

Piercing Guns

There are those who would consider the piercing gun, in use at so many malls around the World, to be an indispensable piece of equipment for the piercing studio. The Association of Professional Piercers (APP) feels quite differently and any genuinely professional piercer shudders at the thought of a piercing gun.

The original ear piercing gun was produced by Roman Research, later Studs, in the 1960's. The design idea came from the implement commonly used to ID tag livestock ears. The device was not altered for use on humans other than the addition of a spring-loading system. The spring loading is necessary to punch such a blunt piece of metal through someone's tissue and helped allay many people's squeamishness about manually pushing the stud through flesh. The gun is made either of plastic or metal-encased plastic and so cannot be sterilized in an autoclave.

Some professional piercers run these devices through their autoclave, where they melt and then hang them on the wall of their shop as a warning. That's the only way in which an ear piercing gun would be used in an APP shop.

What Wrong with piercing Guns?

The ear piercing gun, despite what its manufacturers may tell you, is neither clean nor is it a safe device. Documented cases of disease transmission, including Hepatitis B and pseudomonas perichondritis, have appeared in the medical journals of Finland, England and the USA, among others. These diseases were acquired during the course of a "normal" earlobe piercing and the writers expressed their concern that more serious infectious diseases could also be spread in this manner.

The Ear is Part of the Body

People who would visit a professional body piercer for any other piercing continue to patronize gun piercers for their earlobe piercings. Many USA states have considered piercing legislation to make exemptions or special, less rigorous regulations for ear piercings. The APP wonders why this is so, when the earlobe shares the same blood supply as the rest of the body and can transmit disease just as easily as any other body piercing. A hole in the skin is a hole in the skin. Blood and plasma from the earlobe are still blood and plasma. A pathogen that gains access through a hole in the ear will find its mark just as surely as a pathogen that entered through some other break in the skin. There are no practical distinctions between hygiene protective measures necessary for earlobes and body piercings. A piercing is a piercing. Earlobes are not magically exempt from disease transmission and the gun is by design a very effective means of spreading disease

Blood Micro-spray

When a blunt object such as the back of an ear stud is forced through the skin, it is inevitable that blood micro-spray will occur. This micro-spray will coat the piercer, the client and the gun in a fine mist of potential biohazardous matter. It is frequently reported that the gun causes a visible spray of blood.

These guns are usually not cleansed in any way between clients or perfunctorily wiped down with alcohol, an ineffective disinfectant. Manufacturers admit that micro-spray occurs, but then claim that their gun's 'no touch' design makes it exempt from the need for sterilization. Who would accept that justification from a blood bank, dentist or other person who handles fluids from many different bodies?

The gun can't be sterilized

Any micro-spray that occurs will remain on the gun, waiting for the next client. Some manufacturers claim that their device is safer because the body of the gun never touches the ear. But the piercer's hands do touch both the body of the gun and the ear to be pierced, usually without gloves. The client's hair and bare hands also frequently come into contact with the area to be pierced or the body of the gun. This argument holds even less weight when one considers that the gun is being used to pierce ear cartilage, nostrils, navels and other body parts where contact with the body of the gun and the surrounding tissue is inevitable. The fact that some manufacturers make an effort to avoid contact with the gun and the area to be pierced says something about their confidence in the cleanliness of the gun.

GUN PIERCERS CROSS CONTAMINATE

Most of those who use the gun are untrained retail sales staff. The gun is often stored in the cash register or a drawer, further extending the cross-contamination. Only a few manufacturers (Medi-studs and Inverness Systems) even suggest that gun piercers should wear gloves and the overwhelming majority of gun piercings are performed without the piercer even having washed their hands in advance. The piercing is inevitably performed over a retail sale counter. The area is, if prepped at all, only prepped perfunctorily with alcohol, a very mild disinfectant which is ineffective against Hepatitis and other hardy pathogens. If at all, the area is marked for placement with any old felt-tip pen lying around on the counter. The client is encouraged to touch the area to show preferred placement. Marking makes little sense when piercing with the gun, since there is no control over the angle or even the precise location where the piercing will occur. Because of the lack of control, at least one client has had her nose broken when it was pierced with a gun.

