Community Emergency Response Team

Contra Costa CERT Coalition

Cribbing

Released: 09 September 2026 **Contra Costa CERT Coalition**

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Community Emergency Response Team

- Personal safety is ALWAYS the number one priority
- Show up prepared
  - Wear appropriate clothing and footwear, have WATER
  - Wear PPE – your personal protective equipment …gloves, helmet, goggles, mask, boots, etc.
  - Have at least one communications device: cell, radio, etc.
- Work as a team
- Size-up - maintain situational awareness
- The CERT goal is to do the **Greatest Good for the Greatest Number**
- *Hope for the best but plan for the worst!*

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Unit Objectives

- Use safe techniques for debris removal and victim extrication using a lever and cribbing



Visual CRIB.2 **Contra Costa CERT Coalition** 16

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Leveraging and Cribbing





- For heavy lifting and performed in tandem
- Helps extricate survivors
- Various materials and objects may be used

Visual SAR.3 **Lamorinda CERT** 51

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Leveraging and Cribbing Operations



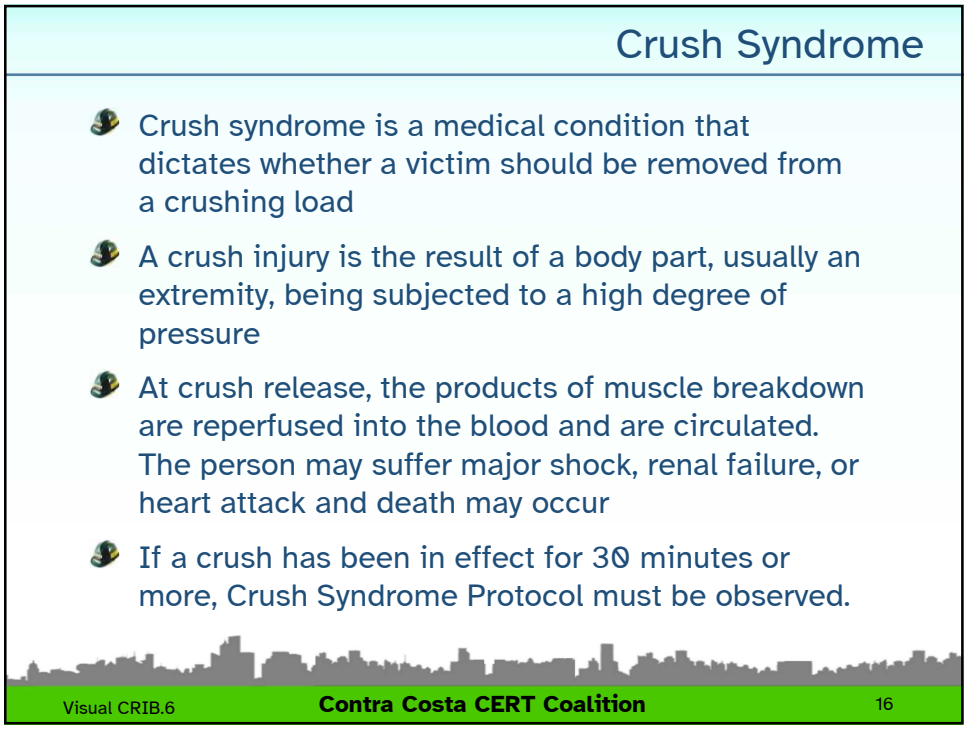
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Cribbing Planning and Staging

