



CORPO NAZIONALE SOCCORSO ALPINO E SPELEOLOGICO

Scuola Nazionale Tecnici Soccorso in Forra

Italian National Canyon Rescue School



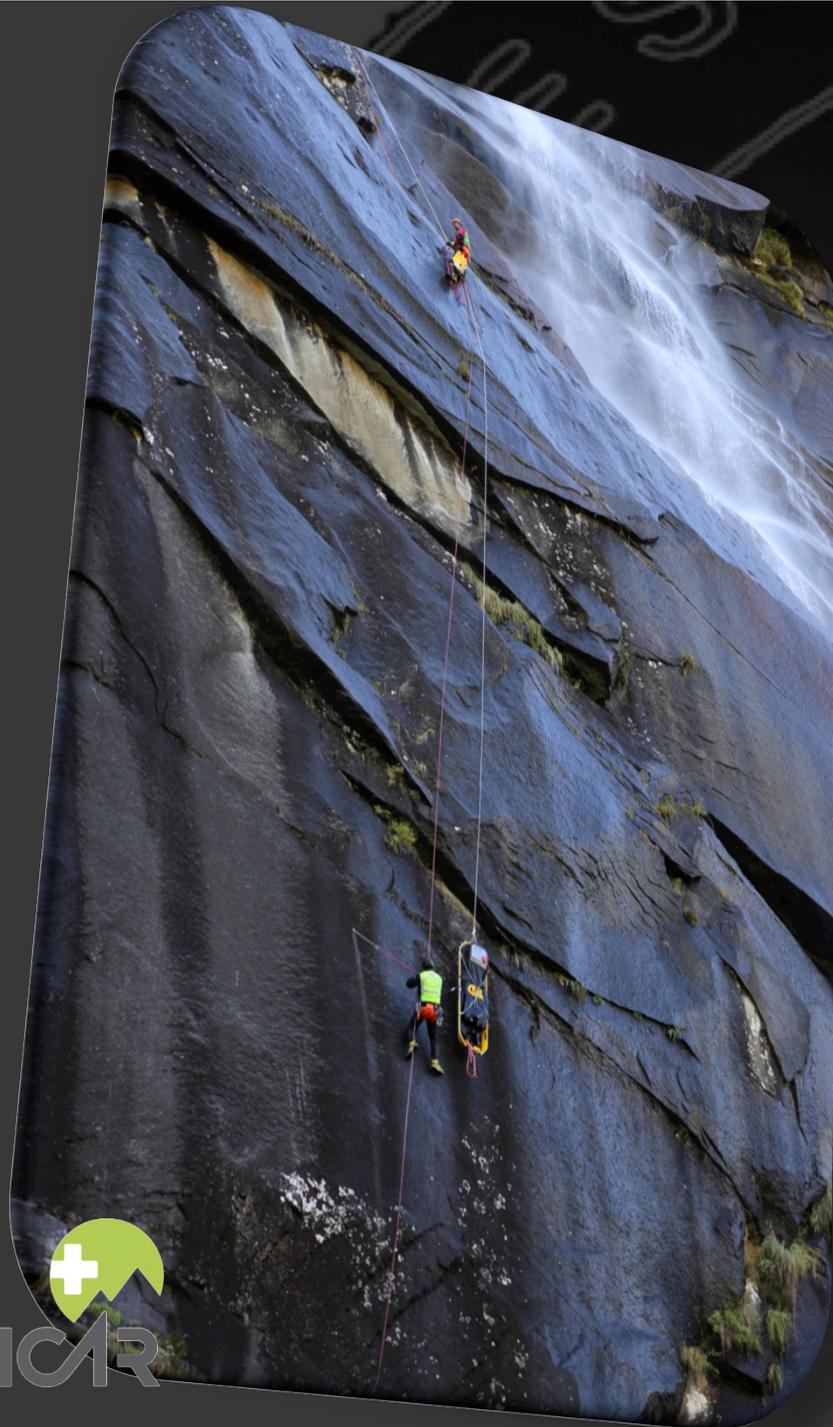
CANYON'S DEEP WATERFALLS

STRETCHER LOWERING TECHNIQUES

by

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THREE DIFFERENT SYSTEMS TO RESCUE A STRETCHER ON A LONG CANYON'S WATERFALLS

- **A**-TOP TO BOTTOM
MULTIPLE ROPES JOINED.
- **B**-BELAY TO BELAY with 60m ROPE.
- **C**- JOINTED ROPES (> 120m)
SKIPPING INTERMEDIATE BELAYS.



