

How the Chilean Miners Are Surviving Underground

By Jeffrey Kluger Saturday, Sep. 25, 2010



You wouldn't think it to look at us, but human beings love to cooperate. We argue, we brawl, we go to war, but give us half a chance and we also join hands in cooperative societies. We do it in the workplace, we do it in a theater queue, we do it even in preschool, where a group of small children will instinctively form a complex internal culture — opaque to anyone outside it but essential to anyone who's part of it.

Never is the impulse to confederate more powerful than during a crisis. And nowhere is it in greater evidence at the moment than 2,300 ft. (700 m) below Chile's Atacama Desert, where 33 miners have been trapped since Aug. 5 and face up to four more months of confinement before they're freed— though rescuers are increasingly optimistic that the job could be done as early as mid-October. Most such rescue operations are sprints, but this one is a marathon, already exceeding the record 25 days logged by a group of Chinese miners in 2009. The world is transfixed by the unfolding drama, but psychologists and anthropologists are taking special note, watching for what the crisis can tell us about human behavior and the ways we react when emergencies obliterate familiar rules and temporary societies must emerge in their place.

"Every stressor known to man is having an impact on those miners," says Duke University psychologist John Fairbank, an expert on traumatic stress. "What we're seeing them do now is trying to normalize their situation, giving it a routine, a structure and a purpose." Normalizing an abnormal situation is one of the first things we all do in a crisis — and it's a very adaptive strategy. A blackout hits a city, and we immediately

begin running a mental inventory of the batteries, bottled water and nonperishable food we've got in the house, calculating how to get the kids fed and bathed and press on in as ordinary a way as possible. Rescue workers in Chile, who have been maintaining 24-hour shifts, have done a good job of helping the miners do the same, using three narrow boreholes to lower them what they need to make their 538-sq.-ft. (50 sq m) hole a home.

The workers have sent clean clothes, reading material, dominoes and letters from loved ones. They've provided music as well as phone contact with family members. The miners' menu — which at first consisted of nothing but nutrient drinks — now includes yogurt, cereal, tea, sandwiches, kiwis and, recently, hot meals like meatballs with rice. Beans were held back for just the reason you'd think when 33 men are living in a confined space — one more way the decorous rules of the surface are being observed below. "The key is to create civil order in a circumstance in which there is none," says Colonel Tom Kolditz, a psychologist and behavioral scientist at West Point and author of the book *In Extremis Leadership: Leading As If Your Life Depended on It*.

The need for normality is only the second most powerful driver of behavior in a crisis, however. The first is what Kolditz calls "mortality salience." For everyone, death is inevitable, but most of the time we think of it as eventual. If that changes — if death seems possibly imminent — behavior changes too. "When you fear for your lives," says Kolditz, "you pull together."

The exact way people do that is often a function of age. Shortly after communications were established between the men and the surface, Dennis O'Dell, director of occupational health and safety for the United Mine Workers of America and a veteran of 20 years in the shafts, told TIME, "Leaders will start to emerge, and if they see someone slipping, they'll try to pick them up. The younger guys will probably defer to the older ones." That's just what's happening. The youngest of the miners is only 19. The oldest, Mario Gómez, is 62. He has assumed the role of coordinator, organizing the group into three-man buddy teams so they can all look after one another and serving as liaison to the surface. He has also set up a makeshift chapel to offer spiritual support. Another senior miner, Luis Urzúa, 54, coordinates the work schedules — which will soon include clearing the tons of rubble that will be produced as the rescue shaft is drilled. Urzúa uses the hood of a mine vehicle as a desk — an important totem of the workplace. He has also established a rule that no one may eat until all 33 men have received their food.

The older men, with their greater experience, will probably continue to run the show throughout the men's stay, though as the months pass, the younger men, with their greater physical endurance, may assume more authority. "This assumption of roles is innate in human culture," says psychologist Pam Ryan, executive chair of Psychology Beyond Borders, a Texas-based nonprofit group that studies ways to minimize trauma in wars and other disasters. "People say, 'O.K., some of us are good at this, some of us are good at that.'"

Sometimes survival strategies are less complex and are merely cosmetic — literally. One of the first things the men requested when a communications link was established was toothbrushes, and they've since been sent clean clothes and razors. In the first of the videos they've sent to the surface, they were shirtless, dirty and unshaven. Now they're cleaner, dressed in matching red shirts, and they've shaved. Tidiness translates into discipline, and that can be lifesaving.

"I talked to leaders in Vietnam who would take men into the jungle for 40 days at a time," says Kolditz. "Every day the men would have to wash off their face paint and shave. That creates civility, and civility prevents conflict and even atrocities."

Of course, the month the miners have spent below so far is not the same as the months they still face. Fatigue and illness may take a toll. Medication — including psychotropics — will be made available if doctors deem it necessary. Critical to the men's emotional health will be managing their expectations. Early on, there was speculation about when or if they'd be told how long their confinement would be, but no one seriously considered withholding the information. They've since been told the full range of possibilities — from as little as a month to sometime around Christmas. "You don't want to get into a situation in which they're ready to go and then they get disappointed," says Fairbank. "That can be devastating."



The odds of a relatively short stay improved recently when a second rescue drill was brought in; a third may be added. All three will dig simultaneously, and the tunnel that's completed first will be the one used for recovery. The actual extraction will not be much more fun than the current confinement. The men will be raised one at a time in a claustrophobia-inducing cage little wider than their bodies. The ride to the surface could take two hours, during which they may be blindfolded or sedated to keep them calm. It will take up to three days for all the men to be rescued, and someone will wind up being the last to go — and alone in the hole.

Until that day arrives, the miners are taking their pleasures as they can find them. Their single large room remains connected to adjacent tunnels, which provide a little privacy when the crowding gets too great — as well as a politely distant spot to use as a bathroom. NASA, which knows a thing or two about keeping people sane during long periods of isolation, has advisers on the

scene. It's providing brighter lights that can be sent down the shaft to establish a day/night cycle. Space-agency docs nixed the idea of sending cigarettes; they're too toxic in an enclosed space. Wine, for now, has been forbidden too — ostensibly until the men's diets are balanced, though likely to keep their behavior balanced as well.

The miners have rebelled at these restrictions and recently rejected a delivery of peaches in protest. NASA considers such reactions normal — and even encouraging, since defiant men are not beaten men. The space agency points to similar small mutinies during Apollo 7, when the crew developed head colds and argued constantly with flight controllers, and Apollo 13, when the emergency abort put nerves on edge both in space and on the ground.

As back then, order will likely be preserved, since the miners know that's their best route to rescue. Psychologists and even media trainers are in regular contact with the men, teaching them how to handle the press, how to answer interview questions and how best to use that most handy of answers: "No comment." HBO, the Discovery Channel and four other production groups are already working on documentaries, and miners' families are being offered thousands of dollars for interviews. Most tellingly, many of the men — who have lived cash-only lives until now — are being taught how to open a checking account and manage a sudden surge in income. After confinement, there will clearly be better times to come.

This is an updated version of a story that originally appeared in the Sept. 20, 2010, issue of TIME magazine.

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