



## Safety Topic: Strains and Sprains, the No. 1 Cause of Injuries

For the past three years, strains and sprains have been the leading cause of injuries to employees at ET&D Partnership member companies.

- A sprain is an injury to a **ligament**, the tough, fibrous tissue that connects bones to other bones.
- A strain is an injury to either a **muscle or a tendon**, the tissue that connects muscles to bones.

**According to Partnership data, the top three body parts injured by strains and sprains are:**

- Lower back.
- Shoulder.
- Knee.

The top three work activities in which strains and sprains occurred are manual materials handling, walking and conductors installing/removing. The following suggestions can help prevent strains and sprains.

### Manual materials handling

Whenever possible, arrange your work areas to minimize the amount of heavy lifting required.

- Before any heavy lifting activity, warm up using moderate exercises.
- Always plan the lift. Consider the weight of the object, how far you must carry it and your travel route.
- When you approach an object on the floor, try to determine its weight. If the object is too heavy, seek additional help or use a mechanical lifting device such as a forklift, hand truck or winch.
- Lift objects in the “power zone.” This is the area between mid-thigh and mid-chest height. Avoid lifting objects outside this zone. Always carry objects close to your body and avoid twisting.
- Use extreme caution when lifting objects more than 50 pounds. Move heavy objects by pushing or pulling whenever possible. Pushing is always preferable.

### Walking

- Use caution when walking across uneven surfaces where you could easily turn or twist an ankle or knee.
- When stepping off ladders, always use three points of contact and look where you will place your feet before you put your full weight on them.
- Use extra caution when working on slippery surfaces such as ice or wet floors.
- Ensure your footwear is regularly inspected and clean of debris and other contaminants. Always wear appropriate and proper-fitting footwear for your job.

### Conductors installing/removing

Often, employees trying to manually remove or install conductor find out it is too heavy and sustain a strain or sprain.

- Plan to reduce or minimize the load on the worker when possible.
- Use mechanical means, such as hoists or handlines.
- Position equipment/trucks/personnel to avoid overreaching.