- **A-TOP TO BOTTOM,**
MULTIPLE ROPES JOINED

PRO:

- *FAST*

CONS:

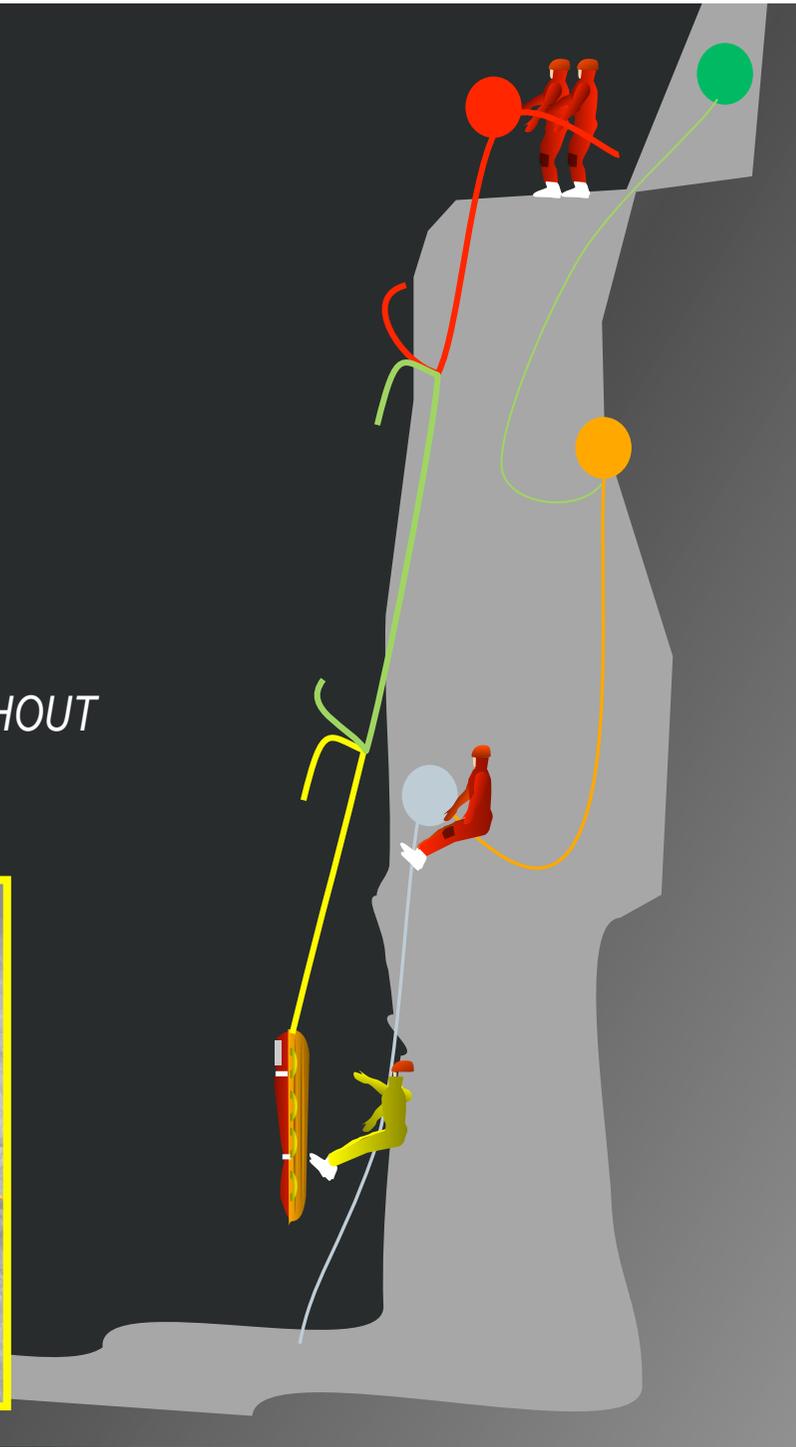
- *MANY ROPES NEEDED*

WHERE TO:

- *LONG OVERHANGING PITCHES WITHOUT LEDGES.*



Single overhand flat knot



- **B-BELAY TO BELAY** with 60m ROPE

120 m.

