

Safety Scalpels

STATE OF THE MARKET REPORT

by Ron Stoker

One of the highest risk areas for sharps injuries is in the perioperative setting. Physicians and perioperative nurses routinely face exposure to bloodborne pathogens from percutaneous injuries. These injuries place healthcare workers at risk for the occupational transmission of hepatitis B virus (HBV), hepatitis C virus (HCV) and HIV. These injuries are also implicated in the transmission of more than 20 other pathogens.

Percutaneous injuries occur throughout all healthcare facilities, and many occur in the perioperative setting. The risk of having a scalpel injury increases much higher the longer the surgery and the more invasive the procedure. Often, the percutaneous injuries are self-inflicted. Many of them occur during the hand-to-hand passing of sharps instruments. The most common body part injured is the non-dominant hand. Injuries from scalpels are reported to occur most often¹ when:

- ▶ loading or removing a disposable scalpel blade;
- ▶ during hand-to-hand passing of the scalpel;
- ▶ when the tissue is being retracted or spread with hands and dissection is being performed;
- ▶ when the surgeon is cutting toward his/her fingers or toward an assistant's fingers;
- ▶ before or after use when the scalpel is left on the operative field unattended;
- ▶ when scalpel is placed into a sharps container that is overfilled or poorly located.

In previous articles, the author has looked at alternate methods of removing scalpel blades and using passing trays to make the transfer of sharps safer. In this article we will review the products that manufacturers are marketing as safety scalpels that are currently available on the market. The purpose of this article is not to compare one scalpel against another, but it is intended to give the reader information about the current state of the market on safety scalpels.



Weighted Safety Scalpel™ with Protective Safety Shield

Weighted Safety Scalpel™ with Protective Safety Shield

The Sandel Weighted Safety Scalpel™ with Protective Safety Shield has the feel of a reusable scalpel. The protective safety shield meets all OSHA requirements. It is color-coded to ensure proper blade selection. The Safety Shield locking /unlocking button can be used by either left- or right-handed clinicians. The product is easy to use. Simply remove Time Out® Sleeve prior to use. This sleeve gives visual reminder to take time out to comply with JCAHO Universal Protocol. To expose the blade push the safety button down

and slide it back. Before each pass and prior to disposal, slide the safety button down and forward until a click is heard and the blade is fully covered. Dispose of the scalpel in an approved sharps container.

Non-Weighted Safety Scalpel™ with Protective Safety Shield

The Sandel Non-Weighted Safety Scalpel™ with Protective Safety Shield is light and easy to use. The protective safety shield meets all OSHA requirements. It is colored-coded to ensure proper blade selection. The Safety Shield locking/unlocking button can be used by either left- or right-handed clinicians. The product is easy to use. Simply remove Time Out® Sleeve prior to use. This sleeve gives a visual reminder to take time out to comply with JCAHO Universal Protocol. To expose the blade push the safety button down and slide it back. Before each pass and prior to disposal, slide the safety button down and forward until a click is heard and the blade is fully covered. Dispose of the scalpel in an approved sharps container.

For more information on safety products from Sandel Medical Industries, visit the company's Web site at www.sandelmedical.com or phone 866.764.3327.



