A 26-year old woodcutter was using a chainsaw to remove limbs from the top of a fallen tree when the cutting chain struck the inside of his thigh. The worker was rushed to hospital but died from loss of blood. The investigation found that he had been pulling the saw towards himself and was not wearing leg protection (chainsaw pants).

**Explain dangers**
- Chainsaw kickback can occur when the chain becomes snagged and suddenly stops moving. The change in momentum causes the chainsaw to move in the opposite direction, back towards the operator.
- The chain runs at very high speeds, and the cutting blade is extremely sharp. Each tooth is designed to remove a quarter-inch chip of material.
- A chainsaw is extremely loud, and parts of it can become very hot.
- Chainsaws produce a lot of vibration, both from the engine and from the process of cutting.
- A chainsaw with a combustible engine produces toxic exhaust fumes.
- The gasoline-oil mixture used for chainsaws with combustion engines can catch on fire if it’s spilled while filling a hot engine.

**Identify controls**

**Maintaining a chainsaw**
- Always follow the manufacturer’s maintenance instructions for your specific chainsaw. Keep a copy of the owner’s manual on hand.
- Inspect the chainsaw before using it. Make sure that the guide bar is tight, the chain is snug, the machine is lubricated, and the teeth are sharp. Check the drive links, sprockets, chain catch, and cutters for damage. Run the saw at half throttle and apply the chain brake to make sure it works properly.
- Never use a chainsaw that has damaged parts.
- Never alter any of the safety features such as the chain brake, throttle trigger interlock, ramped depth gauges, etc.
- Make sure the ratio of gas to oil meets the manufacturer’s recommendations (e.g., 50 to 1).

**Wearing personal protective equipment**
- Always wear eye protection that is CSA or ANSI-approved. A face shield may be required.
- Use gloves, a hard hat, CSA-approved safety boots, earplugs or ear muffs, and leg protection.
- Never wear loose clothing, unbuttoned jackets, flared sleeves and cuffs, scarves, tie strings, cords, chains, jewelry, etc. when operating a chainsaw.

**Starting a chainsaw**
- Keep everyone at least six feet away from you.
- Place the chainsaw on solid ground and secure it with one foot in the rear handle. Grasp the top handle with your left hand, apply the chain brake, and set the throttle lock. Pull the recoil handle towards your chest.
- Never “drop start” or “throw start” a chainsaw.
- Don’t let the cord snap back to the starter.
- Let the chainsaw idle for a minute or two to warm up.

**Operating a chainsaw**
- Hold the saw firmly with both hands and keep your feet firmly planted before you start to cut.
- Stand to the left of the saw and hold your left arm straight. Activate the throttle with your right hand.
- To prevent kickback, cut only one thing at a time. Use the bumper spike to rest the chainsaw on top of what you’re cutting and allow the sharp teeth of the chain and the power of the engine to do the cutting. Don’t force it.
- Bring the saw to full operating speed before starting the cut. If you feel resistance or you need to apply extra pressure in order to cut, the chain may be dull. Using a dull chain is not only a safety hazard, but it also increases your risk of developing hand-arm vibration syndrome (HAVS).
- Never pull the chainsaw blade towards you.
- Don’t operate a chainsaw above shoulder height.

**Transporting a chainsaw**
- Apply the chain brake and shut the motor off before setting the chainsaw down or moving it long distances.
- Allow the chainsaw to cool off.
- Use a bar guard to cover the chain when carrying or transporting it.
- Carry the saw facing downwards and to your side with the bar point behind you.
- During transit, use a carrying case if possible and make sure it’s secured to prevent it from moving.
- Never transport a chainsaw in the passenger’s seat of a vehicle.
- Where possible, transport the chainsaw in a well-vented cabinet or in the open air.

**Demonstrate**

Using the manufacturer’s operating instructions, review the maintenance procedures with your workers.

Show workers the proper way to start the chainsaw and to hold it while cutting.