THE GUN DAMAGES TISSUE

The actual piercing is accomplished with the slightly sharpened back of the ear stud. The resulting hole is not a clean piercing with smooth edges that promote healing, but a ragged tear, with many lacerations and distortions of the tissue which provides hiding places for bacteria and other matter. This blunt object being forced through the tissue is obviously more painful for the client than a sterile, single-use double-beveled piercing needle, which is many times sharper than surgical suture needles.

GUN PIERCERS GIVE IMPROPER AFTERCARE

Often incorrect aftercare advice is given to the new client who is instructed to frequently handle the area with dirty fingers, dragging crusted matter through the piercing and tearing delicate tissue inside. A few of the products sold by gun manufacturers contain benzalkonium chloride, an antibacterial liquid that destroys new skin cells and causes scarring. Unfortunately, most sell only scented alcohol or advice

using Hydrogen Peroxide. Neither of these products will help the development of new skin cells in a healing piercing.

WHAT ABOUT DISPOSABLE GUNS?

What about single-use, disposable guns? Personal piercing kits have become popular. The idea is that one person will use the device once and then dispose of the gun. The fact is that the client will use the device on friends and family, contaminating them all or will reuse the gun on him/her, contaminating themselves with bacteria that develop on a contaminated implement. The additional threat of the personal kits is that ignorant individuals will use them to perform dangerous piercings on themselves, risking scarring, infection, nerve damage or worse. Even used 'properly' these disposable guns have inherent flaws; flaws which can be traced back to their original purpose: tagging livestock ears, not placing a surgical-type implant safely into human tissue.

Let's take a closer look at the jewelry which is used in ear piercing guns.

GUN JEWELRY

We've all grown up with "starter studs". The widely held belief is that the gun studs are of a special design to maximize healing. In reality they're designed to fit in a livestock tagging device and be as inexpensive as possible.

The design of the stud is conducive to infections, as the butterfly backing collects matter that is difficult to clean away. The stud is usually too short to allow for any swelling that may occur as the piercing heals, so it is common to see the stud become partially or completely embedded in the tissue. This almost inevitably occurs when the gun is used to pierce nostril cartilage and body parts, but is also common enough in simple earlobe piercings.

Some studs are made of surgical implant grade stainless steel, but most manufacturers also offer gold-plated or gold-filled studs. The manufacturers claim that the gold is plated over stainless steel. While this may be technically true, steel doesn't plate well, so most of these studs are underplated with a layer of nickel or copper, two highly reactive metals. The plating process is achieved in a cyanide bath. Traces of cyanide or even small pockets of the cyanide are bound to be impregnated in the plating. Gold plating, gold filling or "rolled" gold are never appropriate for piercing jewelry and should only be used in healed piercings.

THE GUN IS ABUSED

But by far the worst thing about these guns is their widespread abuse in the hands of unethical or ignorant profiteers who use them to pierce body parts other than the earlobe. Piercers have seen these studs embedded in severely infected - even gangrenous - earlobes, ear cartilage, tongues, nostrils, nipples, navels and genitals. When embedding occurs, the client is sent for surgical removal of the jewelry. This is very expensive, painful and humiliating for the client and is liable to give someone a very unfortunate, negative opinion of body piercing. Some clients have lost pieces of tissue; many have suffered permanent scarring and nerve damage.

Many "piercers" are being sued for using the gun on body parts including the earlobe and rightly so. The gun was not intended ever to come into contact with the client's skin. How can this be maintained when the gun is jammed into someone's nose, navel, mouth or genitals? The risk of disease transmission multiplies exponentially when this abuse is considered.

Because reputable piercers abide by the law and so won't pierce a minor without express written parental consent (USA - Clients must be over 18 in NSW), the usual victim of an ear gun piercer is underage. In Southern California alone, there are at least five unrelated cases of parents seeking legal action against "piercers" for endangering a minor.

The dangerous fallacy promoted by the gun manufacturers is that the piercing is easy and can be safely done by anyone with the inclination. In fact, a professional piercer usually spends up to two years in a full time apprenticeship and must be knowledgeable about many pressing health, safety, aesthetic and related subjects. Piercing is only easy and safe in the hands of a fully trained, responsible professional.

Please consider this information and ask yourself: is all that risk worth taking when it is safer and more responsible to view piercings of the earlobe just like piercings anywhere else on the body? After the entire earlobe is a part of the body, with the same bloodstream, healing resources and regenerating skin cells. The earlobe has a slightly greater chance of infection than most other piercings due to its location and somewhat limited vascular supply. The ear cartilage, with its extremely limited vascularity and proximity to healing apparatus, is one of the most difficult areas to heal. Isn't it time we stop justifying the use of inferior piercing methods because "it's only an ear?"

