

# CLIMBING SELF RESCUE-1 NOTES

## Introduction

- Module Objectives
  - Recognize that a two-person rescue is difficult enough that you will use sufficient planning and judgment so you don't get in a situation to need to do it.
  - Gain the confidence to rescue your partner or at least improve the situation until assistance arrives.
  - Learn how to teach yourself new skills and practice new rescue scenarios safely.

- Recommended Reading

*Climbing Self-Rescue* by Tyson & Loomis

- Chapter 8 “Scenarios and Solutions” is the heart of these sessions
- Chapters 1-7 have skills you already know and will teach you a few more
- Appendix B: “Gear Specifications” contains useful conversions and material properties information

*Mountaineering: The Freedom of the Hills, 9<sup>th</sup> ed.*

- Chapter 11 covers standard rappel methods
- Chapter 25 covers tandem rappel and some rescue techniques for small parties

*Self-Rescue, 2<sup>nd</sup> ed.* by Fasulo

- Step-by-step scenarios with good illustrations

- Rules of Thumb

- SEE (Safe, Effective, Efficient)
  - Safe – Do no more harm
  - Effective – Do what works
  - Efficient – Minimize use of resources (gear, primarily)
- Speed is important—it comes not from rushing but from being efficient. Efficiency is gained through practice.
- It is most always easier to descend that it is to ascend. Ascending beyond an injured lead climber requires rope solo and aid climbing techniques. Raising an injured partner with only one-person hauling is a tremendous energy expense even with a high ratio hauling system.
- Anchors must be very solid and reliable – bomber.
- Always use techniques that allow the load to be released and transferred. The Mariner's Hitch or Radium Release Hitch, and MMO (Munter Mule Overhand) are the two best options.
- Check and re-check everything.
- Back-up everything.

- Your partner may or may not be able to help. Take advantage of what they can do and use their gear!
- ~~We will practice the T method of determining the mechanical advantage of raise systems.~~
- Demo and Practice
  - Belay Tie-off
  - Cordelette method
  - Other variations with friction hitches and load releasing hitches
- Mariner's Hitch or Munter-mariner hitch
  - Can use webbing or cord
  - Tie when needed so it may be hand-tightened
- Cow's Tail for Tandem Rappel
  - Double runner tied to give a clip loop, a short leg and a long leg
  - Can use Personal Anchor System
  - Subject on short leg vs. long leg dictated by situation and personal choice
  - Connect rappel autoblock to subject's harness belay loop – safer backup that gives rescuer ability to move more freely and control the subject with same hand that controls the autoblock.
- Mariner's Hitch and Cow's Tail Combo (aka Rescue Spider)
  - Create a master point where the rappel device, extended rappel (cow's tail), and a load releasing hitch are connected
- Carabiner Block-and-Tackle with Autoblock
  - Use to create enough slack to untie the subject from the rope
  - An autoblock is best because it may be released under tension

## **Exercises**

- Tie mariner's hitch and munter-mariner hitch
- Tie carabiner block and tackle
- Tie 3:1 radium release hitch
- Transition from rappel to climbing the rappel rope
- Tie off belay from anchor; shift clove hitch to munter hitch with auto-block backup and move to edge to view second to see potential problem
- Rescuing a Fallen/Unresponsive Second

## **Field Trip Additional Notes**

- Use sandbags for rescue subject to avoid close contact during rescue scenario.
- Equipment: 5 ropes (2 for exercises; 2 for safety belay of lead climber; 1 for belay anchor)
- Do bring a mask. We will definitely use them if less than 6' distant from each other.

## **Rescuing a Fallen Second Example**

Scenario: The follower has stopped climbing, is weighting the rope, and is unresponsive. They are within half a rope length of the leader. You are tied into the anchor with a clove hitch, are backed up with a figure 8 on a bight and are belaying from the anchor with ATC in guide mode.

General sequence is to tie off the belay and back it up. Capture the rope with a friction hitch. Release the belay tie-off, remove the rope from the belay device and shift to a counter-balance rappel. Rappel to the unresponsive climber, counterbalancing to hold the second roughly in place. Upon reaching the second, connect to them and continue rappel to an anchor point, pulling the second with you. Set up an anchor and tie yourself and the second into it. Untie and pull the rope. Set up the next rappel as a tandem rappel on both strands. Tandem rappel. Repeat.

1. Tie off the belay with a device mule and overhand.
2. Backup up the tie off with a figure 8 on a bight. This will back up the friction hitch later.
3. Capture the strand connected to the second with a friction hitch and load-releasing device like a 3:1 radium release hitch or mariner's hitch or prusik and Munter mule knot.
4. Untie the device mule and transfer the load to the friction/load releasing hitch. (The figure 8 on bight provides backup.)
5. Remove the rope from the ATC and thread the rope the a locking carabiner to set up for rappel. If at a fixed anchor with chains and/or rappel rings, you will have to untie from the rope and connect it to a rappel anchor.
6. Set up single strand rappel with an autoblock on the free rope strand.
7. Remove the figure 8 on a bight and weight the rappel system.
8. Transfer your partner's weight from the friction and releasable hitch combination to the rope and rappel anchor so that your partner and you are now counterbalancing each other.
9. Rappel to your partner. Connect to their belay loop with a sling and carabiner. Look for good anchor points near your partner and counterbalance rappel to that point, bringing your partner with you.
10. Build anchor unless one exists.
11. Transfer your partner to anchor. (Use a releasable hitch to connect to the anchor if your partner is unresponsive/unable to unweight the anchor for the tandem rappel of step 14.)
12. Transfer yourself to anchor.
13. Pull the rope and set up a two-strand rappel on new anchor.
14. Tandem rappel to the ground or next the rappel station.

## **Added Scenarios to Practice**

There is no one recipe to solve all rescue problems. The scenarios and solutions for rescuing a fallen second will help you practice technical skills needed to successfully complete a rescue. Practicing several scenarios will help you gain problem-solving skills and further refine your

technique. Chapter 8 of *Climbing Self-Rescue* by Tyson and Loomis contains 29 scenarios that are worth reading and practicing.