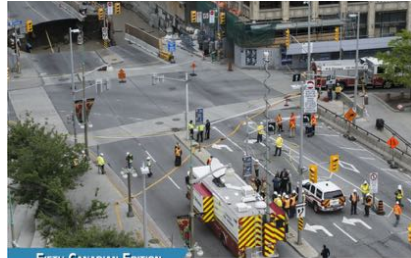


Emergency Medical Responder: A Skills Approach

Fifth Canadian Edition



FIFTH CANADIAN EDITION

EMERGENCY MEDICAL RESPONDER

A SKILLS APPROACH

MEETS PARAMEDIC ASSOCIATION OF CANADA'S
NATIONAL OCCUPATIONAL COMPETENCY PROFILE



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Chapter 23

Agricultural and Industrial
Emergencies

Objectives (1 of 2)

- Identify seven factors involved in the high rate of injury and fatality among farmers.
- Describe the four steps in the emergency medical care of the patient with a farm injury.
- Identify common operational controls used on farm machinery.
- Discuss common mechanisms of injury among agricultural workers.



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Objectives (2 of 2)

- Discuss the principles of disentanglement from farm equipment.
- Describe how to safely approach the scene of an industrial emergency.
- Demonstrate a caring attitude toward the patient and family when dealing with an agricultural or industrial emergency, while giving priority to the interests of the patient.

Why Are Farm Accidents So Serious?

- Complicated farm machinery
- Farmers don't use PPE
- Farmers often use old, unsafe equipment
- Lengthy extrications often needed
- Farmers often work alone in remote areas
- Often no phone at scenes
- Long transport times

Patient Entangled in Equipment

- ABC's
- If you can apply pressure to bleeding wound, use nearest pulse point
- Monitor vitals
- Preserve amputated parts

Begin Rescue After:

- Farm equipment is stabilized
- Engines are shut down
- Other hazards (leaking fuel) are controlled
- Patient is stabilized

Tractors and Farm Equipment Mechanisms Causing Injury

- Pinch points
- Wrap points
- Shear points
- Crush points
- Stored energy

Stabilizing Farm Machinery

- Enter cab, if possible
- Slow engine with throttle
- Pull knob or lever to shut down engine
- If you can't shut down engine from the cab, try fuel tank area
- Last resort – interrupt flow of fuel
- Diesel engine – loosen fuel filter to stall
- Discharge a 9 kg CO₂ fire extinguisher into engine's air intake

Tractor Stabilization

- Wrap 1st chain around rear tire and through rim's high slot
- Wrap 2nd chain around same wheel and rim's low slot
- Wrap 3rd chain through front of tractor and secure it to a hoist
- Secure 1st and 2nd chains to another hoist

Patient Assessment

- ABC's
- Suspect possible chest injuries, including pneumothorax and sucking chest wounds
- Treat patient for shock
- Look for burns and chemical burns
- Stabilize all injuries

Lifting or Removing Overturned Tractor

- Ensure all rescuers know their role
- Try to determine tractor's centre of gravity
- Watch patient during lift
- Use extra care in coordinating lift when more than one device is used

Disentangling Patients from PTO Shafts (1 of 2)

- Always assume neck and back injuries
- If patient is completely wrapped on shaft, determine if clothing can be cut free
- If PTO shaft must be removed with patient, place pry bar into implement side to hold stored energy

Disentangling Patients from PTO Shafts (2 of 2)

- Cut shaft with power saw, hack saw, or gas powered circular saw if you can't uncouple the shaft
- When removing patient, ensure all rescuers and bystanders remain clear
- Locate amputated parts

Other Types of Agricultural Equipment

- Combine
- Auger
- Corn picker
- Snapping rolls
- Husking beds
- Hay baler

Agricultural Storage Devices

- Grain tank
- Silo
- Manure storage

Grain Tank Extrication (1 of 2)

- Turn electrical power off
- Call fire department
- Never enter without other rescuers
- Do not use gravity gate or auger to release grain

Grain Tank Extrication (2 of 2)

- Secure patient with lifeline
- If patient is partially submerged, lower rescuer on harness with lifeline
- Clear area around patient's head

Silos

Silo gas can be recognized by

- Bleach-like odour
- Yellowish or reddish vapour
- Stains of red, yellow, or brown
- Dead birds or insects
- Nearby livestock with signs of illness

Reactions to Silo Gas

- Eye irritation
- Cough, possibly laboured breathing
- Fatigue
- Nausea, vomiting
- Cyanosis
- Dizziness, sleepiness

Manure Storage Areas

There are two potential injuries from liquid manure

- Drowning
- Inhaling toxic fumes

Signs and Symptoms of Hydrogen Sulfide Poisoning

- Cough
- Irritation of mucous membranes
- Nausea
- Sudden collapse and respiratory paralysis

Industrial Emergency

- Check with staff to determine potential hazards
- Never assume any machine is locked and secured
- Wait for specialized personnel for confined space rescues, or those in which the patient has been injured by an airborne or spilled agent