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Health Hazards of Body Modification

Tattooing and body piercing are time honored traditions in cultures through out the world. Early Christians used tattoos as symbols of recognition until 787 AD, when tattoos were banned by papal edict.[1] Captain Cook is credited with bringing this tradition to western culture following his Tahitian expedition in 1771. He coined the term "tattoo" from the Tahitian word "tatau" which is onomatopoetic to the sound a tattooing instrument makes. In the early 19th century, tattooing became very popular with criminals and the working class in Britain and the US. Toward the end of that century it became "chic" among the elite.[2]

Body piercing--historically a symbol of honor, strength, and courage--dates back to Egyptian times. Egyptian royalty pierced their navels, and Roman centurions proudly sported nipple rings. For many populations, such as the Sioux of North America or the Tamil Hindus and Sadu holy men of India, piercing is a central part of religious ceremonies and celebrations. In 18th and 19th century Europe, body piercing did not enjoy as much favor as did tattooing. Recently, however, body piercing and other types of body modification have become popular--presumably as an attempt to establish individuality.[3]

As with any procedure that penetrates both the epidermis and dermis, tattooing and body piercing carry a risk for certain infectious diseases. In 19th century parlors, customers getting tattoos sometimes also acquired gangrene, pyoderma, impetigo, or erysipelas. Additionally, syphilis, warts, and viral hepatitis proliferated as tattooists used urine, tobacco juice, saliva, and dirty water to facilitate the tattooing process.[4] Twentieth century regulations have revolutionized the condition of tattoo parlors, dramatically decreasing the rate of infection. Nevertheless, with the surge of "body modification" in the United States, it is important that we remain alert to potential dangers.

The popularity of body piercing sky-rocketed about two years ago. Today common piercings include those of the nose, eyebrow, nipple, navel, lip, tongue, scrotum, and even the clitoris. Cutting, which is basically scarification as adornment, is also gaining popularity because, to quote a cutter, "piercing is like tooth brushing now." Cutting is more dangerous than piercing since a significant amount of blood can be lost.[5]

Presently, tattooing is banned in four states: Massachusetts, Oklahoma, South Carolina, and Vermont. Eleven other states regulate tattooists: Alaska, Arkansas, Hawaii, Iowa, Kentucky, Maine, Oregon, Rhode Island, South Dakota, West Virginia, and Texas.[6] The Texas Health and Safety Code, Chapter 146, *The Tattoo Studios Act* (1993), requires licensing of studios by the Texas Department of Health (TDH). The main focus of regulation is on sanitation, sterilization, and aseptic procedures. The law prohibits minors (under 21) as well as anyone under the influence of drugs or alcohol from receiving tattoos. Studios are required to pay an annual fee, keep permanent client records, undergo periodic inspections by the TDH Drugs and Medical Devices Division, and report any incidences of infection to TDH.

The TDH Drugs and Medical Devices Division estimates that 85% of Texas tattoo studios also perform body piercing. While tattooing may appear well regulated and controlled, body piercing and other types of body modification are not. In an effort to change this situation, the Texas Legislature is considering Senate Bill 1812. Comparable to the Tattoo Studio Act, this bill would license body piercing studios

Continued ☞

Also in this issue:

and require TDH to adopt rules to enforce the law. Meanwhile, as TDH investigators conduct routine inspections of the tattoo studios, they also inspect body piercers' procedures. Since body piercing is a cosmetic application--regulated under Chapter 431 of the Texas Food, Drug, and Cosmetic Act--TDH investigators can currently cite a studio for failure to properly sterilize equipment, follow other aseptic practices, or maintain general cleanliness.