Non-Weighted Safety Scalpel™ with Protective Safety Shield

TECHNOCUT Plus® Retractable Safety Scalpel

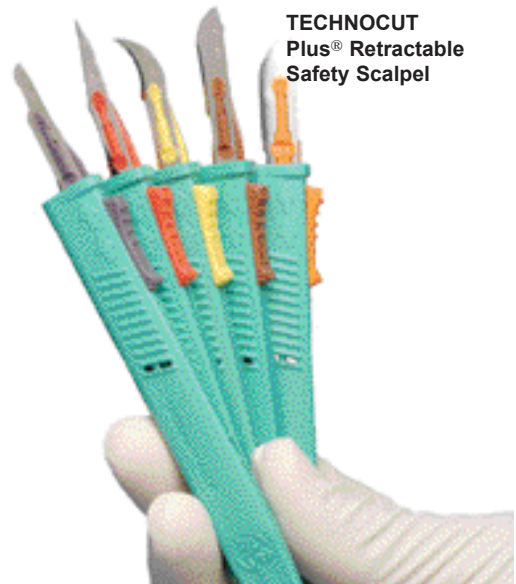
MYCO Medical's TECHNOCUT Plus® Safety Scalpel retracts into a safety covering and can be locked into place. This allows the blade to be passed between surgeons and nurses with the blade enclosed, limiting accidental blade stick injuries that often occur when passing, attaching to or

Percutaneous injuries occur throughout all healthcare facilities, and many occur in the perioperative setting.

removing of a blade from the scalpel handle. The scalpel is easily maneuverable, light and well balanced. The blade is activated on top so that it can be used by both left-handed as well as right-handed individuals. An audible click indicates blade position (retracted, extended and final lock).

To use, push the slide latch forward until the latch clicks into position. The scalpel is now ready for use. To retract the blade, simply pull the slide latch back until a gentle click is heard. Visually check that the blade is fully retracted. The scalpel is now in the safety position. This can be repeated as needed. Once the procedure is completed, pull the slide latch back with force, until a loud click is heard and felt. The scalpel is now ready for disposal.

For more information please contact MYCO Medical at 800.454.6926 or visit the company's Web site at www.mycomedical.com.



TECHNOCUT Plus® Retractable Safety Scalpel

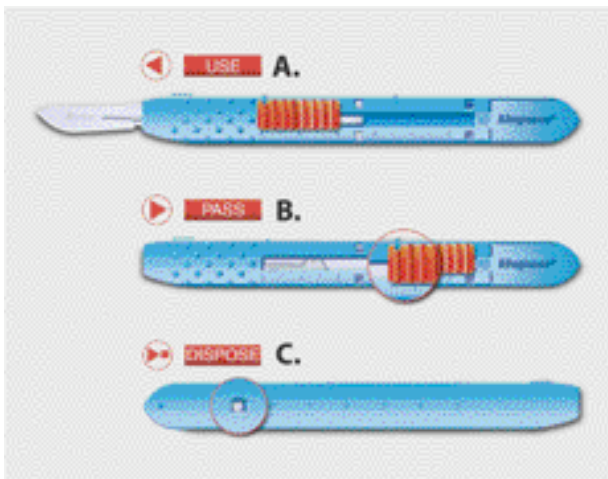
Allegiance® Retractable Safety Scalpel

The Allegiance® Retractable Safety Scalpel from Cardinal Health features a lock to visually verify that the blade is safely locked for disposal. An indicator line shows locked position of the blade to help prevent risk of injury during use, passing and disposal. The sides of the blade have a bubble sensory grip for control.

The stainless steel blade can be identified by the color-coded, skid-resistant, retractable button. To use, the clinician would extend the button forward, positioning the notch on the button with the indicator line. The blade is then exposed and locked in the USE position.

When incision is completed the clinician retracts the blade by retracting the button inside the handle. The positioning notch on the button is aligned with the indicator line. The scalpel can then be PASSED and reused as needed. When the button is pulled back beyond the PASS position, a click is heard. The blade is now locked in the DISPOSE position and cannot be accessed. The locked status of the blade can be viewed through the small window.

For more information about the safety scalpel go to www.Cardinal.com or phone 614.757.5000.



Allegiance® Retractable Safety Scalpel

BD Bard-Parker™ SafetyLock™ Disposable Scalpel

The BD Bard-Parker™ Protected Surgical Blade and Metal Handle from BD was designed with the weight and feel of a traditional scalpel but has a protective shield. It has a one-handed activation of the protective shield. The blade remains covered during assembly and disposal to help prevent accidental contact with the blade. The metal handle is reusable and autoclavable.

