

# UC Monthly Safety Spotlight, June/July 2013

## Careless Chris Busts a Move

By: Kitty

The day had not started out well for Careless Chris, and he already had a sneaking suspicion it was going to be all downhill until quitting time. His assistant had called in at the last minute with an unlikely excuse that was just plausible enough to pass muster, leaving him to do all the day's hazardous waste pick-ups alone. While it was possible to get everything done with only one person, having to do so would mean working faster, lifting more often, and keeping relentlessly on the move in order to make all the required stops and get everything collected. Spending the day working twice as hard was going to be even less bearable if he had to spend it nursing a growing sense of resentful certainty that his assistant was, in fact, enjoying a day playing golf rather than laying on the couch suffering from food poisoning as alleged in the early morning voicemail.

It was going to be a lovely day to be outside, sunny and promising all summer's enticements. Chris scowled as he glanced at the brightly lit frosted window of the bathroom he was changing in and reluctantly pulled off his favorite new light silk t-shirt. The long hot months were not so great for anyone who had to don a lab coat, long pants and sleeves or a full set of coveralls, heavy closed-toe shoes, and the other necessary personal protective equipment that could become unpleasantly uncomfortable but never optional. Being one of the most visible parts of the safety and environmental health office meant always modeling best practices, even when most of the students or even researchers in a laboratory might not be following all the rules. By the end of the shift, he knew his hands would be chapped from marinating in a succession of colorful gloves that seemed to hold in sweat better than they could possibly keep anything else outside.

All dressed up for the day and taking the printed list of requested pick-ups from the copier, Chris could feel his shoulders slump. The Wolowitznozky lab, infamous for their voluminous solvent use, had put in notices for ten carboys of used acetone that needed to be taken away. That would mean five round trips from the loading dock to the third floor with only one cart being used instead of the usual two. "How did he *know* this was the day to take off?" Chris muttered to himself, pushing the fat pile of paper onto his clipboard.

"Looks like a long day ahead," Russ said sympathetically, eyeballing the wad of pick-up tickets as he fished his own print job out of the machine's tray. "It's a good thing..."

"Do not say it's a good thing I have help," Chris interrupted but then felt regret for being so abrupt, which faded into a general sense of shame for being surly without any real provocation. "Sorry, Al's out sick today, it's just me this time." He looked at the clipboard, then consciously straightened and put his shoulders back. "Like it used to be. I got this." For years he had done all the waste collection on his own and that had worked out perfectly well. Thinking back on all those solo tours, he announced firmly, "I'm not afraid of hard work." After a meaningful pause, he finished with mock sincerity, "I can get right up next to it. Not scary at all."

Russ looked a bit uncertain, but nodded in automatic encouragement. "Just be careful, that's going to be a lot of lifting and none of us are getting any younger." With a quick wave, he bustled away doing his best to look too busy to volunteer to help out, and Chris raised a cynical eyebrow.

"I saw what you did there," he called, and felt the stirring of an irresistible smile as Russ sheepishly moved even faster, scuttling to his cubicle clutching his printed spreadsheet defensively. There was something worse than having to do the day's work on his own, and that was being stuck in the office hunched over his desk filling out paperwork. Getting to drive around campus and say hi to his phenomenal assortment of acquaintances promised variety and the best insider news on every topic, a huge improvement over the isolation and boredom of re-writing yet another budget proposal. The incipient smile grew into a real expression of contentment as Chris headed out the door.

Once he had let go of the simmering anger Chris found that the day's task, while dauntingly large, was far from unbearable. It was even a bit of a relief to set his own pace, challenge himself, and take pride in still being able to hustle like he used to before he had an assistant. Not just working fast, either, but doing it right down to the last detail. At each stop, he had his safety glasses on, the right gloves, and took all the proper precautions checking labels, tags, storage, and containers, down to making sure the caps were twisted on tightly before carefully lifting with both hands. Each cart-load that went into the back of the waste truck was an exemplary model of efficiency, speed, total compliance, and proper lifting with bent knees and flexed hip, his back as rigidly secure in its natural curves as if he were wearing a reinforced back belt.

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That last practice was one Chris had been very careful about for years and correct lifting was second nature to him. His own father had always encouraged him to work harder by telling him to "put your back into it!" especially when doing any physical labor, from raking the yard to washing the car. It had sounded good at the time but years later, after his dad underwent two painful and eventually completely debilitating back surgeries, Chris had realized that it wasn't good advice at all. The training he got from the ergonomics specialist had made it all too clear how bad such outdated ideas were, and how his dad's years of bad habits created the cumulative damage that had led to those disastrous results. After watching his father spend the last ten years of his life immobilized on his back in a nursing home, one thing Chris never joked or was careless about was proper lifting technique.