Lack of statistical information on morbidity and infection rates directly correlates with lack of regulation. However, side effects from body piercing have included pain, allergic reaction, deep-cyst formation, hypertrophic scar formation, superficial vein and nerve damage, hematoma formation, neuroma, bleeding, and local infection.[7] Most local infections are thought to result from the failure of "piercees" to follow post-modification instructions. Nasal piercing is particularly risky due to the staphylococcal organisms that reside in the nose. There is at least one reported case of endocarditis resulting from an incorrectly executed nose pierce.[8]

Other possible body piercing risks are similar to those associated with tattooing: any bloodborne pathogen is a potential threat.[9] To date, tattooing has not demonstrated to be a risk for HIV transmission. However, the prolonged incubation period of AIDS makes viral transmission difficult to document. Professional tattooists use sterilization techniques that kill HIV, but amateur tattooists who do not sterilize equipment could conceivably transfer the virus with dirty needles.[10]

While it may be easy to ignore the dubious menace of HIV, the greater threats are hepatitis B and hepatitis C. In 1978 there was a hepatitis B outbreak in persons patronizing a British tattoo parlor. Unsterile needles and faulty technique resulted in 31 primary cases and 3 secondary cases.[11] In 1994 the Canadian National Meeting on the Prevention and Control of Hepatitis C called for the establishment of national guidelines for the prevention of bloodborne infectious diseases due to body piercing and tattooing.[12]

Body modification might be a phase that the public will tire of. Yet based on the long history of the movement and the increasing varieties of modification, decline seems unlikely. It is therefore important to regulate all forms of body modification to reduce the risk of infectious diseases that can be spread by these practices.

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Environmental and Consumer Health Program Contact List

	(Area Code 512)
Abusable Glues & Paints	834-6773
Asbestos	834-6600
Bedding & Sleep Products	834-6773
Border Env. & Consumer Health	458-7675
Code Enforcement Officers	834-6635
Closures (Fish/Oysters)	719-0215
Compressed Medical Gas	719-0237
Consumer Product Recalls	834-6773
Day Care Centers	834-6635
Drug Information	719-0237
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Frozen Desserts	719-0260
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Retail	719-0232
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Shellfish, Oyster & Crab Meat	719-0215
Hazardous Chemicals	834-6600
Hazardous Consumer Products	834-6773
Herbs & Dietary Supplements	719-0237
Indoor Air Quality	834-6600
Industrial Hygiene	834-6600
Laser Registration/Inspection	834-6688
Lead	
In Food/Dinnerware	719-0243
In Homes/Paint	834-6600
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Radon	834-6688
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Swimming Pools	834-6635
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Toy Safety	834-6773
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Youth Camps	834-6635
Texas Natural Resources Conservation Commission	**239-1000**

Thank you!

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Tick season has arrived!

The risk for acquiring tick-borne diseases increases as the weather gets warmer, and ticks begin looking for blood meals. During this tick season, health care providers should be especially cognizant of Rocky Mountain spotted fever (RMSF)-like and human ehrlichiosis-like illnesses. A novel rickettsial organism was found in Texas ticks last year. This organism could possibly cause human illness clinically similar to RMSF or ehrlichiosis.

Health care providers who have patients with suspected RMSF or ehrlichiosis are invited to send whole blood samples in lavender-top (EDTA anticoagulant) tubes, overnight on wet ice, to *David H. Walker, MD; UTMB Department of Pathology, 1.116 Keiller Bldg; 301 University Blvd.; Galveston, TX 77555; (409) 772-2856.* The laboratory will attempt to isolate/identify the etiologic agent.

From 1986 through 1996, 119 RMSF cases and 40 human ehrlichiosis cases were reported to the TDH. (Ehrlichiosis became reportable in 1996.) The signs and symptoms of RMSF and ehrlichiosis and may include any combination of fever, headache, malaise, myalgia, anorexia, nausea/vomiting and rash. Laboratory findings often include neutropenia, thrombocytopenia, and elevated liver enzymes.

Treatment of suspected rickettsial or ehrlichial diseases should be initiated upon clinical suspicion rather than after test results are received. The antibiotic of choice for both illnesses is doxycycline (100 mg q12h). Chloramphenicol (50-75 mg/kg/day) appears to be less effective. Antibiotics should be continued until 2 to 3 days after defervescence.

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