

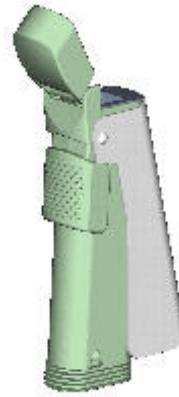
LEINO

NaXiTTM

A NEW, INNOVATIVE AND SAFE METHOD TO:

Destroy used Needles and Syringes

Change Filling Needle to Injection Needle



This patented, portable, pocket size, hand held device makes working with injection needles and syringes safe and easy.

NaXiTTM cuts and containerizes the needles and disconnects the syringe from the needle, without touching the needle by hand, thus making the change from the filling needle to the injection needle safe and easy.

The disposable needle container holds hundreds of cut needles. Containers can be disposed as an ordinary waste.

Even syringes can be punctured to prevent their re-use.

NaXiTTM is an excellent, safety enhancing tool, for example, to the following professions and institutions: nurses, home health care workers, doctors, dentists, veterinarians, ambulance personnel, janitors, park keepers, police, prison wardens, field hospitals etc.

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NaXiTTM

LEINO

in general



NaXiTTM simplifies needle handling and disposal. It is no longer necessary to collect used needles in jars or separate containers. Gypsum casting is no longer necessary. Needles no longer need to be separated as ordinary or hazardous waste. The needles simply disappear into **NaXiTTM** disposable container, which can store several hundred cut needles . Once full, this container can then be thrown away as a normal waste. A new disposable replacement container lets **NaXiTTM** to serve you again.

By using NaXiTTM changing filling needle to injection needle is safe and easy without touching the used needle by hand. The in-build needle cone holder makes this possible .

The compact **NaXiTTM** is designed for easy use. It is pocket-sized and of light weight. It is easy to keep in your pocket, bag, office desk, glove compartment of your vehicle etc. No more problems in immediate disposal of used needles



The more time passes from the application of an injection needle to its disposal, the more separate actions it takes, the higher the risk for a needle stick accident. Needles may unintentionally be left behind in beds, tables, or they may drop on the floor, especially when something unexpected occurs. International statistics show that about 75% of needle stick injuries happens after the actual injection procedure is already completed. **NaXiTTM destroys needles immediately after their use, thereby substantially reducing a risk of an injury.**

NaXiTTM cuts the needle right underneath the plastic cone. The cone is safe to be thrown to waste. As **NaXiTTM** containerises only the metal part of the needle, the small container holds hundreds of cut needles.



The **NaXiTTM** containers can be disposed similarly to the ordinary "sharps containers". If **NaXiTTM** containers are used parallel to "sharps containers" their storage capacity is hugely increased, since the **NaXiTTM** containers stores only metallic parts of needles and not the larger plastic cones of needles.

Even syringes can be punctured with a cutter at the **NaXiTTM** handle for preventing their re- and misuse.

NaXiTTM

is indispensable in various jobs



Health care sector

NaXiTTM is not only a solution to the ***needs of hospital wards, emergency and first-aid care services, diabetics etc.*** It is also ideal for people in various mobile jobs, for instance in ***communal home health care, for rescue and ambulance personnel, veterinarians, dentists,***



Other sectors

Used injection needles are occasionally encountered in numerous other professions outside the health care sector. Due to its technology, small size and light weight **NaXiTTM offers a safe and easy way to immediately, on the spot, to dispose these potentially dangerous needles and syringes.** It is therefore a handy tool to have in the ***police squad cars and for prison wardens.*** If NaXiTTM is kept in the vehicle, the occasional needles, which are left behind by drug addicts, can be safely destroyed by the ***park keepers.*** Hazardous needles, unfortunately, are often found in toilets in restaurants, bars, gas stations and other public buildings. **NaXiTTM offers a safe way to dispose these used and dangerous needles to the staff involved in *janitorial work.***



NaXiTTM enhances work safety by cutting the used needle from the plastic needle cone and containerizing the needle. Used needles are immediately out of way from causing potential hazards. The used syringe can be destroyed by puncturing it with a cutter at the handle. The syringe can no more be used and can be disposed of by throwing it to the waste.

