



AAC Publications

GROUND FALL – Leader Significantly Heavier than Belayer

New Mexico, Socorro Box Canyon

This incident occurred at approximately 1 p.m. on Sunday, May 8, at the Socorro Box Recreation Area during a rock-climbing program with a group of novices. It was the last day of a three-day trip sequence. Climber 1 (32) and Belayer (27) attempted New Kids on the Block (5.10b) to set up a top-rope via a sport lead. Climber 1 briefed Belayer on specific belay techniques, including anticipated rest points, appropriate rope tension, catching a fall, etc. It should be noted that Belayer had practiced lead belays and indicated adequate comfort with the skill. Climber 1 was a trainer in the skill.

Climber 1 and Belayer completed a partner check and belay commands, and then began climbing. Belayer was using a Grigri. After clipping the second bolt, Climber 1 “took” and rested before continuing into the crux. Climber 1 then attempted the two or three move crux, but slipped and fell. Climber 1’s shoulders were approximately at 22 feet above the ground and at the height of the third bolt, which they had not clipped. Climber 1 was also about six feet above the second bolt. They fell 10 to 12 feet before being caught by Belayer. However, due to the momentum of the fall and their relative weight difference, Belayer was unable to prevent Climber 1 from hitting the ground and landing on their back.

Climber 1 indicated that the wind had been knocked out of them and they felt a sharp pain in the upper left quadrant of their back. Upon regaining their breath, the initial pain subsided and there were no other apparent injuries. Climber 1 visited urgent care the following day, and a physical examination and X-Rays revealed that their spine, ribs, and lungs were intact and there were no additional injuries.

ANALYSIS

According to an eyewitness, Climber 1 outweighed the Belayer by approximately 65 pounds. Belayer had only a small “J” of slack present between themselves and the first bolt. There was about three feet of total slack in the rope.

The weight difference, the small bit of slack, and the fact the leader fell from the height of the not-yet-clipped third bolt led to the ground fall—a convergence of factors at the worst possible moment. On such a short route (40’) and with the crux near the midpoint, successfully clipping the third bolt was of tantamount importance.

Climber 1 was a seasoned rock climber and Single Pitch Guide (PCGI). In the months leading up to the incident, Climber 1 had limited time to climb, resulting in poor climbing-specific fitness. Climber 1 made the assumption—based on past experience—that they would be able to climb the route; however, they failed to accurately assess their ability.

Climber 1 reported having poor quality sleep in the two preceding nights. This, coupled with long program days, high winds, dust, wildfire smoke, and a recent history of illness and family stress, resulted in their psychological and emotional status being less than 100 percent.

Climber 1 also may have been subject to some pressure to deliver on requests made by staff and/or clients, and this may have influenced Climber 1’s decision to attempt a more difficult route, despite the aforementioned risk factors. (Source: Christian Sommer and the Editors.)

Images



An unidentified climber top-roping New Kids on the Block (5.10b) in Socorro Box Canyon. In the accident described here, Climber 1 failed to clip a bolt that is hidden from view by the climber's body, and then fell from just below this spot. The Edelrid Ohm is an "assisted-braking resistor" that is useful in such situations by increasing the rope friction in a fall, thereby compensating for a heavier lead climber.

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