



Children's Safety Harnesses

Crewsaver harness is a ruggedly built but heavy alternative.

Never mind what your experience tells you. Children do not go to sea. At least that is the only logical conclusion we can reach as we deal with the lack of adequate offshore safety equipment for kids.

In October 2006, we ran down more than a dozen life jackets for infants and toddlers. There were only a few worth writing about, and none met our full expectations. Of the lot, we pegged the MTI Adventurewear Bay Bee 201-1, the Mustang Survival MV-3150 and MV-3155, and the Suspenders 12ACH as standouts, and all of these products are still available today.

In the December 2006 and January 2007 issues, we dug into the topic of safety harnesses and tethers, and the outcome was worse. One product

The Crewsaver harness' yellow nylon sleeves help to keep the shoulder straps from tangling. Fairly large and easy to manipulate buckles adjust the shoulder straps.

SAFETY & SURVIVAL

The Crewsaver harness (left) was tested in the water both with and without a personal flotation device. Testers found the West Marine harness (right) to be much lighter, but also much harder to don.



in that test, a safety tether designed for children more than 50 pounds, snapped under the load of a 35-pound weight being dropped from six feet. The tether, from Jim Buoy,

underwent an upgrade immediately after our report.

The only safety harness that we found acceptable for children was a complicated tangle of webbing sold by West Marine. We'd rather deal with a hank-on jib at the end of an 8-foot bowsprit than wriggle a child into that harness's crossover shoulder straps, but at least it didn't break under load. One nice feature of the West Marine model was the crotch strap, something that we found essential in PFDs for small children. A child's flexible joints and limbs seem designed to slip out of wearable safety equipment, and applying knowledge about fitting adult PFDs to those for children is a losing battle.

WHAT WE TESTED

Crewsaver, a British company that specializes in a wide range of recreational and commercial safety gear, has generally done well in our safety product reviews, so when we heard about its Venturer child safety harness and tether, we requested them for testing. The harness is, by far, the most rugged children's safety harness we have seen. The harness is made of 35-millimeter nylon webbing with a 4,000-pound breaking

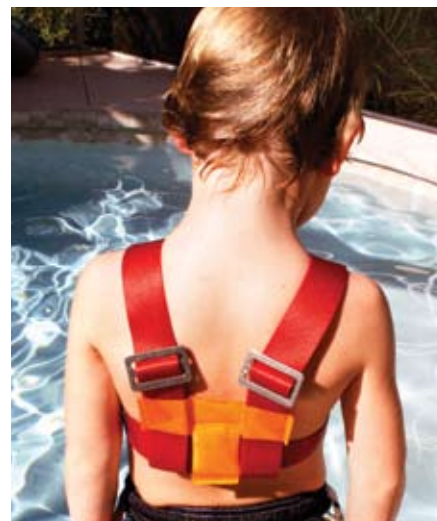
strength, and stainless-steel adjustment and closure buckles. A stainless-steel D-ring serves as the tether attachment point.

The harness comes in two chest sizes: 16 to 24 inches and 22 to 32 inches. It is designed so that it can be worn forward or backward, so the tether can serve as a "leash" for waterfront strolls with a toddler as well as a tether at sea.

The tether is 4 feet long (most adult harnesses are about 6 feet) and attaches to the harness with a cow hitch (see article on facing page for more discussion on this), making it impossible for the child to detach himself from the tether while he is clipped in. At the boat end of the tether is the common Wichard hook, a rugged clip that requires a relatively strong grip to manipulate (January 2006 and May 2009).

HOW WE TESTED

We tested the Crewsaver harness in various situations one would expect to encounter on a boat or onshore, checking it for comfort and fit on children ranging from 35 to 50 pounds. Two children were subjected to a series of pool tests, including lifting and drop-



AS VALUE GUIDE		CHILDREN'S SAFETY HARNESSES			
MAKER	PRICE / SOURCE	WEIGHT	RATINGS		
			DESIGN / FUNCTION	MATERIALS	FIT / COMFORT / ADJUSTABILITY
CREWSAVER ★	\$70 / landfall navigation.com	12 oz.	Fair	Good	Good
WEST MARINE ✓	\$50 / westmarine.com	8 oz.	Fair	Good	Good
★ Best Choice ✓ Recommended					

ping and dragging in the water—a perfect exercise for a hot summer day. We did not do a break test on the tether, but identical tethers have withstood our dynamic load tests of 1,000-plus pounds.

