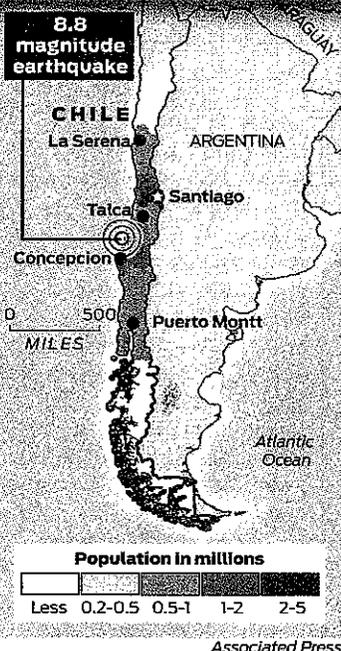


area, which is roughly 70 miles from the quake's center. There, cars lay mangled and upended on streets littered with telephone and power cables. The quake leveled old and new construction, despite the country's strict earthquake codes. A new 15-story apartment building fell, while an older, chemical lab at the University of Concepcion caught fire. The nearby port of Talcahuano, a wave flooded the main square as the receding and washing a large fishing boat onto the city streets. "We're talking about a tragedy," President Michelle Bachelet said at a conference Saturday night at



earthquakes; tsunami delivers some Bay Area beaches. **A16**

Many of those cash payments appeared to violate rules designed to limit how much vacation time state workers can accumulate during their careers. Most employees are allowed to bank 80 days' worth of unused vacation, but

Payouts continues on A18

LAW ENFORCEMENT SFPD takes 2nd look at Tasers

By Jaxon Van Derbeken
CHRONICLE STAFF WRITER

For more than 20 years, Taser International zealously guarded its stun gun technology against any suggestion that its use could cause fatal heart attacks. Assured of the devices' safety, and wanting to give officers an alternative to shooting dangerous suspects, 14,000 police departments around the world deployed Tasers — something San Francisco will consider doing this week. Critics of Tasers, however, in San Francisco and elsewhere, argue that the devices can kill. They point to statistics that show that since 2001, roughly 400 suspects stunned by the devices have died. The company counters that

Taser continues on A14

defines Yahoo CEO



Martin Sundberg / Yahoo

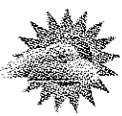
Bartz was named CEO of in January 2009. Yahoo Inc., tells this story for obvious reasons. It's the likely drawn anecdote for a lead-

er with a carefully crafted image as steely willed and blunt, illustrating the deep roots of her Midwestern work ethic and can-do attitude. And there's a moral: Decisiveness and nerve killed the snake before it could strike. It's these very qualities, the listener is left to conclude, that enabled Bartz to stand up to misogynist managers as she rose through the ranks of the technology industry, to turn around flailing Autodesk when she was appointed CEO — and to undertake a corporate overhaul that could lead to similar results at embattled Yahoo.

Bartz continues on A13

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FROM THE COVER

SFPD taking 2nd look at stun guns

Taser from page A1

those people died of heart conditions, drug use or both, not a Taser jolt.

But in May, Taser got a jolt of its own. It came from an unlikely source: a cardiologist who serves on the company's science advisory board.

Don't aim at chest

Dr. Charles Swerdlow reviewed heart data in 56 deaths of people who had been hit with a Taser and found at least one man who had died of a heart attack that Swerdlow believed had been caused by the device.

The UCLA medical school clinical professor and surgeon at Cedars-Sinai Medical Center postulated that 1 in 10,000 people hit with a Taser chest shot could die of ventricular fibrillation, the chaotic rhythm associated with a heart attack. It was rare, he said, but did happen.

Five months later, Taser issued a bulletin to client agencies: Officers should fire at the back or at the pelvis and below, not at the chest.

The Scottsdale, Ariz., company explained that its recommendation had less to do with safety than limiting legal risk. It still insisted the risk of death from a Taser jolt was "near zero."

But critics say Swerdlow's findings, and the company's subsequent about-face about aiming at the chest, should not be ignored as San Francisco considers whether

and how to deploy Tasers.