The clear shield locks before and after use for protection. The top activation button enables the use of the scalpel by either left- or right-handed users. The lock provides both an audible button click and a tactile sensation indicating that the lock is in place.

The blade is attached to the handle by grasping the protective shield with the thumb and index finger with the blade tip pointing up. The handle cleat is inserted into the scalpel blade until the blade is up to the indicator line. The user is cautioned against placing her hand in front of the shield opening. To use the scalpel, the top button is depressed on the protective shield and the shield is retracted to its rear locked position. This fully uncovers the blade. To cover the blade, the top button is depressed on the protective shield and is advanced completely until it locks into position. Disposal of the protected scalpel can then be made in an approved sharps container.



BD Bard-Parker™ Protected Surgical Blade and Metal Handle

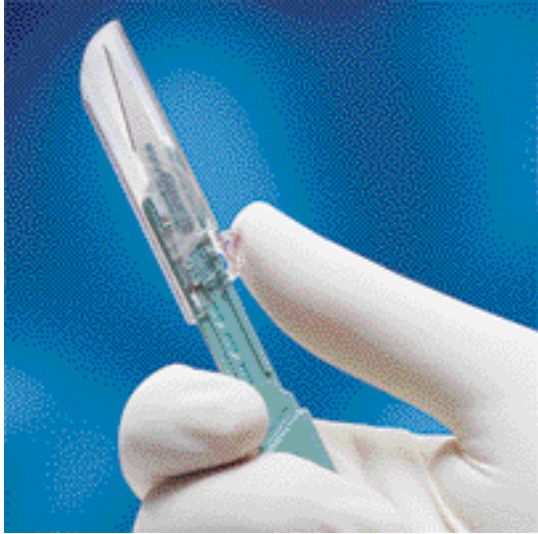
BD Bard-Parker™ Protected Disposable Scalpel

The BD Bard-Parker™ Protected Disposable Scalpel has a protective shield and is easily activated with one finger by depressing the top button to slide it either to its “in use” or “protected” position. The scalpels have virtually the same size and weight as a conventional scalpel.

To use the clinician simply depresses the top button on the protective shield. The shield is then retracted to its rear locked position to fully cover the scalpel blade.

To cover the scalpel blade prior to transfer, the top button is depressed on the protective shield. The shield is then advanced forward to the forward locked position at the lock indicator line. The scalpel can then be disposed of in an approved sharps container.

For more information on safety products by BD, visit www.BD.com or phone 800.237.2762.



BD Bard-Parker™ Protected Disposable Scalpel

Canica-Safety™ Scalpel Handle

The Canica-Safety™ Reusable Retractable/Ejectable Scalpel Handle From DeRoyal allows retraction of the scalpel blade inside the handle before passing to reduce the risk of sharps injuries. The slider activation allows touchless disposal of used blades into a needle counter box. It has a similar feel in length, weight and feel to a traditional scalpel handle.



Canica-Safety™ Scalpel Handle

The risk of having a scalpel injury increases much higher the longer the surgery and the more invasive the procedure.

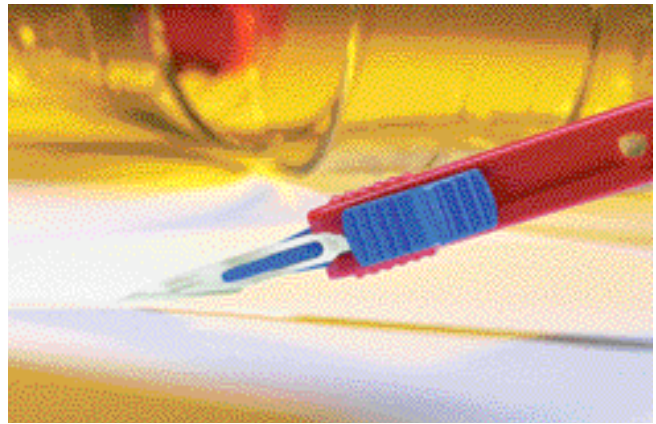
Its ambidextrous design can be used by both right-handed and left-handed surgeons.