CONCLUSION

The parallel, no-tangle design is the best thing going for this harness. The wide straps add weight, but make it easier to don and are more comfortable under load than the narrow straps on the West Marine harness. Contrasting stitching allows for easy quality inspection.

Careful fitting is essential for this (or any) harness to perform well in an emergency. Testers found that harnesses that appeared to fit snug on land were loose under load in the water. It is important that the chest strap rides high and close under the child's armpits, leaving no room for the child to slip out. Although the child seemed

secure during the more vigorous water testing, we would recommend a crotch strap for all safety harnesses for children, just as we do for infant and toddler PFDs. If a crotch strap is used, it should not impede head-up orientation when the harness is under load.

Bottom line: The \$70 Crewsaver kids' harness is the best built and designed safety harness for children that we've come across, but it has shortcomings. It is heavier than the West Marine harness, and the flat buckles have sharp hard edges that can dig into skin.

The \$70 tether also needs improvement. For older children, who might be clipping themselves in, the Wichard is a poor choice of clips. The Gibb-style or Kong clip (see photos, page 28) are preferable as they're easier to open.

Sadly, if you are serious about get-



The Wichard-style tether clip is difficult for most pre-teens—and even many adults—to release.

ting a good-fitting harness for your child, there aren't a lot of options. Some cruisers resort to working with a sailmaker to fashion their own. If you know of an ideal kids' harness, we'd like to hear about it. ▲

CONTACTS

CREWSAVER,
+44 (0) 23/9259/8621
www.crewsaver.co.uk

WEST MARINE,
800/262-8464
www.westmarine.com

Another Approach to Tethers

Spinlock cutter and harnesses rethink the snap-hook.

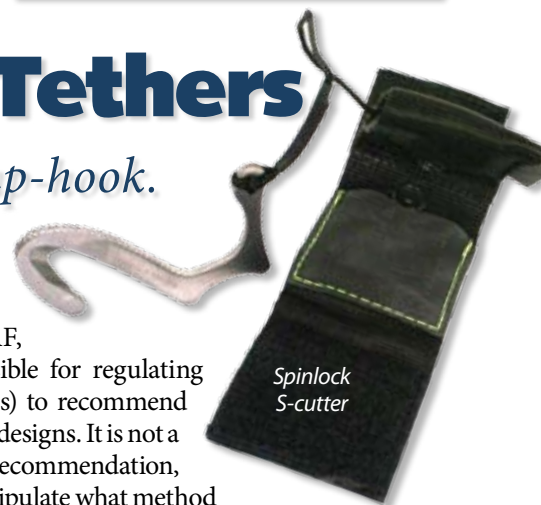
There's a reason why we recommend safety tethers—the umbilical cords that connect the jacklines on our boats to the harnesses on our bodies—be 6 feet long or shorter. Getting dragged behind a boat, even at the sedate speed of 4 knots, can easily drown a person. Unless someone is on hand to haul you on board, survival relies on a superhuman burst of adrenaline.

Though rare, there have been some highly publicized deaths involving harnesses. The story of Harvey Shalsky, a sailor in the 1999 Double-handed Farallones Race, is familiar to most racers. Shalsky, racing with longtime partner Mark Van Selst, drowned while tethered to his J/29 *White Lightning*. Van Selst was unable to slow the boat or haul his partner in, and eventually cut loose Shalsky (who was by then unconscious) so that following boats could recover him.

The hazards associated with a tether that cannot be eas-

ily released under load prompted the International Sailing Federation (ISAF, the council responsible for regulating offshore sailing races) to recommend this feature in tether designs. It is not a requirement, only a recommendation, and ISAF does not stipulate what method should be used for the release.

The standard clip used by most makers for this purpose is a hinged snap shackle. The snap shackle, which features a spring loaded plunger pin, will release easily under no load and light loads, but it becomes progressively harder to release as the load increases. Usually, there is a lanyard attached to the release pin



Spinlock's race tether uses thinner non-absorbent tether material and lighter Gibb-style hooks than its Classic counterpart. A third hook can be cow-hitched into the harness-end of the tether.

to make it easier to grab and pull (see photos below), but these are hard to use under the loads one could expect in a man-overboard incident.

During our on-the-water evaluation of inflatable PFD/harness combos for our August 2008 article, testers who were pulled at less than 4 knots were able to successfully release tethers with snap shackles only 50 percent of the time.

