

FURNITURE SAFETY & RESTRAINTS

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FURNITURE SAFETY

- Center for Injury Research and Policy of The Research Institute at Nationwide Children's Hospital found that from 1990-2007 an average of nearly 15,000 children younger than 18 years of age visited emergency departments annually for injuries received from furniture tipovers.
- Most furniture tip-over-related injuries occurred among children younger than 7 years of age and resulted from televisions tipping over.
- More than one quarter of the injuries occurred when children pulled over or climbed on furniture.
- Other tip-prone items include lamps, free-standing ranges, glass-top furniture and radiators covers.



Furniture Risks

- Why Is Furniture Risky?
 - We have all had the circumstance where we pull out too many drawers of a file cabinet – We can react to it by pushing a drawer back in, but a child, especially one climbing on it, can't.
 - Furniture falls can be very dangerous to a young child
 - Anything taller than it is wide or deep, such as narrow side tables, tables with unstable bases or on pedestals, bar stools, floor lamps and standing mirrors are likely to be tipped over.

Furniture Risks - Continued

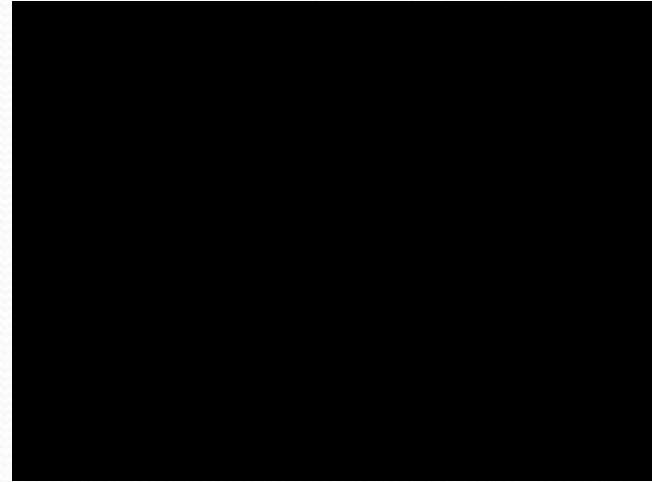
- , computer, printer, fax machine or piece of art.
- If a cable or strap type restraint is used, the strap must be tightened with no slack allowed when installed between the wall and tethered item according to ASTM standards and should be able to withstand 50 pounds of weight in the drawer.



Furniture Tipover

[Consumer Reports](#)
[Video about tipover and standard](#)

http://blogs.consumerreports.org/safety/2008/10/tv-tipover.html?resultPageIndex=1&resultIndex=5&searchTerm=furniture_tipover



Furniture Restraints

- Furniture Tethers – Typically mounted in pairs unless furniture is narrow
- Flat Screen TV Restraint Brackets & Straps



L-Brackets

- Good alternative to conceal restraint in open furniture.



Large Tube TVs

- Extra-Wide, Super Strong Adhesive Strap with Velcro Mounted On Back of TV.
- Other end is Bolted To Stud In Wall or with Toggle Bolt in Plaster or Metal Studded Walls.
- Buckle on Strap allows Easy Movement.



Inferior Restraints

- Be wary of Furniture Zip Ties with Plastic “Buckles” on the wall and the furniture
- The break strength of the Zip Tie may only be about 50 pounds – a 50 pound child with a drawer that is out about 2 feet will exert a force of 100 pounds on the strap.
- The screws included with these are relatively fine in comparison to standard wood screws.
- These are inherently difficult to get taut – Any slack in the Zip Ties can impart a impulse load, which may cause it to snap.
- The instructions call out “Do Not Overtighten” the strap.
- Be aware that the packaging calls out “Straps should be periodically adjusted and replaced”. This is most likely due to solid nylon getting brittle over time, especially in warm, dry or high-ozone areas.