The scalpel blades are installed in the Canica-Safety® Handle using traditional methods, and then retracted into the handle for passing. To remove the scalpel blade, the Canica-Safety® Handle is placed over a needle counter box. The button is slid to release the blade. The blade drops into the box for collection and counting. A new blade can then be placed on the Canica-Safety® Handle.

IonFusion™ Disposable Safety Scalpels with Retractable Blade

The IonFusion™ Disposable Safety Scalpels with Retractable Blades from DeRoyal provides full blade visibility at all times to help prevent accidental injury. It has a ribbed, slip-resistant finger grip to ensure a secure grip in gloved hands, accommodating a variety of hand positions. It allows a controlled retraction of the entire blade. It comes in a variety of scalpel sizes to provide protection in every department of the hospital. It has a temporary forward locking position to prevent accidental retractions. It features a permanent lock position for disposal.

For more information on DeRoyal Industries' safety products visit www.deroyal.com or phone 888.938.7828.



IonFusion™ Disposable Safety Scalpels with Retractable Blade

Futura® Safety Scalpel

The Futura® Safety Scalpel by Merit Medical is easy to use. The Futura scalpel employs a spring-based slider that automatically retracts the blade into the device body when activated, in order to shield the sharp. Other safety scalpels require user intervention to either fully shield or fully retract the blade, thereby increasing the possibility of blade exposure due to human error. The user may re-extend the blade as often as needed, for example, to deepen or lengthen an incision, or making additional incisions, on the same patient. The safety mechanism should be activated (i.e., blade retracted) prior to passing the device among clinical staff members, placing the device into the sharps safe zone, or disposing the device after the procedure is complete.

To use the scalpel place thumb on push plate and push forward until blade locks into position. The blade is now locked into the open position. To retract the blade before passing or disposing of scalpel, apply pressure on the center of the push plate. The spring retracts the scalpel into the handle. The scalpel is now ready for passing or disposal.

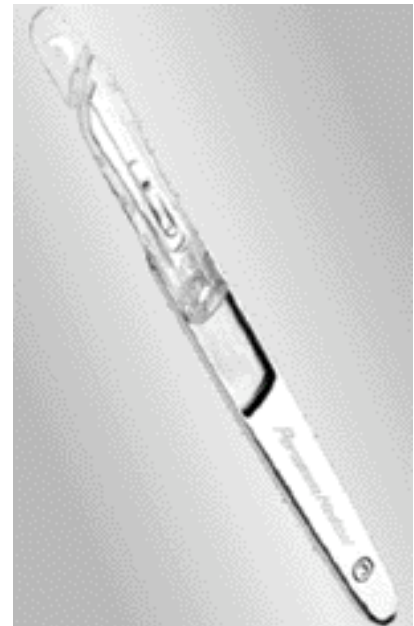
For more information contact Merit Medical at www.merit.com or by phone at 801.253.1600.



Futura® Safety Scalpel

Personna Plus® Safety Scalpel System

The Personna Plus® Safety Scalpel System has a plastic sheath cartridge that prevents clinicians from being touched by the blade. It has the same weight and feel of most traditional scalpels. The sure-grip sides on the metal handles allow for stable handling, preventing slippage, and assuring easy loading, opening and closing. The unloading of the cartridge is conducted with a one-handed disposal process. To use, pull the sheath back until it stops. Ensure there is no gap between the handle tip and the edge of the blade slot. Tear the tab away from the cartridge and snap off. Do not pull sheath back until the other hand is clear. Pull the sheath back to expose



Personna Plus® Safety Scalpel System

**Are you aware of
additional safety scalpels?
Please write to the author
at info@isips.org.**

blade. Listen for audible click when blade is fully open. To close the scalpel to pass, place thumb on top of thumb rest. Push the sheath forward to cover the blade. Listen for audible click. Discard the used scalpel into an appropriate sharps container.