60 m.

PRO

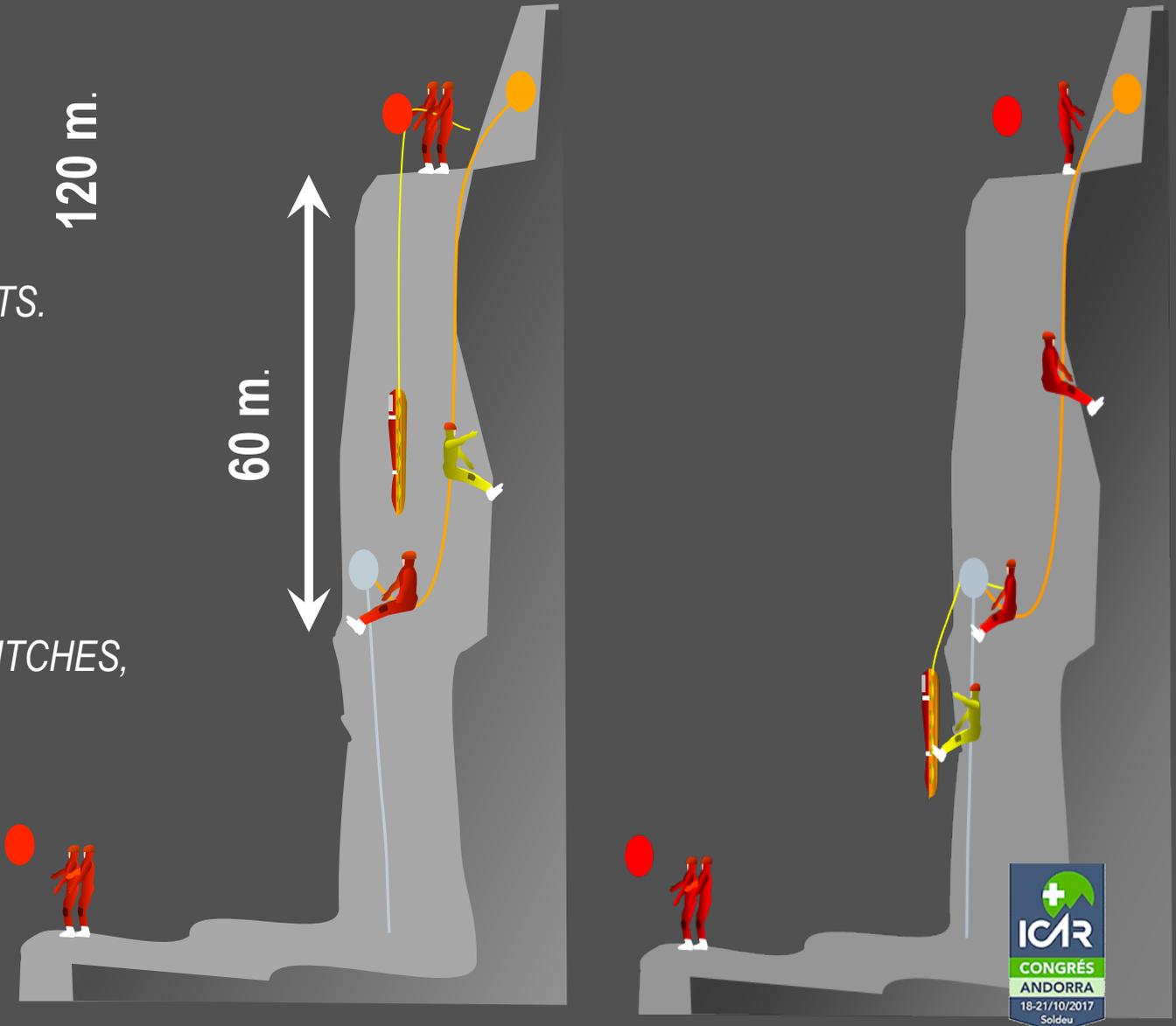
- *EASY LATERAL SHIFTS.*
- *ONE ROPE NEEDED.*