Ideally, legislators will ban outright the use of the ear piercing gun. If this is not possible, use of the gun should be restricted to persons who do not claim to be professional piercers and who use the gun only for piercings of the earlobe. In this day and age, the ear piercing gun is not a good idea for public health.

DOCUMENTATION

If the gun has so many inherent design faults, why is it so widely used?

The gun manufacturers, not unlike cigarette manufacturers, make large profits from their device and pay for studios to assure favorable documentation. Costume jewelry retail outlets can make plenty of money by placing the gun in the hands of their untrained sales staff and the technique has been used for so many years that no one thinks to question it. In the following excerpts from medical journals one can clearly see the nature of the problem. It is important to remember that all of these reports deal with piercings that were performed with an ear piercing gun, not by professional body piercing methods.

DO PIERCED PATIENTS POSE PROBLEMS? - Emergency Medical Services, May 1996

All of these things, in which there is the possibility of inadequate sterilization, are a risk. Even people who are just having their ears pierced should ask what kinds of sterilization techniques are used. Incompletely sterilized tattooing or acupuncture materials and body piercing machinery are all suspect unless they have been autoclaved. Ed note: No ear piercing gun can be sterilized. The plastic or metal-coated plastic melts in an autoclave.

HEPATITIS B TRANSMITTED BY EAR PIERCING – Danish Medical Journal Ugeskr-Lagerr, January 7 1991

A case of Hepatitis B occurred in connection with piercing earlobes for earrings. The most probable source of infection was repeated use of the instruments following disinfection with Hydrogen Peroxide. (Ed note: this is considerably more disinfection than is applied by most gun piercers) Disposable instruments are therefore recommended for this procedure.

INFECTION AS A CONSEQUENCE OF EAR PIERCING – English medical practitioner, March 22 1989

Infection associated with earrings is a particular problem in girls aged 5-11 years and in patients with dermatitis. Potentially fatal septicemia due to beta-hamolytic streptococci may occur.

HAZARDS OF EAR PIERCING WHICH PROCEDURES TRANVERSE CARTILAGE: A REPORT OF PSEUDOMONAS PERICHONDRITIS AND REVIEW OF OTHER COMPLICATIONS - British Journal of Clinical Practice, November 1990

A case of severe pseudomonas perichondritis following a fashionable ear piercing procedure, performed high on the pinnacle, is reported. The current vogue for such high ear piercing, which transverse cartilage rather than the fat tissue of the earlobe increases the risk of infection which may cause severe cosmetic deformity. Ed note: many ear piercing gun manufacturers are advocating use of their product to pierce cartilage, in spite of specific exclusion of ear cartilage from the US FDA regulation of the device.

ACUTE PSEUDOMONAS PERICHONDRITIS AS A SEQUEL TO EAR PIRCING - Ann-Plastic Surgery USA, March 1990

A patient is reported who had pseudomonas perichondritis secondary to ear piercing. This cause, pathogenesis, symptoms and diagnosis of acute chondritis are discussed. Principles of treatment are enumerated.

EAR PIERCING PROBLEMS - British Medical Journal, 27 August 1977

Twenty children were seen in this department between 19 January and 25 June 1977 with problems following piercing of the ears. All of the children were girls aged 6-14 years old: six of them were only 6 years old. In twelve cases part of the earring had become imbedded in the earlobe and five of these had superadded infection. Four of the patients had infection at the site of the perforation. Three children had suffered trauma to the earlobe; in two cases this was deliberately inflicted by another child and in the third the ear was injured by the stud during a fall. One child developed a keloid. In only one case was the problem bilateral.

Imbedded earrings were removed, usually under local anesthesia, but one child required general anesthesia. Infected earlobes usually drain and heal once the earring is removed, but one patient had an abscess which required incision and drainage. Three children needed antibiotics; one beta-hamolytic streptococcus (lancefield group A) was isolated. One child was ill with pyrexia and required hospital admission. Her mother felt guilty about having her ears pierced and thought her daughter had

meningitis; she did not. Although we do not know about the child with the keloid who did not attend for follow-up, in all other cases the ear eventually healed well.