NaXiT™

LEINO

This is how it works:



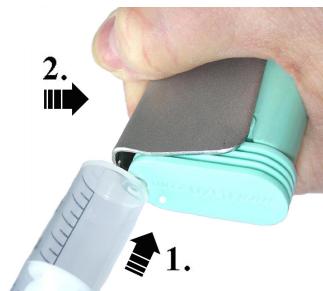
Open NaXiT™ by moving the lock slide down. This releases both the handle and the top cover.



(1) Place the needle HORIZONTALLY on top of the needle slot, turn it 90 degrees and push it all the way down into the needle slot. (Alternatively, you may also place the device standing on table and place the needle into the needle slot with one hand).

(2) Press the handle to cut the needle. The cut needle drops automatically into the container.

While still pressing the handle, the plastic needle cone is being held at the slot. The syringe is disconnected from the plastic cone by pulling the syringe out. This is a safe method to change needles.



Re-use and mis-use of the syringe is prevented by puncturing the syringe with a cutter at the handle.



The disposable needle container remains closed when NaXiT™ is locked and/ or when the container is separated from the device. The container holds hundreds of cut needles, depending on the needle size. Once full, the container is replaced with a new one. Full container can be easily disposed of.

NaXiT™ can easily be disinfected.

NaXiT™

The primary target in designing NaXit was the need to reduce accidents in needle handling.

The idea of a safe, handy and economical method to dispose used injection needles was initiated by the staff in various hospital wards. A large survey on the existing needle handling procedures was conducted in order to find out a better solution to protect the staff from the hazards in working with needles.

The consequences from a needlestick injury .



AIDS/HIV, Hepatitis B and C are the most common pathogens transmitted from a needlestick injury. The situation is relatively easy to trace on a needle stick injury, which occurs in a hospital ward. Often, when the needle stick injury happens on the first aid care, it is not possible to obtain all the relevant patient's background information immediately. The worst case takes place, when an injury happens with a needle which origin and user(s) are unknown. Such injury leads to a prolonged period of examinations and follow-ups. This time period is a most arduous and nerve wrecking to the injured person. From the employer's point of view, this causes very high costs and absence from the work.

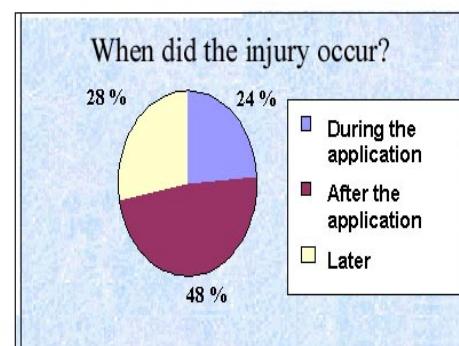
Observations from safety hazards in handling needles.

A time delay between the completion of the injection process to the disposal of a needle increases substantially the risk of a needle stick injury.

Unintentional carelessness; e.g. needles left on trolleys upon leaving the room, etc.

A needlestick occurs during the change from filling needle to injection needle.

Only about one quarter of the needlestick injuries happen during the actual injection process. A restless patient, a needle change or handing over a filled syringe are the common reasons for this. **Over 75% of needlestick injuries happen after the actual injection process has been completed.** An injury resulting from cleaning work, recapping the needle, collision with fellow worker are the typical reasons. Incomplete or inadequate disposal processes are also common accident reasons, taking place when needles are forgotten in beds, are hidden under papers or are thrown to waste basket etc. **The longer it takes before the needle is completely disposed of, the more action steps are required, the higher the risk of a needlestick injury.** **NaXiT™ substantially reduces the risks of needlestick injuries.** It is designed to be carried in the pocket by every person involved in handling needles or to be nearby at hand. **By using NaXiT™, needles will be destroyed permanently immediately after their use.**



NaXiTTM

Existing dangers and problems in the needle and syringe disposal procedures.

