

Rescue Belays: Important Considerations for Long Lowers

The use of a capable rescue belay is an integral part of many teams' rope rescue transportation system. The choice to include (or exclude) a belay line really boils down to an assessment of risk and consequence. In other words, ask yourself, "What is the chance of the primary support line failing?", and "If it were to fail, what happens to the patient package?"

Employing a belay is quite common in North American rope rescue circles. Far too uncommon, however, is the practice of morphing the way that the belay line is *managed* as the operation progresses through its various stages. There exist a number of key parameters such as shock absorption, abrasion resistance, stopping distance and others that hold greater, and at times, lesser importance as the patient package travels down the cliff face. Recognizing which factors contain the greatest risk to the patient and attendant in a timely and 'stage sensitive' manner will greatly increase the overall safety of the operation.

There are a number of different methods for configuring two ropes in a rope rescue transportation system. This presentation will focus on some key *Belay Line* operational considerations solely for teams that operate with a primary support line (i.e. Main) and a secondary backup line (i.e. Belay). Additionally, the scope of the presentation material is somewhat specific to the 8mm Tandem Prusik Belay as well as the 540° Rescue Belay.

In August, 2007, Rigging for Rescue conducted a drop test series that focused on examining the effect of adding *friction* to the belay line once 30 metres of rope were in service. The friction came in the form of a descent control device on the belay line. The purpose was to observe how much effect the friction had in *changing* the overall stopping distance of the rescue load as a result of a mainline failure. Baseline tests were conducted without the added friction device for comparative purposes.

Some interesting test results were observed. Certainly as many questions were raised as were answered. The presentation seeks to share these test results and offer our interpretations of them in a manner that (hopefully) lends some valuable direction to the rope rescue community at large.