state contends it has finally turned over all its testing records. Heisel and reporter Keith Sharon spend most of the month entering these records into the Register's own database of government tests. The data is cross-checked numerous times with paper files the state provided.

January 2004: Sharon finds candies linked to Santa Fe in a San Diego candy store.

February 2004: Heisel ships a final batch of candy samples to Forensic for testing.

March 2004: Heisel conducts final interviews with FDA and state officials. Soon after, both agencies take their first significant steps to regulate candy since the Register investigation began.

On the lookout for lead

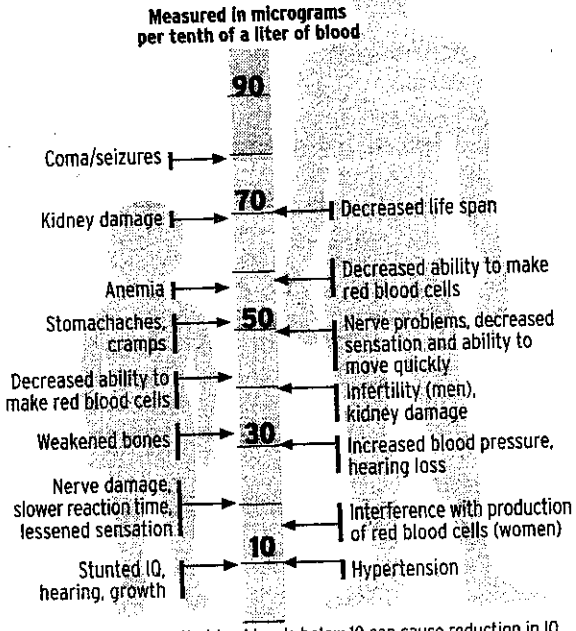
An estimated 434,000 U.S. children suffer from lead poisoning. Numbers have been declining nationwide because of rules banning lead paint and lead gasoline. But in Orange County, the number of lead-poisoned children has risen in four of the past five years, in part because of an increase in cases involving Mexican candy. The number of lead-poisoned children in California rose last year because of stricter reporting requirements. Even with low levels of exposure, lead can cause behavioral problems and lower IQ.

Symptoms to look for

- Decreased appetite
- Fatigue
- Irritability
- Difficulty concentrating
- Tremors
- Headaches
- Abdominal pain
- Vomiting
- Constipation
- Weight loss

Adverse effects of lead

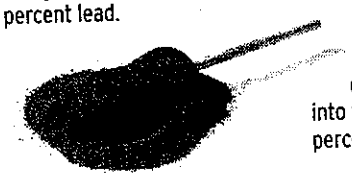
Studies show that long-term exposure to lead can affect a child's developing nervous system. Health effects range from hypertension to coma and seizures.



Studies have shown that lead levels below 10 can cause reduction in IQ.

In glaze

Candy sometimes is packaged in clay pots. To seal the clay and give the pot a shiny look, it is covered with a glaze called greta, which contains lead. The Register tested one greta sample and found it was 60 percent lead.

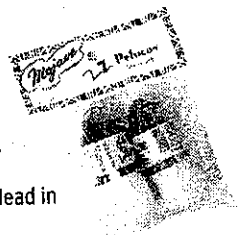


In chili

Chili often is not cleaned before it is ground, so dirt, which contains lead, gets into the mix. The Register found lead in 90 percent of the ground chili samples tested.

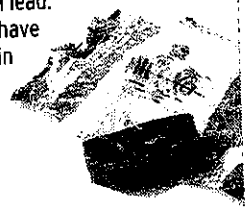
In tamarind

This sticky, acidic fruit can easily pick up lead from ink in packaging. The Register found lead in one sample.



In wrappers

Candy wrappers are printed with inks that contain lead. Regulators have found lead in wrappers more than 130 times.



Other sources of lead

These sources were linked to lead-poisoning cases in Orange County since 1998.

Lead-based paint, lead-contaminated dust and soil

Mexican pottery, including bean pots and tamale steamers

Home remedies, including azarcon and greta, used for upset stomachs or indigestion

Surma or **kohl**, a black powder made mostly out of lead, used around the eyes for medicinal and cosmetic purposes

Chapulines, or grasshoppers imported from Oaxaca, Mexico, often prepared with red chili powder

"Take home" lead, or lead brought into the household by someone who works with lead, including painters, mechanics, construction and factory workers

Getting the lead out

Adjusting diet

- Decrease fat intake because high-fat foods promote absorption of lead in a child's body.
- Increase foods rich in iron, calcium, zinc and protein that inhibit the absorption of lead.
- Take supplements but check with a doctor to find out the appropriate levels before giving them to a child.

Using drug therapy

- Drugs bind to lead in the body. The drug with the lead is then excreted in the urine. This treatment can be uncomfortable and requires a hospital stay.
- An oral drug that binds to lead is given every eight hours for five days and then every 12 hours for two more weeks.
- Drug therapy must be supervised by a doctor.

Getting information

If children do not have a medical provider, they may call the **Health Referral Line** (800) 564-8448

Orange County Health Care Agency's Childhood Lead Poisoning Prevention Program
(714) 834-8006

Sources: Orange County Health Care Agency; Centers for Disease Control and Prevention, Register research

MOLLY ZISK/The Register

THE AFTERMATH

Here are the headlines for follow stories that have appeared in The Orange County Register since the series "Toxic Treats" published April 25-30.

- **June 4, 2004: $7 million to fight lead poisoning unpaid**
  The state Department of Health Services has failed to collect millions in fees from paint and petroleum companies, shortchanging efforts to eliminate lead poisoning in children.

- **May 27, 2004: Assembly OKs bill to eradicate lead from candy**
  State Assembly passes bill that calls for more testing of lead candy, 71-2. Senate hears it next.

- **May 22, 2004: Call for action on tainted treats**
  Meeting attendees want lead levels cut to protect kids. Health officials sympathetic but cautious.

- **May 13, 2004: Vendors of tainted candies to be sued**
  Two groups file notices of action against Mexican candy makers.

- **May 11, 2004: Candy maker wants industry to eliminate lead**
  Grupo Lorena's plan aims for companies to tighten rules for Mexican candy.

- **May 2, 2004: Word on toxic candy spreads quickly in county**
  Mixed reactions from Orange County residents over lead in Mexican candy.

- **May 1, 2004: Officials vow action on tainted candies**
  FDA pledges more lead tests on Mexican treats as some stores pull them from shelves.

Read the series and all follow-up stories at **www.ocregister.com**