In 2004, San Francisco police commissioners were treated to a demonstration in which a police officer agreed to be hit with a Taser and the company told the panel that the devices were safe. But the Northern California chapter of the American Civil Liberties Union said the devices could endanger suspects' lives, and the panel shelved plans to buy them.

Pushing for Tasers

When George Gascón became police chief last summer, however, he began pushing for the stun guns he had introduced as chief in Mesa, Ariz. He ordered a review of five years' worth of officer-involved shootings in San Francisco, which concluded that one-third could have been avoided had Tasers been available.

The Police Commission voted against adopting Tasers on Feb. 17, as some members said they needed more time to review the research. The panel will reconsider Tasers on Wednesday.

Commission President Joe Marshall, who backs the chief's effort, was on the commission when the idea died in 2004.

"Nobody pushed it," Marshall said, but it's different now. "This chief is avid about it. This is one of the things he really wants to see happen." Indications are that the commission will go along.

Taser International began marketing its stun gun in 1988 and has sold it to police throughout Europe and Australia in addition to the United States. San Francisco is one of the few major U.S. cities whose officers don't have the devices.

The weapon works by conducting a current through darts, extended on wires, fired from a gun into the body. The electrical current that the device delivers interferes with muscular control and immobilizes unruly suspects.

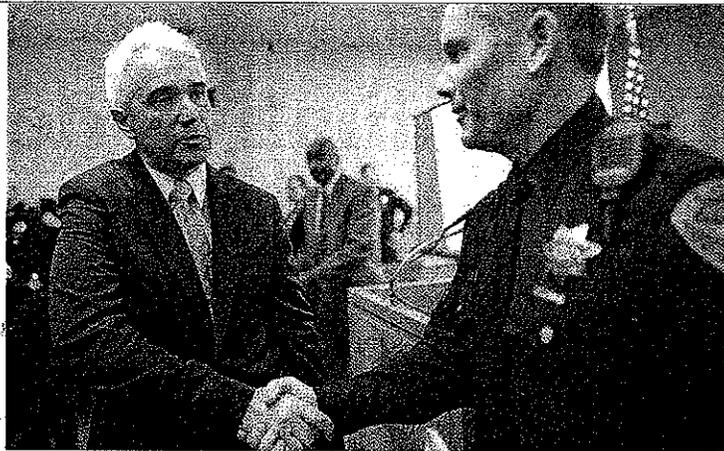
But as Taser use has grown, so has a contradictory body of research. Taser has insisted all along that its product is safe, when properly used. The company has gone so far as to pressure coroners to remove Taser shots as a factor in death reports, critics say.

Amnesty review

Critics often cite an Amnesty International review that found 330 deaths in the United States among people jolted by Tasers between 2001 and August 2008. The human rights agency found that in 50 of the deaths, autopsies cited Tasers as a contributing factor.

They also point to high-profile deaths, including a man who died in 2007 after being hit five times with a Taser in Vancouver, British Columbia.

A policy committee of the American Medical Association concluded last year that Tasers are



David Paul Morris / Special to The Chronicle

Police Chief George Gascón (left), greets Sgt. Joe McCloskey after a news conference on Tasers at the Hall Of Justice in San Francisco.

used "too frequently" by police, and said the devices "may contribute to the death of suspects, directly or indirectly."

Pig experiments

Some critics point to research findings on pigs that show excessive jolts from the device can stop the heart of a healthy animal.

Dr. Andrew Dennis, a trauma doctor and reserve police officer in Chicago, led a study at Cook County Medical Center in which doctors zapped 11 pigs twice each in the chest for 40 seconds with Tasers.

The jolts were much longer than what Taser tells police to use against suspects — a single five-second shot. Dennis said he wanted to know whether a Taser's electrical charge was capable of stopping a heart, which the company insisted was impossible.

Dennis found that it was possible — at least in pigs. All the animals suffered heart rhythm problems. Two died almost immediately, and a third within three minutes.

Dennis said that as an officer, he carries a Taser. He says the devices have

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value, but that police need to know they are not risk-free.

