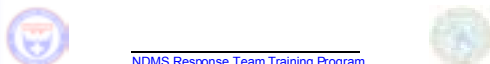


Aircraft Safety for NDMS Response Teams

Part 2 Operational Safety Issues


Stanley Batchelor, RN, NREMT-P, CEN, BSBA



NDMS Response Team Training Program

Topics

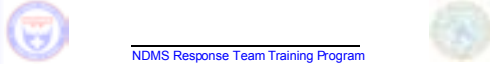
- Preparing for military aircraft deployment
- Flight line and Circle of Safety considerations
- Helicopter safety
- Landing zone set-up



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Deploying on Military Aircraft

- Follow the same packing instructions as with a commercial airline.
- The same baggage safety rules apply.
- Additional guidelines and safety rules must be considered.



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Cargo Aircraft Information

- For DMATs, military airlift occurs via aircraft that can carry passengers (pax) and cargo together:
 - C-130, C-141, C-17 adaptable aircraft
 - Rear drop ramp
 - Large enough to allow a 35-member team and pallets



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Cargo Aircraft Information

- Passengers sit in web seats facing each other:
 - Carry-on bag must be small enough to fit under this seat.
 - Gear bags go on a non-accessible pallet covered with a tarpaulin and a cargo net.
 - On-board services are limited, so keep snacks, water, etc., close at hand.



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Hearing Protection

- Military aircraft have several very powerful engines and are not insulated, resulting in a high level of noise.
- Hearing protection is **mandatory**:
 - Personal, comfortable hearing protection is best.
 - Self-sealing foam ear plugs are generally available upon boarding.



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Hearing Protection

- Only crew will have communications during flight, so intra-team communication is difficult while airborne.



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Flight Line Safety

- A preflight safety briefing will be conducted by the aircraft crew. These briefings will include:
 - Safe boarding procedures
 - Standard flight expectations
 - Emergency procedures
 - Other information from flight crew to safely complete the mission



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Flight Line Safety

- **No smoking within 50 feet of aircraft.**
- **All passengers are to stay in a group when on the flight line.**
- **Do not approach the aircraft until directed by the flight crew.**



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Flight Line Safety

- Do not walk under the wings or propellers, even if not running.
- Do not run when near the aircraft.
- Wear eye protection and long sleeve shirts/pants when near an aircraft with running engines.



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Circle of Safety

- A “circle of safety” exists around all aircraft:
 - Vehicles or people must not enter area unless directed by the flight crew.
 - Circle of safety is area around the aircraft, 10 feet from the nose, wings and tail of the aircraft.

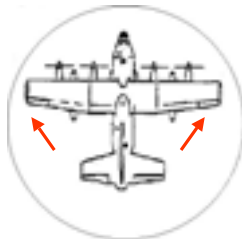


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NDMS Response Team Training Program



Circle of Safety

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Circle of Safety

- All vehicles moving within the circle of safety must have a spotter while in motion and use wheel chocks when parked.
- Only one vehicle at a time is allowed to be in motion within the circle of safety.



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Special Night Considerations

- Use a flashlight, if boarding the aircraft in a dark environment.
- Do **not** point lights in the face of the flight crew members, or direct the lights toward the cockpit.



NDMS Response Team Training Program



Special Night Considerations

- In flight, use low lights or flashlights with red or blue filters.
- Be especially cautious while moving in or around darkened aircraft.



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In-flight Considerations

- Bandanas joined and looped through the webbing and slipped over the forehead provide head support.
- Minimal restroom facilities are available during flight.
- **NO** smoking or alcohol consumption is allowed while in flight.



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Helicopter Safety

- Working around rotary winged aircraft (helicopters) can be very dangerous.
- Two major danger areas:
 - Main rotor blades
 - Tail rotor



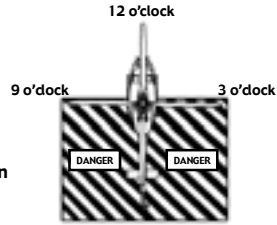
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Helicopter Safety

- **Main rotor blades danger area :**

- Downdrafts can cause injury from flying debris.
- Clearance from the blades to the ground can be reduced when the aircraft is on uneven ground.