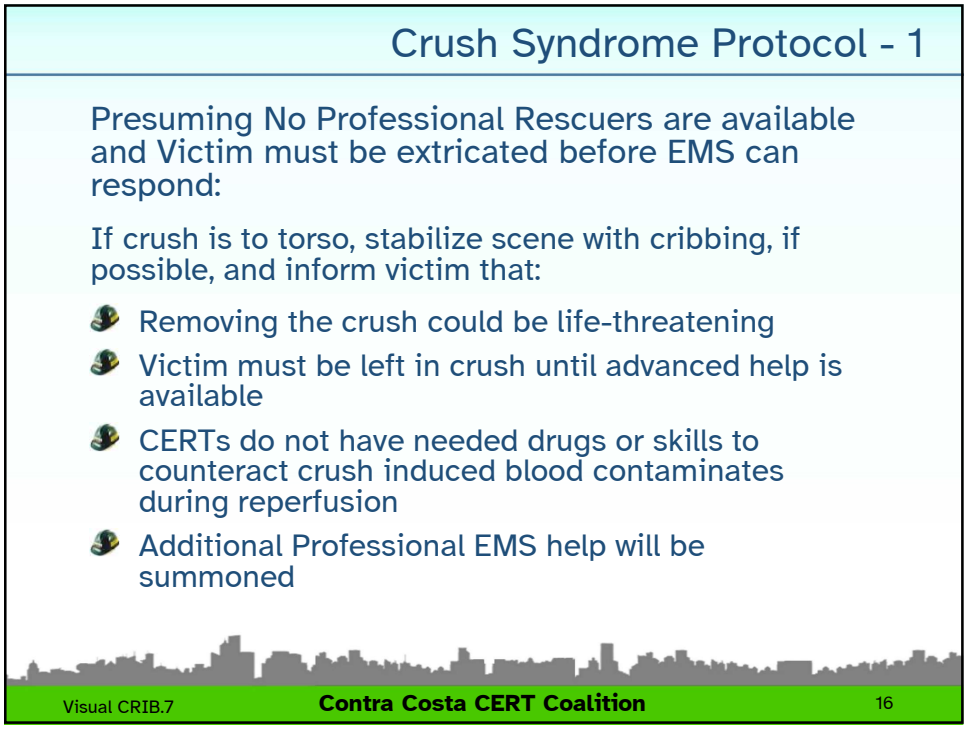
- Conduct a Size-up of the scene
- Have one person in charge and formulate an action plan
- Gather necessary materials for leveraging (lifting) and cribbing operations



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Crush Syndrome
Crush syndrome is a medical condition that dictates whether a victim should be removed from a crushing load
A crush injury is the result of a body part, usually an extremity, being subjected to a high degree of pressure
At crush release, the products of muscle breakdown are reperfused into the blood and are circulated. The person may suffer major shock, renal failure, or heart attack and death may occur
If a crush has been in effect for 30 minutes or more, Crush Syndrome Protocol must be observed.
Visual CRIB.6
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Crush Syndrome Protocol - 1
Presuming No Professional Rescuers are available and Victim must be extricated before EMS can respond:
If crush is to torso, stabilize scene with cribbing, if possible, and inform victim that:
Removing the crush could be life-threatening
Victim must be left in crush until advanced help is available
CERTs do not have needed drugs or skills to counteract crush induced blood contaminates during reperfusion
Additional Professional EMS help will be summoned
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Crush Syndrome Protocol - 2

If crush is to extremities and cause of entrapment can be stabilized with cribbing, volunteers may attempt to extricate by strictly adhering to the following protocol:

- Make plan to transport to trauma center
- < 30 minutes, consider tourniquet/s
- ≥ 30 minutes, utilize tourniquet/s
- Immediately prior to extrication, apply two tourniquets to crushed extremities, proximal to crush, if possible
- Extricate victim
- Transport to Advanced Medical Care immediately

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Leveraging and Cribbing Operations

- When a large object such as a collapsed wall or heavy debris needs to be moved in order to free victims, leverage and cribbing may be used.
  - ***Leverage*** is obtained by wedging a lever (pole or other long object) under the object that needs to be moved with a stationary object underneath it to act as a fulcrum. When the lever is forced down over the fulcrum, greater force is obtained to lift the object.
  - **A *crib*** is a framework of wooden, plastic or metal bars used for support or strengthening. *Box cribbing* means arranging pairs of wood pieces alternately to form a stable rectangle. In a disaster situation, debris may be available to use for cribbing.
- Leveraging and Cribbing are ***Perishable Skills*** and must be practiced regularly

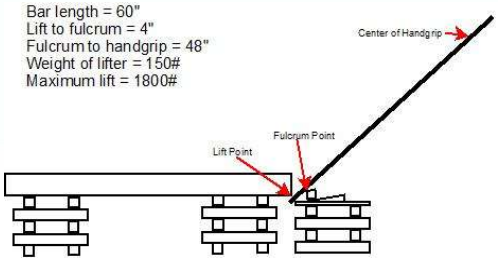
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Leveraging