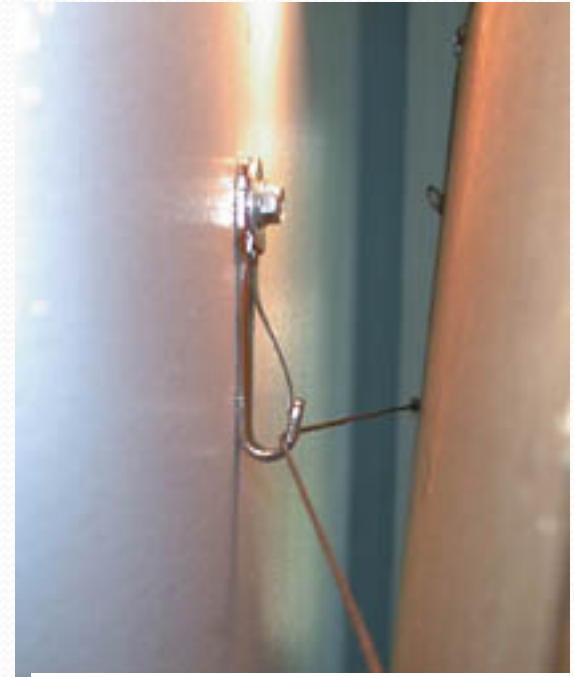
Difficult Furniture

- Sometimes it is best to remove the furniture or block access to it.
- Clear Museum Wax or Putty is a good alternative for securing items prone to falling.



Picture Restraints

- A picture, especially one that is low hanging or right above a chair or sofa is a risk.
- Consider using tremor picture hooks with retention tangs or seismic connectors



Furniture Restraints Installation: Tips & Tools

- Walls

- Wood Studs: Electronic Stud finder, Tot Lok Super Key (to help find drywall screws or nails)
 - Be aware that there may be items going through the middle of the stud (e.g., water or drain pipes, electrical wires, etc.) – **YOU DON'T WANT TO HIT THESE WITH LONG SCREWS**
- Plaster Walls / Metal Studs
 - Don't rely on wood lath struts or metal studs to hold screws securely.
 - Instead use Toggle Bolts, Toggler® Bolts, Molly Bolts
- Concrete / Masonry Walls
 - Tapcon or Spax Screws / Expansion Bolts



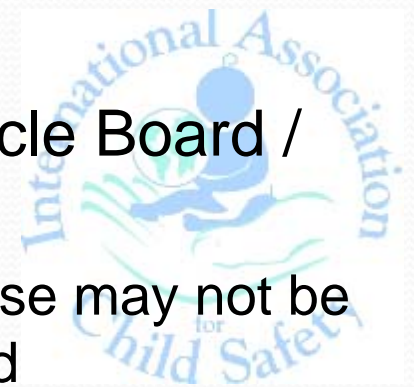
Furniture Restraints Installation: Tips & Tools

- Suggested Length Of Walls Screws
 - Too Shallow – Run the risk of screw pulling out – Suggest using #8 or #10 screws at least 1.5” long (~1” engagement into wood studs with ½” Drywall)
 - Too Deep – Run the risk of screwing into electrical wires, supply piping or drain lines. Avoid screws that will go 2” (1.5” engagement into wood) as you may hit one of these. Be prepared for the consequences! This is true for other items as well, like gates wall mounts, picture mounts.
- Metal Shields – Used on the surface of woods studs to prevent drilling into items too close to the front of the wood. **STOP - DO NOT DRILL THROUGH THIS!**



Cautions

- Walls – Ensure the mount is secure
- Furniture
 - Wood / High Density Fiberboard
 - Metal
 - Furniture Backs
 - Don't secure here
 - Relatively thin and prone to popping off the furniture or the screw pulling through the material
 - Low or Medium Density Fiberboard / Particle Board / Rickety Old Furniture
 - You may want to let the client know that these may not be safely secured and may need to be replaced