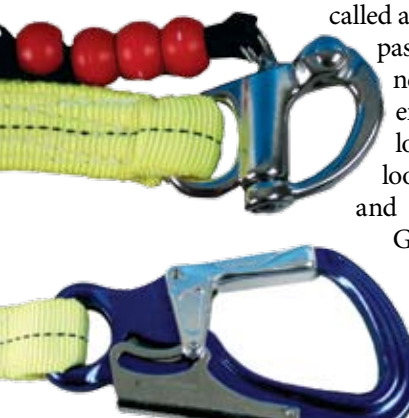
Some makers question whether the snap-shackle is the right attachment method for a tether. A clip that releases easily, they say, contradicts its primary purpose, which is to resist opening when the body, harness, and tether are being bumped across the deck by a wave.

So how do you make a tether that's easy to release but won't release accidentally? The engineers at Spinlock pondered this problem and came up with two new lines of tethers—classic and race—neither of which use snap shackles.

They also developed a special S-cutter Safety Knife (\$24) that can be fixed to the safety harness and kept at the ready to slice the tether if needed. The hook-shaped tool stores in a small pouch that will fit on most harnesses or harness/PFDs. A lanyard keeps it close at hand if it gets dropped. It is extremely sharp, and the cutting blade is protected with a soft wax shell that easily breaks away during cutting.

"It is not a substitute for a good knife" explained Myles Uren, who oversees Spinlock's Deckwear line. "We encourage sailors to always have a sharp knife handy for an emergency. This is a back-up."

For the jackline-end of the tethers, Spinlock has opted for the Gibb-style dual-action hook, an excellent piece of hardware that locks securely and is easy to open. At the harness end, users can choose either another Gibb-style hook or a soft loop that can be tied to the harness with a cow hitch. (To tie a cow hitch, also



called a lark's head or girth hitch, simply pass the soft loop through the harness D-ring and then pull the boat end of the tether through the soft loop.) Those who opt for the soft loop can buy a separate Gibb hook and cow-hitch it in as needed. The Gibb hook does not release under load, but is otherwise easy to unhook. The soft loop minimizes weight and any clanking at the harness—particularly when combined with Spinlock's



harness, which uses a high-tech fiber strop instead of the conventional D-ring for tether attachment.

The main difference between Spinlock's classic and race lines of tethers (priced from \$90 to \$160) is that the race harnesses feature a lighter version of the Gibb-style hook and narrower webbing. The race tether's total weight of 13 ounces is about 2 ounces lighter than the classic tether. The tethers in each line comes in either the two-leg style, which allows the wearer to stay clipped in even when he is changing fixed clip-in points, or a single leg (with or without elastic). One of the tethers in the Y-shaped dual-tether has sewn-in elastic to minimize the amount of slack.

The tethers, clips, and hardware are all top-of-the-line and meet all the ISAF standards, including contrasting stitching for easy inspection, an overall length of less than 6 feet, and a sewn-in overload indicator. If you subscribe to the no-snap-hook philosophy, these tethers are as good as, if not better than, our favorite tethers from the January 2007 test.

CONCLUSION

The well-made Spinlock tether with a Gibb hook at the harness end is a good option for those who worry about snap shackle. However, based on historical evidence, we cannot recommend a tether that must be cut to be released in an emergency. The 1998 Sydney-Hobart race (www.ussailing.org/safety/Studies/1998_sydney_hobart.htm) is worth reading about before committing to the cow hitch. One possible lighter option is the Kong hook (left), but watch for corrosion.

The S-cutter would make a fine addition to any harness, but it does not take the place of a sharp knife. We practiced cutting webbing with it in the water and were impressed with the cutter's keen edge but it is small to handle. A sharp knife with a lanyard is an essential piece of deckwear. In a worst-case scenario, when you need to cut free of your tether under a high load, a swipe of a good knife can be more effective than any cutter, hook, or clip we've tried to date. ▲

The snap shackle (top) used in the West Marine tether is typical of those found on many other tethers. There is some concern that the split-ring connecting the lanyard to the plunger pin could deform or even pull out under the forces required to release a snap hook under load. The alloy Kong jackline hook (bottom) is light and easy to work, but watch out for corrosion in saltwater applications.

CONTACT

SPINLOCK
401/662-3125
www.spinlockusa.com