All of the children suffered discomfort, three needed antibiotics, one general anesthetic and one hospital admission. Ear piercing is a fashion at present - at least in Sheffield - among adults as well as children and even among boys, who frequently have one ear pierced. We have seen very young children, even babies, with pierced ears. The number of problems has increased markedly over the past nine years. Although we do not know the incidence of complications of ear piercing, we are concerned about the problems that it causes. In addition to those we have already seen, we consider that it is possible that serum Hepatitis could be transmitted in this way. In our view the medical profession should discourage this practice.

TAKING FASHION A BIT TOO FAR - Maryland's the Capitol, 19 June 1995

His friends did it and he thought it looked good, so Mark Kaluziński had the upper part of his left ear pierced with two gold studs.

About six weeks later, the twenty year old Annapolis man was rushed to the Anne Arundel Medical Centre for emergency surgery for a virulent infection. He could have lost all or part of his ear, but luckily a U-shaped scar is all that remains of his ordeal.

Now his doctor, Dr Gregory L Heacock is making a plea for people to stop piercing along the rim of their ears where there is cartilage.

"Up in the cartilage the blood supply is fragile," he said. "If people develop an infection around it, it takes the blood supply away and the cartilage dies. An infection spreads quickly. You can't bring cartilage back; you have to cut it out like a cancer."

The same holds true for noses - people should avoid the cartilaginous areas and keep things clean. \, the 33 year old ear, nose and throat specialist said.

"I had no idea," Mr. Kaluziński said. "I would never have guessed there would be all this trouble over ear piercing."

Managers of local jewelry shops that do ear piercing said getting studs or other types of earrings in ear cartilage is very popular with both men and women. Few know of any problems, but most shops make customers sign a waiver before any piercing is done.

"We haven't heard back of any horror stories," said Maureen Delaney, part owner of Tara in Annapolis. Still, she said warning people about the risks involved wasn't a bad idea.

"It's good to let people know."

Mr. Kaluziński, who works in Kmart in Edgewater, first got his ear pierced when he was in ninth grade. The hole was in his earlobe and there were no problems.

He got the two gold studs in the same ear at a local shop in April. Things were fine for about two weeks. Then the trouble started.

His ear started to sting and then got so red and swollen that one of the studs became imbedded. He pulled the other one out, but the pain didn't stop.

His regular doctor put him on an antibiotic, but the infection didn't respond to the treatment. His doctor then referred him to Dr Heacock, at Annapolis Ear, Nose, Throat and Allergy Associates. He tried another antibiotic.

When nothing happened after one or two days, Mr. Kaluziński ended up in surgery. Dr Heacock had to cut away dead tissue and cartilage in a 30-45 minute procedure.

A couple of days later, Dr Heacock had to remove more dead tissue and Mr. Kaluziński ended up staying in the hospital for about a week on intravenous antibiotic treatment.

Mr. Kaluziński was the first patient Dr Heacock has seen with an infected ear cartilage since he joined his practice two years ago.

But as a resident at the Shock Trauma Centre at University Hospital in Baltimore he treated five or six people with the same problem. Most pieces of their ear.

Dr Richard A Marelli, an ear, nose and throat specialist with offices in Annapolis agrees there is a risk.

"I think there are definitely some risks in the cartilaginous portions of the ear," he said. "If it gets infected, it tends to be very severe."

Ed note: It's important to remember that this incident occurred when the cartilage was pierced with a gun. Such infections, while possible, are unlikely to occur with a professional piercing, with appropriate jewelry that is properly cared for.

IS THE GUN EVER SAFE?

The gun would be a safe implement to use if:

(1) The gun is made of stainless steel with no parts that could be damaged by repeated steam sterilization.

And

(2) Each store offering gun piercings autoclaved the device between each use and stored the device in a sterile bag between uses.

And

(3) The gun was designed to install appropriate jewelry, in a manner that did not damage tissue.

And

(4) The gun piercers were thoroughly trained in cross-contamination avoidance techniques and observed universal precautions during each gun piercing. This would involve several glove Changes and disposable marking devices.

Of course, this is unlikely to occur. Even if all these conditions were met, it would still be Easier, less painful, more accurate and more professional to utilize the piercing techniques used by professionals. The APP concludes that the ear piercing guns are neither clean nor safe and encourages legislators to consider a long, hard look at the appropriateness of exempting guns from legislation.