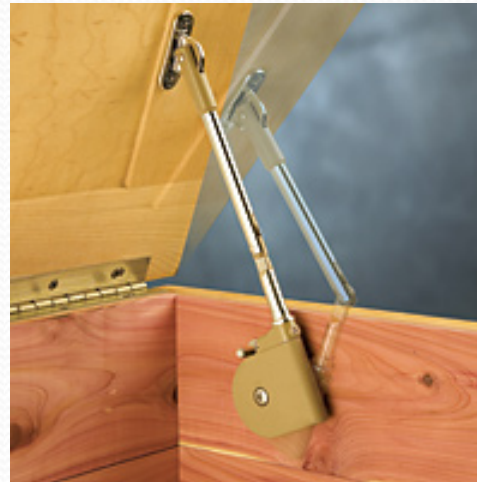
Cautions - Continued

- Furniture
 - Latch Drawers to Help Minimize Climbing
 - Prevent Non-Captivated Drawers from being pulled out



Chests

- Prevent the lid from slamming on a child's hand.
- Also ensure that there is adequate air holes or slots to allow a child to breath inside chest



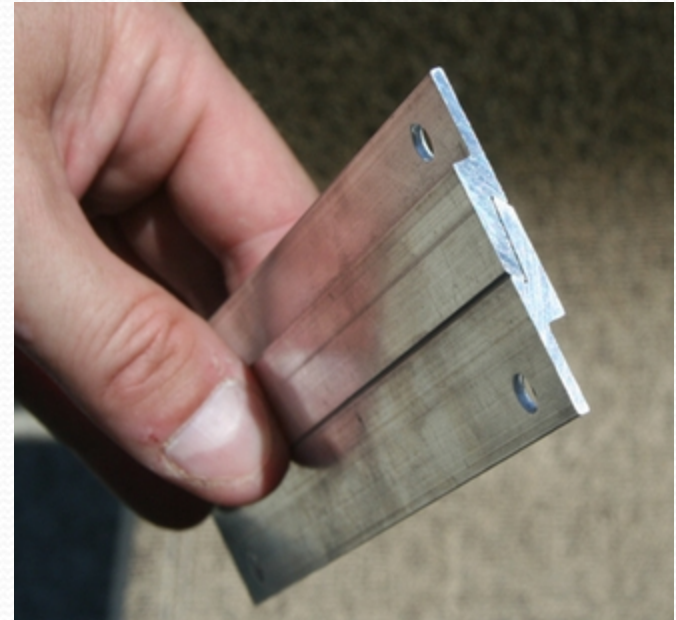
Range Anti-Tip Devices

- Anti-Tip devices help prevent a range from tipping over
- When doing surveys, check to see if a anti-tip bracket is installed
 - Remove Lower Drawer & Use Flashlight, or
 - Carefully Pull From Back of Range
- To get an anti-tip bracket, go to <http://www.aham.org/consumer/ht/d/s/p/i/2319/pid/2319>
- If installing into tile, ensure you have appropriate drill bit, especially if it is porcelain



Large Pictures / Mirrors

- French Cleats (or Z-Clips) can be used to hold these on to a wall.
- Mount one part on the back of the picture or mirror and then the other part into studs in a wall
- May want to utilize a secondary retention devices (cable restraint or tether) to help prevent the device from being pulled from the bottom
- Can handle weights up to 100 pounds



Other Items to Secure

- Lamps
- Radiator Covers



Annealed vs. Tempered Glass

- Annealed glass breaks into shards, which are dangerous, while tempered or safety glass breaks into small fragments.
- As per current Building Code, tempered glass will be present on all glass doors, windows within 24" of a door and in bathrooms (this will not apply to older homes)
- Tempered glass in this case is easily determined by an etching in one of the corners
- Glass furniture, especially flat tables, don't have this etching, so if you see a glass surface, recommend to the client that they remove it. Or they can replace the panel with polycarbonate or acrylic plastic. Another suggestion for cabinets with glass is to coat the back of the glass with special film that holds the glass together. Lastly, they can try to get the glass tempered.
- See <http://blogs.consumerreports.org/safety/2008/12/glass-tables.html> for more information about glass tabletops