From the Top Down: 
Enhancing Safety 
Through Culture Change

By Robert Pater, Strategic Safety Associates

The bad news is that many executives are seemingly adrift when implementing strategies aimed at higher-level safety performance, cost-control, and cultural change. Interventions to cut pervasive injuries often work only to a certain point. Beyond that, even well-intended actions can run aground, wasting limited resources and time, or even backfire.

The good news is that safety at its highest level—joining enhanced performance with efficient cost-control—has been resoundingly achieved in the maritime industry by Alaska Tanker Company (ATC). And if they can do it, so can you.

Shipping oil between Alaska and the Lower 48, ATC (www.aktanker.com) is the safest tanker company in the world—and the recipient of the gold Benkert Award, the U.S. Coast Guard’s highest environmental honor. In the past seven and a half years, ATC has logged over thirteen and a half million hours without a lost-time injury. Not surprisingly, the company has excellent systems for loss control and safety.

But it wasn’t always that way. When Anil Mathur took over as CEO in 2001, ATC’s record was average. So how did ATC climb to its current level of success? It changed the culture. It began with executive-driven leadership. According to Anil, “We initially developed a series of management-led interventions that were highly prescriptive. As our culture improved and evolved, the need for these kinds of strong interventions went away. We’ve now reached a stage in our culture where our workforce ‘owns’ safety. I truly believe all accidents are preventable.”

Navigating the Course: What Kinds of Injuries?

Common maritime injuries tend to be “soft tissue” or “personal”: slips/trips/falls, strains/sprains (e.g., back injuries) and damage to the hands, wrists, fingers or arms. Contributing factors include:

- exposure to the environment (temperature extremes, high winds, rain, ice) that lowers body temperature, heightens discomfort, fogs glasses, creates slippery decks, etc.
- turning valves, or changing them out
- traversing ladders
- consistent motion of the vessel—listing and rolling, vibration, etc.
- using heavy tools
- operating and maintaining equipment
- entering and leaving the dock—tying/untying lines, hooking up to terminals, etc.
- oil and grease on surfaces
- changing elevation
- working long hours, often with interrupted sleep patterns.

The list goes on and on—all lying in wait even for mariners who are young and fit, and not all are.
Avoiding the Shoals: What Not to Do

Regrettably, many companies have barely dented the hard problems of soft-tissue injuries or slips/trips/falls. Approaches to loss-control typically include signs or verbal reminders (“Pay attention when you lift something heavy!”), personal protective equipment such as lifting aids or footwear, training that doesn’t focus on specific maritime applications, or disciplining workers for getting injured. While these strategies may help to a point, they haven’t engendered breakthrough-results in most companies.

Anil Mathur contends that the right mindset, skill set and tool set are critical to high-level safety performance. In this vein, here are five shoals that are shipwrecks-in-waiting, along with strategies for steering around them.

Shoal 1: Treating soft-tissue injuries (strains/sprains, back injuries) as acute, single-source problems when instead they are predominantly wear-down issues that build over time. Think of soft-tissue injuries as “the straw that broke the camel’s back.” In reality, many get hurt from relatively low-risk tasks they’ve done thousands of times before (stepping down, bending over to tie a shoe, etc.). While trying to close a heavy valve might seem to have precipitated the back pain — and can certainly be a contributing factor — it’s often the myriad number of smaller tensions over time that result in a breakdown (just as metal fatigues).

Strategy: Be wise. Think beyond strenuous lifting or slippery decks. Focus on small changes that leverage into significant improvements in soft-tissue strength, control and balance. Develop strategies that address seemingly minor exposures — lifting light loads, climbing low heights, traversing dry as well as wet decks — before they result in an injury.

Shoal 2: Assuming engineering fixes will save the day. Even in land-based sites, it’s almost impossible to control all exposures. People still manage to trip crossing dry decks in calm seas (or clear parking lots) as well as injure their shoulder/back/knees when lifting relatively light loads. It’s not possible to control maritime exposures through design-only interventions. Strong, safety-focused systems, processes and behaviors are what is needed.