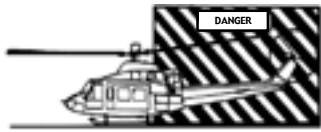
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Helicopter Safety

- **Tail rotor danger area :**

- Can be very difficult to see due to high RPMs
 - Is sometimes less than head height
- **Do not go behind skids of aircraft while blades are in motion.**



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Helicopter Safety

- **No smoking or open flames near the aircraft or landing zones.**
- **Do not approach the aircraft until directed by the pilot or flight crew.**
- **Do not open/close doors or compartments unless directed.**

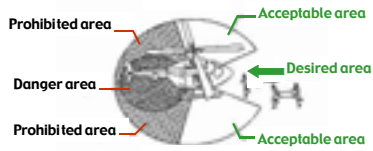


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Helicopter Safety

- **When approaching an aircraft with blades turning:**
 - Approach only from the front or between the 9 o'clock to 3 o'clock positions.
 - Maintain eye contact with pilot.



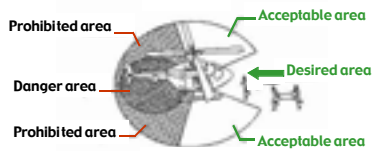
Safe Approach Zones

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Helicopter Safety

- **Stay clear of the tail rotor area:**
- **Do not proceed behind the skids or rear wheels without air crew direction.**



Safe Approach Zones

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Helicopter Safety

- **Hearing protection is required.**
- **Protective footwear, including ankle supporting boots, are essential safety equipment.**
- **Eye protection is required when working around landing zones and approaching aircraft with turning blades.**



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Helicopter Safety

- Secure all loose items that may be picked up by the blades (i.e., clothing, supplies, etc.).
- All aircraft have strict weight restrictions:
 - DMAT members may have to limit the amount of supplies and gear being transported.



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Helicopter Safety

- When flying with doors open, secure all loose objects.
- Safety belts and/or harnesses must be secured at all times when in flight:
 - Aircraft crew will provide instructions on the proper use of safety restraints.



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Helicopter Safety

- Do not radio the aircraft during the last 30 seconds before landing, except to report an immediate hazard.
- Radio "ABORT LANDING" or "WAVE-OFF" if you identify a potential hazard while the aircraft is on final approach.



NDMS Response Team Training Program



Landing Zone (LZ) Set-up

- When a LZ must be established near a DMAT:
 - Locate the LZ far enough away from the DMAT to prevent rotor-wash damage.
 - The larger the aircraft, the more rotor-wash.



NDMS Response Team Training Program



Landing Zone (LZ) Set-up

- When a LZ must be established near a DMAT:
 - The LZ should be at least 200 feet from the camp:
 - Easy access for patient, personnel, and equipment movement is necessary, but protect the LZ from unauthorized access.
 - Location does not restrict flow into and out of the DMAT camp.



NDMS Response Team Training Program



Landing Zone (LZ) Set-up

- Follow basic guidelines when choosing and setting up a landing zone:
 - Size: Ideally at least 100' x 100'.
 - LZ should be on a flat, firm surface, free of overhead wires, poles, tall trees, or structures.
 - Search and clear the LZ of debris.



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Landing Zone (LZ) Set-up

- Mark all corners to easily identify the landing zone:
 - Do not use cones or other objects that may blow around.
 - Use brightly colored flags.



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Landing Zone (LZ) Set-up

- At night, use red or yellow colored or strobe lights to mark the perimeter of the LZ.
- Use caution to protect the pilot's night vision by keeping bright white lights away from the LZ.
 - Do not use flares to mark the LZ.



NDMS Response Team Training Program



Summary

- Prepare personal belongings for military aircraft deployment.
- Follow guidelines for:
 - Flight line safety
 - Circle of Safety
 - Helicopter safety
 - Landing zone set-up



NDMS Response Team Training Program