CONS

- *SLOWER.*

WHERE TO

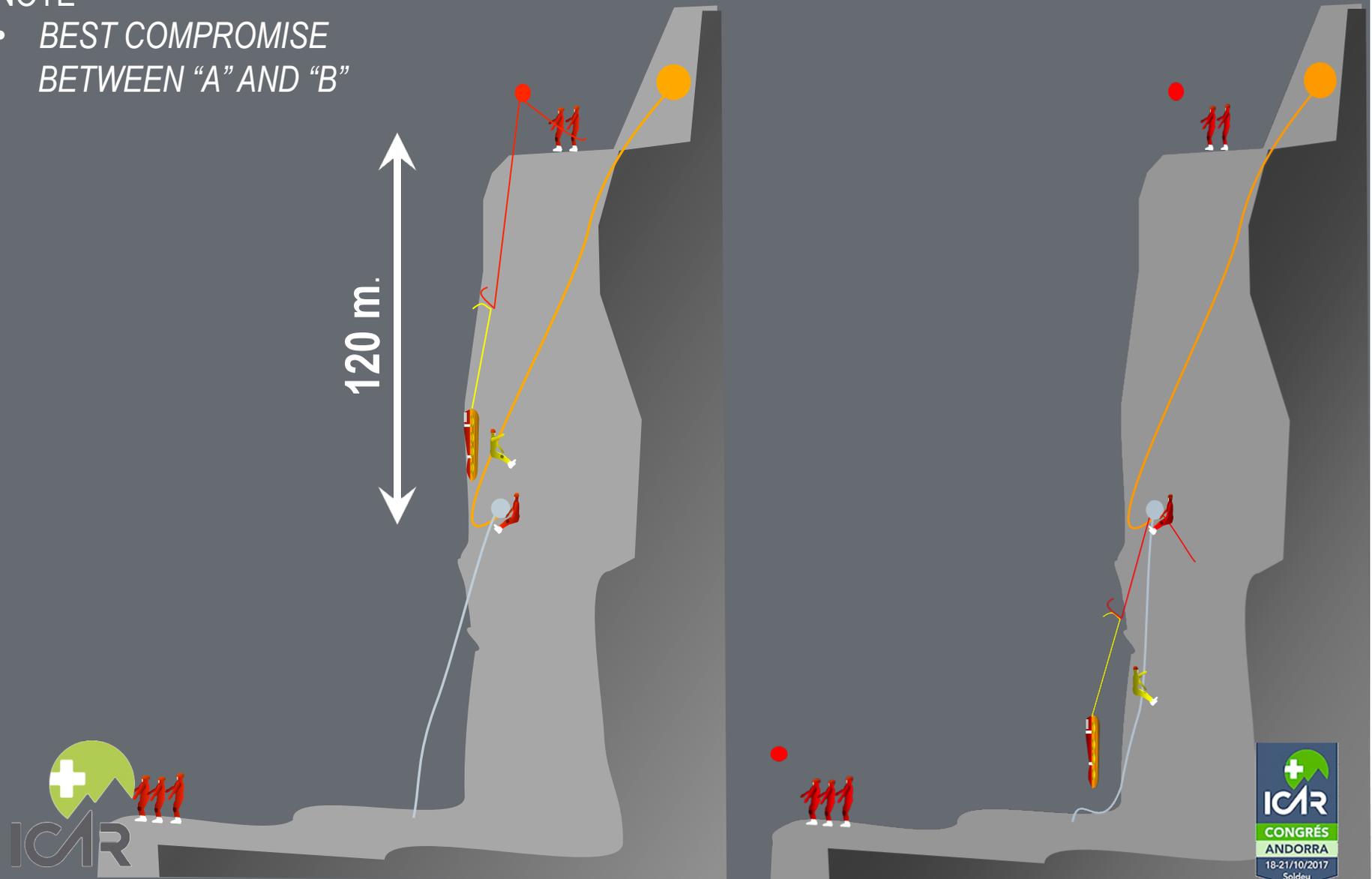
- *DEEP LOW ANGLE PITCHES, WITH LEDGES.*