Other research supported the company's assertions of safety. A 2009 study by a researcher at Wake Forest University Baptist Medical Center in North Carolina reviewed 1,201 Taser uses by six police departments over three years.

Dr. William Bozeman — who has also served as an adviser to Taser — found that there were just three notable injuries involving single firings of Tasers, two from falls.

He later expanded on his findings, citing research of 5,000 Taser uses in the United States and Britain over five years in which no deaths were attributed to the device.

"There's never a zero likelihood of death, but in these cases it was extremely unlikely," Bozeman said.

Swerdlow's jolt

One area of research that had not been explored was a detailed review of heart data from deaths associated with Tasers.

Swerdlow, the UCLA cardiologist, decided to do just that on his own, without Taser's sponsorship. He learned of 422 deaths of people who had been shot with the device, but was able to obtain records for fewer than half the cases.

Of those for which he did get data, Swerdlow found 118 instances in which heart spasms could have been a death factor. He was able to obtain detailed heart data recorded by paramedics and doctors in 56 of the cases.

Most of the victims were men, averaging 35 years old, and had been using illegal drugs. One of them was a 25-year-old man who died in Georgia in 2004 within 15 seconds of receiving a third jolt from police.

The local medical examiner cited the Taser as a factor, but blamed a rare heart condition for the man's death and said the man had a history of drug use.

Swerdlow found, however, that "neither drugs nor cardiac disease could be implicated" in the man's death — the Taser jolts alone had probably caused ventricular fibrillation. He told Taser officials of his finding in May.

Taser shifts stance

In October, Taser issued its bulletin telling police to fire at the pelvis or below, away from the heart.

In a subsequent memo to police, the company said the recommendation "has less to do with safety and more to do with effective risk management for law enforcement agencies."

Even though the research shows the risk of fatal heart attack is "near zero," the memo said, "law enforcement is left defending a lawsuit and disproving a negative, which is difficult to do."

Dennis, the Chicago doctor, said Taser "will not admit that our re-

search had anything to do with the change in protocols. But it was a big 180 from, 'There's no risk, Tase with impunity,' to 'There's risk.'"

Asked about the change, Steve Tuttle, a Taser vice president and spokesman, sent an e-mail citing language in the company's memo. It said Taser "has long stood by the fact that our technology is not risk-free and is often used during violent and dangerous confrontations."

Although the company still rejects any link to fatal heart irregularities, changing the recommendations for where suspects should be jolted will "avoid any potential controversy on this topic," Taser said.

Deadly learning curve

Gascón has assured San Francisco police commissioners that his officers will be restricted to using Tasers only on aggressive, combative suspects.

Critics say such assurances aside, police won't be able to help themselves and will use Tasers regularly. "The evidence is overwhelming that they do, across the country," said Ben Rosenfeld, an attorney on the board of Civil Liberties Defense Center, a group that has handled Taser lawsuits.

Even following strict guidelines, agencies that adopt the devices typically experience an increase in in-custody deaths in the first year, a UCSF study found in 2009.

Zian Tseng, a cardiologist and assistant professor at UCSF, looked at 50 law enforcement agencies in California. Before Tasers were put into use, the agencies' average total for sudden, in-custody deaths over a five-year period was about 1 per 100,000 arrests, he said.

But the average jumped to 6 deaths per 100,000 arrests in the first year of Taser deployment, Tseng said. For the following four years, the number dropped back to about 1.4 deaths per 100,000 arrests.

The UCSF study found something else: Officer-involved shooting deaths actually increased just after the devices were adopted, before returning to normal levels.

"We were surprised at that outcome," Tseng said, adding that one explanation may be that using Tasers escalates in some cases to situations in which an officer has to pull a gun.

Tseng said agencies should follow three rules: Don't fire Tasers at the chest area, don't fire multiple times and keep a heart defibrillator on hand to help those whose hearts stop after being jolted.

"I'm a scientist. I'm a cardiologist," Tseng said. "My message is that these are potentially lethal weapons and they need to be recognized as such."

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