

Safety Around Helicopter Operations



Why?

**NO RESCUE IS WORTH
LOSING YOUR LIFE OVER...**



**MAINTAIN YOUR SITUATIONAL
AWARENESS AT ALL TIMES!**

Objectives

- Give you the right mindset to survive around helicopters.
- Understand helicopter uses in SAR
- Understand helicopter risks and safety
- Understand how to behave around helicopters
- Understand LZ requirements
- Understand hoisting operations

Helicopters in SAR

Search



Helicopters in SAR

Rescue



Helicopters in SAR

Rescue



Helicopters in SAR

Rescue



Helicopters in SAR

Transport



Helicopters in SAR

Transport



Things can go wrong



Things can go wrong



Things can go wrong



Helicopter Dangers

- Rotors

- Main rotor droops during spin up/down, tail rotor is low and nearly invisible
- Loading/unloading crucial

- Crash impact

- Belts/harnesses, PPE (especially helmet)

Safety Principles

- The crew has the final say, period.
 - Your choice is to not fly, which is fine.
- Do nothing unless directed by crew
- Always be aware of the rotors.
- Do not go rearward of the doors.
- Is the risk justified?
- ***SLOW DOWN, THINK!***

Things to keep in mind

- Don't get separated from your gear.
- Be prepared to spend the night.
- Be prepared to hike out.
- Don't assume that you got dropped in the right place.

Preparing to load

- Know the true weight of yourself and pack.
- Stow any loose gear (your hat, no dangling junk on pack)
- Turn electronics off
- Use eye and ear protection.
- Be prepared for rotor wash during landing, turn your back.
- Stay well outside of LZ until helo lands.

Approaching and Loading

- Wait for permission/signal from crew, stay in constant sight of crew.
- Approach from front (usually 45-90° from nose), never from rear or upslope side
- Hunch over, keep eye contact with crew.
- Be aware of rotors, carry tall items horizontally
- Follow crew directions on seating, belts, intercom, etc

During flight

- Stay seated with belts secured.
- Helicopter rides can be very rough, looking at horizon may help with airsickness.
 - Not a bad idea to have Dramamine in your pack and dose before the ride.
- Follow instructions.
 - Crash positions, don't get out until rotors stop
- Enjoy the view.

Unloading and Departing

- Stay buckled until instructed by crew.
- Remove/secure helmet and headset if issued.
- Unbuckle yourself, *re-buckle belts*, disembark.
- Depart as directed by crew, never to rear or uphill.
- Make sure you get all your gear.
- Expect rotor wash when helo departs.
- Figure out where you are and how to get out.

Landing Zones

- A “hover hole” reduces safety/performance margins
- Ideal LZ is flat strip about the size of a football field.
 - Flat ridges and saddles really work well.
- Pilot will prefer to land/takeoff into wind.
- No lightweight debris, tall dry grass, trees/snags/stumps

Landing Zones

- Everyone except parking tender stays 100' away.
- Pilot will make a recon pass, may nix the LZ.
- At night, light only LZ itself and any power line towers

Landing Zones



Landing Zones



Landing Zones



Landing Zones



The Parking Tender

- Person most familiar with helicopter ops should be parking tender.
- Makes contact on radio, gives LZ lat/long.
- Stands at upwind end of LZ, back to wind.
- Tells pilot when in visual range, gives location in clock terms relative to pilot.
- Advise pilot about wires, hazards, surface winds, surface conditions
- Wave-off hand signal

Hoist Operations

- Some helos (like CHP) have hoists that can extract a subject when landing is impossible.
- One person does all radio comm with crew.
- Will lower a Buaman bag or a screamer suit on the hoist.
- ***Don't touch the cable until it hits the ground!!***

Hoist Operations

- Put subject in bag/suit and attach to hoist
 - Instruction card with pictures is attached, it's firefighter-proof.
- Tell crew ready to hoist
- Manage tag line, be prepared for it to be thrown down when finished.
- Hike out.

Bauman Bag



Screamer Suit



In Conclusion

- Helicopters are great tools, but will kill you in a heart beat.
- Safety around a helicopter is paramount.
- Maintain situational awareness.
- Always evaluate risks/rewards. Don't fly if you don't think it's justified.
- ***SLOW DOWN, THINK!***