Since 2009, David Parker, M.D., M.P.H., a Park Nicollet and HealthPartners occupational medicine physician, and his research colleagues have been looking for ways auto body shop owners can ramp up their safety practices.

As part of the Collision Auto Repair Safety Study (CARSS), a collaboration between the Park Nicollet Institute and the University of Minnesota funded by the National Institute for Occupational Safety and Health, the researchers visited 49 collision repair shops in the Twin Cities and St. Cloud.

Parker says they decided to focus on auto collision repair because it’s “a high-hazard industry.” The nearly 34,000 collision-repair shops across the United States employ more than 200,000 people, according to 2010 data from the U.S. Bureau of Labor Statistics. Ninety percent of those shops employ fewer than 20 people. Among the things that put workers at risk are asthma-inducing chemicals, flammable solvents, noise, lifts improperly supporting cars and dangerous machinery.

Some of the health problems documented among collision-repair workers are occupational asthma; head, eye and knee injuries; and injuries and illnesses caused by chemical exposures.

Parker and his colleagues assessed working conditions using a 92-item survey. Some of the common problems they saw were blocked emergency exits, inaccessible fire extinguishers, lack of ground-fault circuit interrupters in wet areas where electrical equipment was used, a lack of written safety policies and inadequate safety training.

They also identified the safety concerns most likely to attract the attention of the Occupational Safety and Health Administration (OSHA).

The researchers reviewed their results with the shop owners and helped them select deficiencies to correct. Over the next 12 months, they met quarterly with the owners to fix problems and offered training, templates for safety protocols (for example, for de-activating machinery before conducting repairs), and services such as medical clearance for respirator users and respirator fit testing.

One year after the initial survey, the investigators returned to the repair shops to do a follow-up evaluation. They found the percentage of safe practices in the shops increased from 54 percent to 71 percent. Improvements included better management of electrical hazards (closed electrical panels, use of ground-fault circuit interrupters), maintenance of emergency exits, and proper procedures for handling flammable liquids.

“One of the things we tested as part of the study was whether commitment to fixing safety issues mattered: If a shop owner said they were going to fix a particular safety problem, did that commitment make them more likely to succeed? The answer was ‘yes,’” says Anca Bejan, a research industrial hygienist at Park Nicollet Institute’s Health Research Division.

However, when team members cold-called participating shop owners 24 months after the initial intervention, they found that although they had maintained their pledged improvements, they had made few additional ones. (The team did not evaluate the health effects of or the medical cost-savings associated with the changes.)

In the future, Parker and his colleagues hope to partner with Minnesota’s OSHA Workplace Consultation Program, the Minnesota Alliance of Automotive Service Providers and technical colleges to raise awareness of the safety and health issues in collision repair shops and promote safe workplace practices.

Crash course
Researchers look at worker safety in the auto body repair industry.

BY JEANNE METTNER

One way to protect the health of collision repair workers is to make sure they wear properly fitted respirators when they are using potentially harmful chemicals.
Gut instinct

Greg Plotnikoff saw writing a book as a way to do public health.

BY CARMEN PEOTA

For the last decade, Greg Plotnikoff, M.D., M.T.S., has been working as a detective. As an integrative medicine specialist at Allina Health’s Penny George Institute for Health and Healing in Minneapolis, he has focused on solving the cases of “mystery patients,” people who’ve had extensive work-ups but don’t have a diagnosis or a treatment plan that’s alleviating their symptoms.

Among them were people diagnosed with and treated for such maladies as inflammatory bowel disease or GERD but who still suffered symptoms ranging from diarrhea to depression. Plotnikoff began to realize that these cases were anything but unique. “Every physician sees these patients,” he says. “Gut problems are so common, and so many people suffer, including doctors who throw up their hands or, in a compassionate manner, surrender and say, ‘You have to live with this.’”

Over the years, Plotnikoff had been reading emerging research about how the five forms of stress (environmental, physical, emotional, pharmaceutical and dietary) trigger adverse neural/hormonal responses. He also became interested in the microbiome—the trillions of microbes needed to maintain a healthy digestive system—and the important role good bacteria play in gut health. With that information in hand, he and co-author Mark Weisberg, Ph.D., a health psychologist, developed a two-pronged approach to helping these difficult-to-treat patients that involves what they’ve termed “neurohormonal retraining” and “ecological rebalancing.”

Their resulting book, Trust Your Gut, published last year, lays out their approach. According to the authors, neurohormonal retraining involves becoming aware of one’s behavior, symptoms and feelings and then learning techniques for rewiring one’s responses. “There is an anticipatory dread that plays a big role for people who’ve long suffered,” Plotnikoff explains. “You feel your stomach gurgle and you think, ‘Oh no. What’s next?’ That dread precipitates further symptoms.”

Ecological rebalancing involves tending to the gut’s good bacteria through diet, adequate sleep and supplementation. He emphasizes that once serious illness is ruled out, there’s much people with intestinal problems can do on their own to help themselves.

Plotnikoff hopes the book reaches a wide audience. “So many people I see have suffered for decades,” he says. “Functional bowel issues are really a leading cause of missing work and missing life. We want people to get their lives back and to do so without becoming more dependent on the medical system.”