Strategy: Be improvement-focused. Experience has shown that the best results come from combining work/tool modifications with behavioral improvements — what we call ergonomics, which we define as improving the fit between crew and work. We do this by (1) bringing tasks "closer" to workers through cost-effective ship design and tools, and (2) enhancing mariner skills for making small physical and judgmental adaptations that reduce the buildup of tensions and stresses.
Shoal 3: Believing changes in awareness or motivation alone will somehow “fix” these problems. Without question, motivation affects safety, but it is not enough. Specific mental and physical skills are needed to prevent strains/sprains, slips/trips/falls and hand injuries.

Strategy: Be strategic. Transfer needed skills, not just "awareness.” Experience in the maritime industry worldwide has shown that the following mental and physical skills are critical for injury prevention.

Mental Skills:
» Personal stress control (not allowing excess physical or emotional attention to "wag the dog."). Over-tension can lead to the soft-tissue danger zone, just as a taut cord is easier to cut than one that's slacked. Further, unmanaged stress can upset physical balance.
» Team connection – doing tasks seamlessly with others. For example, safer two-person lifting can be coordinated by employing small eye confirmations and verbal gestures.
» Thinking forward, cumulatively and 24/7, as in "what can go wrong here," as well as realizing that small levels of tension can build into nagging soft-tissue problems.
» Ability to better direct attention. Upgrade attention skills such as scanning for best options (e.g., safest path), selecting where to focus, sustaining attention on priorities, switching back to an important task when distracted, and sequencing parts of a task for greatest efficiency and safety (e.g., securing load against the body, seeing condition of steps, sighting handrails, situating feet for best balance, spying where stairs end).

Physical Skills:
» Ability to maximize personal leverage and strength through best alignment, position and connected movement.
» Significantly improved balance and coordination
» Improving flexibility and range of motion
» Strategies for fatigue reduction
» Synchronizing breath with tasks (e.g., when bending down to pick up/lift, most people hold their breath, thereby increasing pressure on the lower back while significantly weakening balance. The right training can reduce this at-risk habit and enable greater lifting strength).
» Developing methods for practical recovery, employed as early as possible, to steer away from potential major problems; for example, should you begin to...
fall, how to reflexively regain vertical balance without straining muscles.

All the above are tangible, easily transferable skills, proven to significantly reduce soft-tissue injuries and slips/trips/falls. The MoveSMART® system for injury prevention, as applied within ATC, transfers these skills. Anil Mathur says, "MoveSMART® is the program most favored by our sea staff. Our work environment aboard tankers in the Gulf of Alaska is full of ‘slips, trips and falls’ hazards. MoveSMART® is a practical program that helps them execute their tasks without getting hurt."

Shoal 4: Thinking “inside the box” that strains/sprains, hand injuries and slips/trips/falls are unrelated problems requiring never-the-twin-shall-meet solutions.

One company attributes all tool drops onto feet as caused by an incipient slip or trip. In reality, such incidents have a base of common causes that include attention breakdowns, balance disturbances, failure to think through approaches and bailouts in advance, suboptimal position and alignment, lack of synchronized breath control and more.

Strategy: Be efficient. Simultaneously address root causes of strains/sprains, slips/trips/falls and hand injuries.

Shoal 5: Becoming a Lone Ranger. It’s easy for some executives who have sighted the Valhalla of high-level safety to become frustrated or even give up. Anil Mathur reveals, “I didn’t believe for many years that others had the same commitment to safety as I did because of the lapses I saw between their words and actions. I now realize that through advocacy, inquiry and recognition, one can form strong partnerships in safety.”

Strategy: Be inclusive. Deputize everyone as a safety advocate. But, according to Anil, what’s most important is to be true to yourself as a leader: “Don’t go down the safety journey unless you truly believe in yourself. Embarking on this journey with only superficial commitment produces deep cynicism in the workforce. Safety pays many dividends, but the irony is that, if those dividends are your sole motive, your safety drive will most likely fail.”

With the right leadership and training, personal injuries in the maritime industry can be overcome and safety performance can exceed the highest expectations – and generate higher crew engagement, morale and efficiency.

Robert Pater is Managing Director of Strategic Safety Associates and creator of the MoveSMART® system for preventing strains/sprains, slips/trips/falls and hand injuries (www.move-smart.com). He has worked for many years with Alaska Tanker, BP Shipping and many other companies worldwide.