Needles are not destroyed immediately after their use. There are a great many various devices and methods to dispose used needles and syringes. Common to them is, that **needles are not necessarily destroyed immediately after their use.** It is obvious and backed up by all the available statistics that **when more time passes from the use of the needle to its permanent destruction/disposal, the risk of an injury remarkably increases.**

"Sharps containers" cannot be kept permanently in all wards. Children's and Psychiatric wards are examples of cases, in which the containers must be brought along separately together with other materials, or the undisposed needles must be taken back for later disposal.

Gypsum casting is dangerous, time consuming and expensive. Collecting needles into containers, their transportation, possible transfer into bigger containers etc. are all dangerous, timeconsuming and therefore expensive steps towards final disposal of used needles and syringes. Limited personnel resources could certainly be used to more productive tasks.

Separating needles and syringes into ordinary and hazardous waste is dangerous, costly and time consuming. If needles and syringes are separated for later disposal as a hazardous and an ordinary waste, this procedure is dangerous, timeconsuming and therefore also expensive. Again, limited personnel resources could certainly be used to more productive tasks. Alternatively, if needles and syringes are kept together and thrown into a "sharps container", the container is very soon full, since the needles and syringes are not in an ordely manner in the container. The container is full of air but still full.

The high costs of hazardous waste handling. Quantity of hazardous waste is high, since the containers are mostly full of air. Accordingly the disposal costs are high. Furthermore, the syringes are normally included in the hazardous waste, even though they could be disposed as an ordinary waste. However, this would require a safe and fast method to separate the needles and syringes.

There are no handy Needle and Syringe Disposal Devices available, especially for mobile jobs. Due to this fact all kinds of unsatisfactory methods are being used for example by Communal Health Care and Veterinary personnel.

The risks that used but still operational syringes end up in wrong hands. If Syringes are disposed of as an ordinary waste, but without rendering them unusable, there is always risk, that they end up in wrong hands.

How the use of NaXiT will help you:

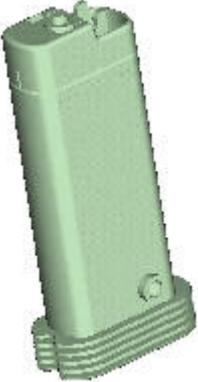
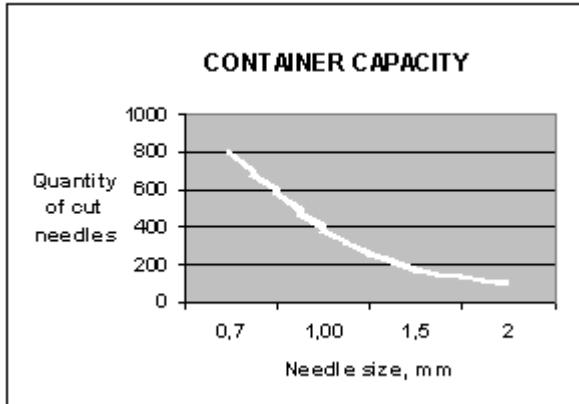
NaXiTTM is designed to be used during and immediately after the needle is used (or found).
Immediate permanent disposal/destroying of needles is the best and cheapest way to reduce risks of a needlestick injury. It is not necessary to place needles into "sharps containers" nor to transport them anywhere for disposal. NaXiTTM is a portable and pocket-sized personal/ward device and therefore easy to keep along. It works mechanically requiring no electricity.

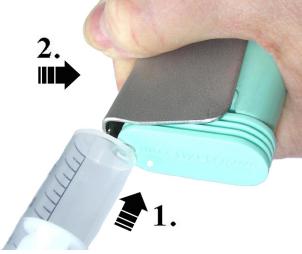
There is no need for "sharps containers". NaXiTTM container stores only the metallic part of the needle thereby holding up to hundreds of cut needles in a small space. However, if "sharps containers" are used, NaXiTTM containers can also be used in parallel with them. Placing small NaXiTTM containers into larger "sharps containers" will greatly increase their storage capacity due to the high packing density of needles in the NaXiTTM containers.

