

RINGS OF FIRE

The open-air burn pits used in Iraq and Afghanistan since the Gulf War are finally coming under fire for the medical problems that may have resulted from their toxic smoke.

By Jennifer Peters

It didn't stay in Iraq. It didn't stop there," says Rosie Torres of the alleged problems caused by burn pits. "This has followed us home and is now claiming the lives of so many." Torres is the wife of one of the many soldiers who believe they're sick—and, in some cases, dying—because they were exposed to smoke produced by burn pits that were used to dispose of trash in a combat zone. Until this past January, when President Obama signed legislation requiring the Department of Veterans Affairs to create a registry to track service members who have gotten sick or died after exposure, no official action had been taken to address the issue.

The problem, according to Ryan Gallucci, an Iraq vet and the deputy legislative director for the Veterans of Foreign Wars, is that the burn pits exist all across combat zones and there is not yet enough research to prove if they're causing the conditions believed to be associated with exposure to toxic smoke. "Burn pits are used out of necessity," Gallucci says. "One of the harsh realities of military service is that you can't leave your trash behind. It can be a security risk, and it can pose additional environmental hazards for wherever we're operating."

Steven Coughlin, MD, a former VA employee, testified before the House of Representatives in March. He claimed that the problems caused by burn pits had been brushed aside by a VA research contingent while he was working for the department. According to Coughlin, while they were researching post-traumatic stress disorder and traumatic brain injury among Iraq and Afghanistan veterans, there was increasing interest from researchers in looking at the relationship between burn pits and/or other inhalational hazards and asthma and bronchitis. Coughlin says he was told to disregard data collected from veterans about doctors' visits and hospitalizations for these respiratory conditions.

"Some of the information that the study provided about how many veterans were self-reporting that they had been exposed to burn pits or other

inhalational hazards was set aside or discarded and the focus was narrowed," Coughlin says. "The way they were analyzing the data obscured the key associations rather than highlighting them. The preliminary analyses showed that a sizable percentage of the research participants who had been exposed to these inhalational health hazards were more likely to have been diagnosed with asthma or bronchitis by their own physician."

Since Coughlin's resignation in December 2012, legislation has been proposed by members of the House of Representatives to establish three unique Centers of Excellence to study the effects of burn pits and exposure-related illness. If passed, the Helping Veterans Exposed to Toxic Chemicals Act would require the Department of Defense and the VA to open facilities that would be similar to the existing Defense Centers of Excellence for Psychological Health (PTSD) and Traumatic Brain Injury; the DOD and VA would be given \$30 million each year through 2019 to run the centers.

In the meantime, legislation was passed in April that requires the VA to start a registry so that vets can self-report burn-pit exposure and any health effects they believe are related, a move that took far too long, considering Gulf War vets were exposed 20 years ago and more than a decade has passed since the first Operation Iraqi Freedom/Operation Enduring Freedom veterans were exposed.

In June 2012, VA spokesman Curtis Coy told the *Military Times* that while he agreed more research was needed, a registry was not the appropriate tool for gathering data, saying that registries for victims of Agent Orange and Gulf War Syndrome had done little to further knowledge of the problems.

Others in the veterans' community disagree. Paul Rieckhoff, the executive director of Iraq and Afghanistan Veterans of America, believes a registry would be a valuable asset. As a 9/11 first responder, Rieckhoff is part of the World Trade Center Health Registry, which he says has been a very effective tool for both those affected and the greater medical community.

Rieckhoff thinks a burn-pit registry would help find hot spots and clustered incidents, even after units separate upon returning stateside. "If we know that the National Guard unit from a certain state was in a particular area and the members are now experiencing a negative health impact, then we can get the research and medical care that's necessary," he explains. "A lot of folks have health issues and they don't know what it's from. It could be from burn pits, it could be from something else, but I think creating a registry is an important starting point so we can gather the data and see if there are trends."

While veterans wait for the VA to create an official registry—Congress has given the agency a one-year deadline to do so—advocates have been collecting data. Torres, who runs BurnPits360.org, has collected information from more than 2,000 veterans and active-duty service members who believe they've been negatively impacted by the use of burn pits. Torres created the site in 2010 after her husband, former Army captain Le Roy Torres, returned from a year stationed at Joint Base Balad in Iraq and began having trouble breathing. Her husband had been in fighting shape before his deployment, but he was having coughing fits and getting easily winded. Local doctors were unable to diagnose the problem, so the couple went to VA hospitals, then DOD hospitals. Even a trip to the War Related Illness and Injury Study Center in Washington, D.C., failed to yield results.