- Lever Defined: A rigid bar, either straight or bent, that is free to move on a fixed point called a fulcrum
- A lever works by transferring a force from one place to another while at the same time changing the direction of the force



Clallam County Technical Rescue Team photo



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Leveraging

Lift an inch, Crib an inch

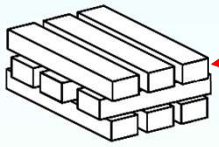
- Stabilize the object to be lifted
- Initiate the lift using the lever and fulcrum for mechanical advantage
- Have someone available to handle the victim
- As the object is lifted, add cribbing as needed; build on the foundation of the box crib
- When the object is adequately supported, the victim may be removed

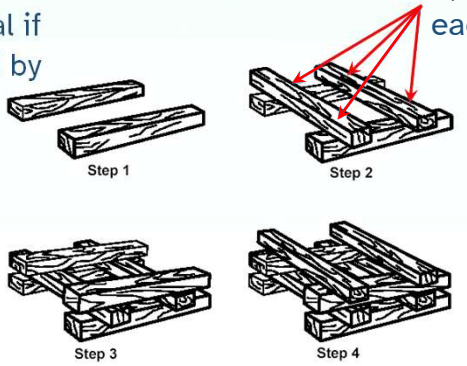
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Cribbing

24,000 lbs. total if load is supported by 4 joints

54,000 lbs. total if load is supported by 9 joints



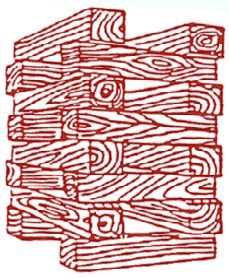


Visual CRIB.12 **Contra Costa CERT Coalition** 16

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Cribbing

- Wood fails at cut ends first
- Overlap ends by width of member – 4x4 = 3.5" overlap
- Don't crib higher than three times the footprint (width) of the crib
- Load needs to be supported with wood-to-wood contact all the way to the ground



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Cribbing

- Shims are used to match the angle of a surface
- Shims balance the load by ensuring even contact





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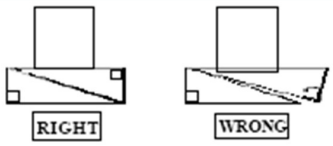
Visual CRIB.14 **Contra Costa CERT Coalition** 16

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Cribbing

- Wedges, inserted as Married Pairs, are used as variable height crib members
- Wedges can be used as Inclined Planes to prevent sliding movement
- **Single wedges can be used for *temporary* stabilization until flat pieces can be inserted**

"MARRYING" Wedges



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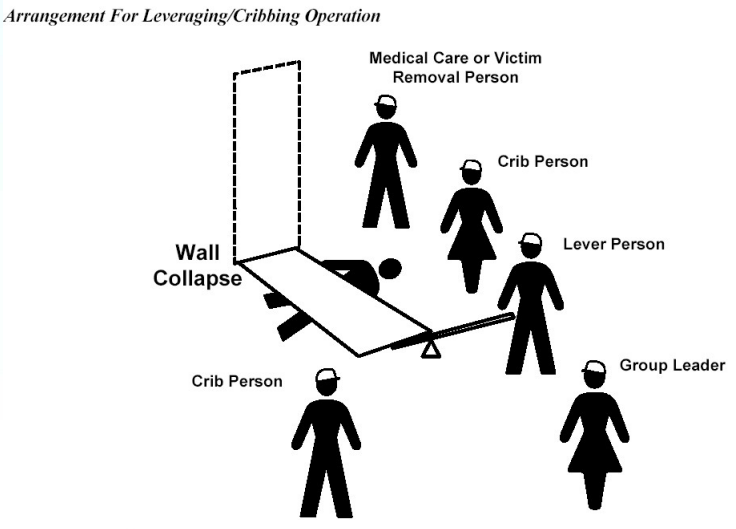
Cribbing Checklist

- Safety is most important
- Size-up the situation
- Stabilize the load
- Remove debris
- Raise the load
- Rescue the victim
- Lower the load
- Keep hands and toes clear of the load at all times!

Visual CRIB.16 **Contra Costa CERT Coalition** 16

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Resource Arrangement Example



Visual CRIB.17 **Contra Costa CERT Coalition** 16

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Cribbing Video



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Questions ?



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