There is no need for Gypsum casting of used needles for disposal. The disposable NaXiT™ container stays firmly closed when not attached to the device itself. Once full (capacity up to hundreds of cut needles), the container can therefore be disposed of easily without any further disposal procedures. This will save time and costs.

Reduced costs of hazardous waste disposal. The use of NaXiT™ device makes the separation of needles and syringes fast, effortless and safe. Furthermore, the packing density of waste is greatly improved. The reduced quantity of hazardous waste together with the use of inexpensive disposable NaXiT™ containers will substantially reduce the overall costs. ***Handling of used needles and syringes with NaXiT™ is an economic and safety enhancing alternative in hospitals and in numerous other jobs.***

Re-use of the syringes. NaXiT™ prevents the re-use of the syringes by puncturing the syringe with the cutter device at the handle of the device. Neither is the needle length a problem! NaXiT™ cuts needles up to a length of 56mm with one go. Longer needles can simply be cut twice or more. NaXiT™ can be used up to the needle diameter of 2mm.

NaXiT™ Features	NaXiT™ Benefits	NaXiT™ Beneficiaries																
Needle cone holder 	NaXiT™ holds the plastic needle cone firmly after needle is cut making the disconnection of the syringe from the needle cone safe and easy. Touching needles by hand is no longer necessary. Changing filling needle to injection needle becomes safe and easy.	All users																
Can be used up to 2 mm needle diameter	NaXiT™ cuts and containerizes most common needle sizes.	Veterinarians, particularly																
Works with all needle lengths	56 mm needle length can be destroyed with one cut. Longer ones simply need to be cut twice or more.	Health care workers, veterinarians																
Container capacity 	Disposable container holds 800 cut 0,5mm needles of 25mm in length. 100 large needles can be cut before the container is full. A new container is then inserted, while the full one can be thrown away as classified dump yard waste	Health care workers, veterinarians																
	<p style="text-align: center;">CONTAINER CAPACITY</p>  <table border="1"> <caption>Data points estimated from the graph</caption> <thead> <tr> <th>Needle size, mm</th> <th>Quantity of cut needles</th> </tr> </thead> <tbody> <tr><td>0.7</td><td>800</td></tr> <tr><td>0.8</td><td>600</td></tr> <tr><td>0.9</td><td>450</td></tr> <tr><td>1.0</td><td>350</td></tr> <tr><td>1.2</td><td>200</td></tr> <tr><td>1.5</td><td>50</td></tr> <tr><td>2.0</td><td>10</td></tr> </tbody> </table>	Needle size, mm	Quantity of cut needles	0.7	800	0.8	600	0.9	450	1.0	350	1.2	200	1.5	50	2.0	10	
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Automatic closing mechanism of the container	NaXiT™ container is always closed when NaXiT™ is locked or when the container is separated from the device. Cut needles and small liquid amounts remain safely and hygienically inside the the container.	All users																
Ergonomically designed handle	The handle is ergonomically designed to allow cutting also large needles with only small force.	All users																
Cover	Offers additional protection to your hand	All users																

NaXiTT™ Features	NaXiTT™ Benefits	NaXiTT™ Beneficiaries
Materials are stainless steel, aluminium and medical grade plastics	The selected materials allow cleaning with common disinfectioning agents, including pure alcohol.	All users
Weight less than 150 grams and size of a "cell phone"	<p>NaXiTT™ is easy to carry in a pocket, bag or glove compartment of your vehicle. Used needles can be disposed of immediately when needed.</p> 	All user, mobile people in particular
<p>Syringe cutter at the handle</p> 	Punctures a syringe thus making it impossible to insert new needle. Used syringe can be thrown to ordinary waste without worry of re-use.	All user, home health care and all mobile people in particular