- **C- JOINTED ROPES (> 120m) SKIPPING INTERMEDIATE BELAYS.**

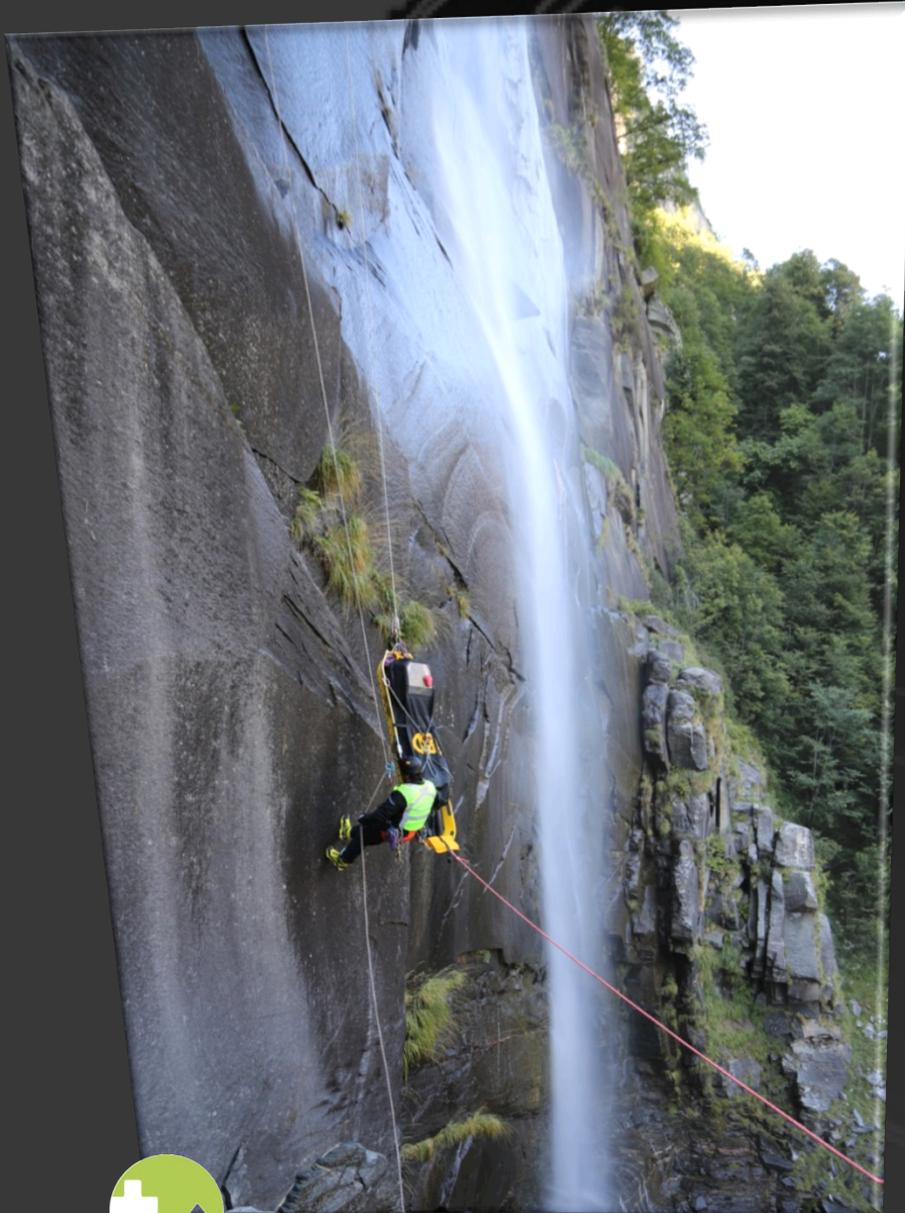
NOTE

- *BEST COMPROMISE BETWEEN "A" AND "B"*



SAFETY BASICS:

- IF POSSIBLE, THE STRETCHER HAVE TO BE LOWERED FAR FROM THE WATERFALL.
- A LINE FOR SINGLE ROPE WALKING TECHNIQUE HAS TO BE EQUIPPED TOP TO BOTTOM.
- STRETCHER AND OPERATORS HAVE TO AVOID LOOSE ROCK AND POSSIBLE ROCK FALL TRAJECTORIES.
- RADIO CONNECTION HAS TO BE ALWAYS AVAIBLE.