Personna Disposable Safety Scalpel®

The Personna Safety Scalpel®, has an innovative safety scalpel that comes with a protective sheath which covers the blade, safeguarding against accidental cuts when removing the scalpel from the package, while passing the scalpel, and during disposal. The bright orange color makes the scalpel easy to see in any setting and the sure grip sides provide more stable handling, preventing slippage, and assuring that it is easy to open, close and lock.

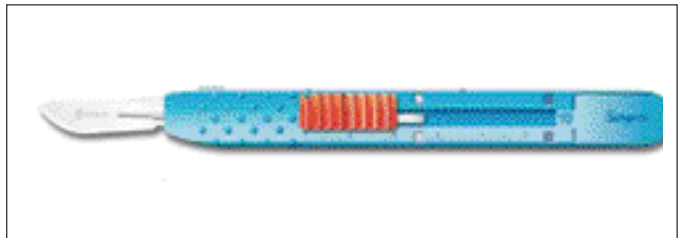
For more information on Personna Medical safety products visit www.asrco.com or phone 540.248.8000.



Personna Disposable Safety Scalpel®

Surgeon Brand Retractable Safety Scalpel with Steadfast Disposal Lock

The Surgeon brand Retractable Safety Scalpel with Steadfast Disposal Lock from Jai Surgicals Limited is easy to use. Simply extend the button fully forward until the notch aligns with the indicator line. The blade will be exposed and locked in the USE position. To pass the Safety scalpel, retract the button inside of the handle until it reaches the notch. The scalpel can then be safely passed. The scalpel can be retracted multiple times as needed. This means that there is a minimal risk of a sharps injury during passing. To dispose of the product, retract the button to the PASS position. Then, force the button further back until a positive click is heard. The blade is now locked in the DISPOSE position and cannot be accessed again. The lock status of the scalpel can be checked from the rear window.



Surgeon Brand Retractable Safety Scalpel

SAFhandle™ Safety Reusable Metal Scalpel Holder

The SAFhandle™ Safety Reusable Metal Scalpel Holder from Jai Surgicals Limited has a unique method to remove the scalpel blade—hands free. It is easy and safe to fit a standard scalpel blade on the handle. It utilizes a round-tipped scalpel blade instead of a sharp-tipped blade which follows CDC and AORN guidelines. Clinicians should always use the neutral zone or passing tray.



SAFhandle™ Safety Reusable Metal Scalpel Holder

To place a scalpel blade on the reusable handle, push the handle upper jaw tab slightly up and gently open the upper jaw of the handle clockwise until the jaws are open wide enough to receive the blade. Do not force open the jaws beyond the jaw stop pin.

Holding a standard blade with a hemostat and using fitment pins as guides, the scalpel blade is seated on the handle. After ensuring the blade is seated flat, the jaws of the handle are closed until the handle tab aligns with the handle jaws pin. The SAFhandle is ready for use. To remove the blade, simply open the jaws of the handle and then turn the handle over and drop the blade into an approved sharps container.

For more information on products from Jai Surgicals Limited, visit the company's Web site at www.jaisurgical.com or send an e-mail to surgeon@jaisurgical.com.

Are you aware of additional safety scalpels that should be included? Please write to the author at info@isips.org. †

Reference

1. ECRI, "Sharps Injuries in the Operating room- A new focus for OSHA," Operating Room Risk Management, December 2004; 1-5.

Ron Stoker is the founder and executive director of the International Sharps Injury Prevention Society (ISIPS). Mr. Stoker has a graduate degree in Bioengineering from the University of Utah with an undergraduate degree from Brigham Young University, Utah. He has been involved in the medical device industry for more than 28 years in a variety of settings, including research and development, business development, marketing and public relations, and has six patents issued in his name. He writes frequently about sharps safety and infection control issues and speaks internationally on the issues. Mr. Stoker is co-author of the Compendium of Infection Control Technology that is available at www.medicalsafetybook.com.