He was going to need to be on top with his skill, he knew, as he approached the Wolowitznozky lab that afternoon. All the carboys were nearly full, weighing in at a good 40 pounds each. Although the rolling cart had two levels and four carboys could be fitted on it, the usual practice was to limit each cart to carrying two at a time, mainly because the weight could make them hard to manage. Still, they had experimented occasionally with doubling up when there were more than usual to collect so Chris knew it was feasible. As he stood looking at the array of white plastic containers, he decided this was the time to exercise some initiative and cut his time investment by half. There weren't any sloping driveways or hills he would have to steer the overloaded cart along and the truck backed right up to the loading dock so as long as he didn't make any mistakes picking up or putting down the waste containers, there was no reason he couldn't successfully move them more quickly in bulk.

Getting the ones that went on the lower shelf placed without over-reaching or bending incorrectly was the first challenge. It required locking the casters to keep the cart from shifting and then being able to flex into an extremely deep squat, pivot without twisting, and use purely upper body strength to get the carboy over the lip of the shelf. Chris took the time to walk around the cart, carefully judge the distances, angles, and weight, and stretch his arms and thighs to loosen up for the lift. After making doubly sure the area was clear and he knew exactly what he was doing, Chris took a deep breath, grasped the first carboy firmly, and made his smooth, planned maneuver. It worked like a charm, the container slid into place without a hitch, and he was able to re-position himself and repeat the success in no time. Lifting the two that went on the top shelf was simple by comparison but done with just as much care and attention to detail, ensuring another another minor victory for the industrial athlete.

Getting the cart out of the lab and down the hall, into the elevator, and off at the bottom level posed no unexpected challenges. Chris pushed the cart over to the edge of the loading dock where the waste truck was parked with its lift gate lowered and met the first real setback of the day. With all the other loads he had done already, the cart had rolled up over the 2-inch high, angled lip of the steel gate without any trouble. This time the cart was so heavy that instead of rolling up and over, the casters jammed at the abrupt change of slope and the cart came to a sudden stop. Fortunately, the full carboys were very solidly settled and didn't do more than slosh their contents threateningly, and the cart hadn't been moving fast enough or at an angle that put it in danger of tipping over.

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Briefly stymied, Chris stepped back and carefully surveyed the layout. He needed to get the cart into the back of the truck but he was not reckless enough to pull the cart away from the lift gate as far as he could and make a running start, hoping to get up enough speed that it would obligingly pop over the hump. That way lay certain disaster and he had no desire to end the day dressed in tyvek mopping a dozen gallons of solvent off the concrete while the fire department stood by. The only reasonable way to get the cart into the truck was to carefully position it right at the problematic juncture, physically heave it the few inches necessary to get the first set of wheels up and over onto the lift gate platform, then pull it carefully over and repeat the lift for the rear set of casters. That would keep everything stable and moving slowly enough to be under full control the whole time. With only a few inches of vertical rise needed on each lift and no awkward obstacles to make positioning his grasp complicated, Chris knew his form was going to be as good as it could get.

Following his habitual good practices, Chris rolled his shoulders and took a couple deep breaths, steadying himself, mentally preparing to move through his planned lift. Planting his feet shoulder-width apart and keeping his back straight (but not vertical), he tensed his abdominal muscles to form a strong, rigid core and bent only at the hip and knees. Head up and looking directly forward, he took careful hold of the cart edge and applied his strength in a calm, even manner, the way he had done every lift that day. The cart's weight passively resisted with the immutable force of gravity until finally he felt it beginning to come upward, but in the split second between knowing he had succeeded and actually having succeeded, a sickening internal popping sound accompanied by sharp daggers of pain through his knees brought an abrupt end to the effort. He let the cart drop the few millimeters it had risen and folded sideways moaning in pain, trying to clutch both knees simultaneously.

"Dude! Are you OK?" Becky, one of the laboratory safety representatives he had visited earlier, trotted over. "What happened?"

"I think I blew out my knees lifting the cart," Chris gasped. The rotten irony of a member of the campus safety team injuring himself on the job sank in with the words, and he groaned in misery deeper than the physical pain. "They are never going to let me live this down."

Already connected to dispatch, Becky shook her head sympathetically and after giving information on where to send the emergency response team, favored him with her honest opinion. "Probably not. I mean, seriously, you tried to lift that? It's like, what, 200 pounds at least." She looked it over, inferring his obvious intention of getting it into the back of the truck, and asked a simple question. "Why didn't you take the carboys off one at a time instead of trying to move the whole thing at once?"

It was the blindingly simple solution he had completely missed even considering by being too focused on applying one answer to every single question. "Because I'm an idiot that didn't think of breaking down the load instead of myself," he replied sadly, but his mind was already working on a solution. The very week he got back to work he instituted a policy of using only 2.5 gallon carboys for waste collection. By lightening each lift and reinforcing the policy of moving loads in pieces rather than all at once, he prevented any future injuries in his program.