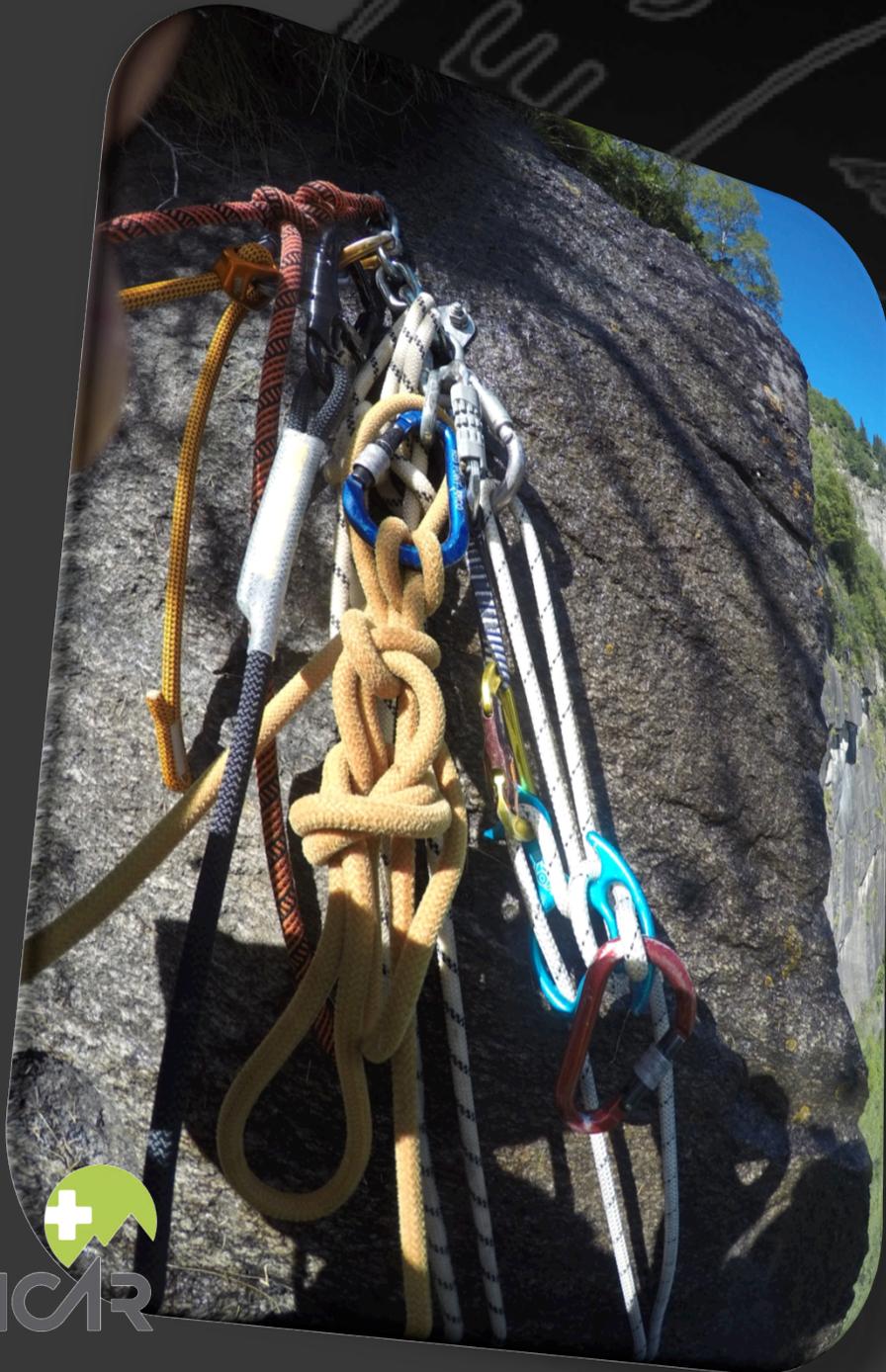


LOWERING TECHNIQUES

- 10mm SINGLE ROPE STATIC TYPE «A» EN 1891
- AN OPERATOR FOLLOWS THE STRETCHER, ABSEILING ON THE LINE.

- PREFERRED LOWERING DEVICE IS “OKA”, EASY TO LOCK ROPE





IN PRESENCE OF SHARP
ROCKS OR RISKS ROCK FALL,
WE LOWER THE STRETCHER
WITH TWO TENSIONED ROPES

- WE LOWER THE STRETCHER IN VERTICAL POSITION IF NEARBY OR INTO THE WATER FALL.
- WE LOWER THE STRETCHER IN VERTICAL POSITION AT HIGH RISKS OF ROCK FALL,
- THE RESCUE OPERATOR THAT FOLLOWS THE STRETCHER DURING THE OPERATON.



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THANK YOU