"We've probably had more than 80 medical visits since he got back from Iraq," Rosie Torres says. "Toxic exposure eats up your body one organ at a time. He had a liver biopsy. They removed his gallbladder. He had several scans of his brain because he suffers from very, very bad headaches, to the point where we're always at the hospital and no one can tell us what's wrong." Torres has fought tirelessly to get legislation passed that could help an entire generation of soldiers who are suffering from similar illnesses.

Paul Richmond is one of the vets who's registered with BurnPits360. After a five-month tour of duty in Iraq, Richmond began getting headaches that wouldn't go away. "I've had MRIs, I've had CAT scans, I've had a little bit of everything," he tells us. "And to this point, the neurologist I've been seeing since I came home in 2005 still cannot pinpoint any exact cause." Richmond, like Torres, didn't think about a connection to the burn pits at first, though he remembers them well. "You could smell that burning," he says. "The winds pushed all that smoke

from the pit to where we lived."

According to Richmond and other vets, everything was burned in the pits, from everyday garbage to human and medical waste, amputated body parts, and old vehicles and tires. The most common accelerant for the pits is jet fuel.

The problem isn't just the smoke, however. The real issue is the particulate matter, according to Anthony Szema, MD, an assistant professor and researcher from the School of Medicine at the State University of New York at Stony Brook, one of the proposed sites for a Center of Excellence to study inhalational hazards and their associated medical conditions. While larger particles get caught in the eyes, ears, nose, and mouth and can be felt, the smoke from the burn pits contains particles that are small enough to inhale. "We think that most lay persons, and even many doctors, are completely unaware of this problem," Szema says. "Unless you see these patients often, you would not be attuned to the nuances of this emerging disease."

Szema recently conducted research on a group of mice using dust from Camp Victory, Iraq. The dust, which had been collected by the Army Corps of Engineers, was injected into the airways of the mice, which were monitored for several weeks. Immediately after the injections, Szema and his team noticed inflammation of the mice's lungs, and within two weeks, the subjects were experiencing symptoms of even greater immunosuppression.

The inhalational hazards, according to Szema, also include particulate matter from improvised explosive devices and sandstorms, bacteria unique to the desert, and air pollution. "Particulate-matter air pollution is bad, be it from sandstorms or explosives or burning smoke, or even aeroallergens like pollen," the doctor explains. "You could get allergically sensitized to that, get allergic asthma, or it could exacerbate a preexisting condition."

Allergies and asthma aren't the only conditions associated with breathing in particulate matter. Szema says other possible effects include cardiovascular disease, heart attacks, strokes, bronchitis, emphysema, and chronic obstructive pulmonary disease. He's even seen patients who, after exposure to the toxic sand and smoke, now have titanium embedded in their lungs.

Szema currently works with the data gathered by BurnPits360 to track trends in health conditions allegedly caused by the toxic particulates, but believes an official database is still necessary: "I think analyzing data from a broad array of patients from across the United States, and doing it within the VA system, will help us get a better handle on the scope and nature of the problem."

More than anything, advocates hope that the legislation will allow veterans to come forward and tell their stories so that they can be treated sooner rather than later. "It's cliché, but war is hell in every sense of the word," the VFW's Gallucci says. "It's a bad place to be. Individual experiences may vary, but that doesn't mean they should be marginalized in any way. If you're having legitimate health problems because of what you were exposed to in a combat environment, then we have an obligation to make sure you're taken care of."



Le Roy and Rosie Torres



Ryan Gallucci

PHOTOGRAPHS BY (ABOVE) ANDREW BURTON/REUTERS/CORBISIMAGES; (RIGHT, TOP) MICHAEL MACOR/SAN FRANCISCO CHRONICLE/CORBIS; (RIGHT, SECOND FROM TOP) MARK STAHL/GETTY IMAGES; (RIGHT, BOTTOM) THE WASHINGTON POST/GETTY IMAGES