

COUNCIL OF SCIENTIFIC AND HEALTH ADVISORS

IOWA DEPARTMENT OF PUBLIC HEALTH

FINAL REPORT

SUBCOMMITTEE REPORT: Body Piercing

I. Summary of problem

- A. Introduced by: Dr. Gleason
- B. At what meeting: Dec. 15, 1999
- C. Background: Legislation was being considered to regulate body piercing in Iowa.
- D. Purpose of report: to describe and evaluate the health risks associated with body piercing, as identified in the published literature. No primary data were collected.
- E. Identify timeline: N/A

II. Available Evidence

It is estimated that as many as 80% of American women have pierced ears, and the trend for piercing of other body sites is known to be increasing, especially among adolescents. Few reliable data on incidence or prevalence of post-piercing complications in sites besides the earlobe are published but they are assumed to be similar to those of the earlobe, with the possibility of greater severity and/or frequency for sites more subject to microbial contamination, pressure, or trauma.

It appears that minor complications of earlobe piercing are common and major complications are rare. Infectious complications are not well-documented, perhaps because they are usually self-resolving and often not treated by health care providers. Introduction of infectious agents occurs either due to poor piercing technique and contaminated instruments or to improper aftercare.

Although *staphylococcus aureus* is the most commonly reported organism recovered in cases of post-piercing infections of the ear lobe, *p. aeruginosa* is commonly identified when the ear cartilage has been pierced. More serious infections, sometimes life-threatening, have occurred due to the presence of group A beta-hemolytic streptococci. Rare incidents of infection with tuberculosis and tetanus have been reported due to ear piercing. There appears to be some association of ear piercing with risk of hepatitis, but the evidence is not consistent across studies and the populations are very likely dissimilar to Iowa's.

III. Research Sources

- A. Literature review - A Medline search using the keyword and text words "body piercing" (no limitations on date of publication) yielded 40 English language articles on body piercing for cosmetic reasons, with eight review articles. An additional Medline search using the keyword and text words "ear piercing" (no limitations on date of publication) yielded 97 English language citations. The highest level of evidence was the case-control studies of ear piercing risks (five) and prevalence studies of ear piercing risks (eight). Only two of the prevalence studies and none of the case-control studies were conducted in the U.S.

The majority of articles about piercing of sites other than the earlobe were either case reports of unusual medical complications of body piercing or commentaries on body piercing practices and health risks, with no controlled experimental or population-based studies; there were four regional cross-sectional studies on self-reported prevalence of piercing and post-piercing complications. The

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highest level of evidence regarding health risks of body piercing for sites besides the earlobe at this time available appears to be literature reviews, with expert opinion provided by the authors.

B. Expert sources and testimony : NA

C. Other people/organizations looking at issue The Iowa Dental Association approved the following resolution, May 8, 2000: "Be it resolved, that the Iowa Dental Association opposes intraoral and perioral piercing for public health reasons."

D. What other states are doing - The health departments of the states with body piercing regulations (Maine, Ohio, Oregon, Texas and Wisconsin) were contacted to determine whether there are any data on effects of these regulations; none had tracked incidence of complications before or after regulations were instituted.

E. Other: none

III. Conclusions and Recommendations

A. Conclusions

1. Since the importance of aseptic technique in reducing complications (primarily infection) for any procedures piercing the skin is well-documented, it seems reasonable to extrapolate that complications of body piercing would be reduced by use of aseptic technique as well.

It is also important to note that there are certain areas of the body that cannot be effectively decontaminated, therefore, caution should be used about piercing these areas. This logic is the basis of the conclusions of the authors of the existing literature reviews and commentaries, rather than epidemiological data or evidence from experimental studies.

2. There is little evidence, other than anecdotal, of serious health problems arising from body piercing. Serious risks of ear piercing (primarily hepatitis) have not been documented consistently across studies, and the populations in which the studies were conducted may not be generalizable to Iowa's. Piercing body parts other than the ear lobe may have greater risks, but few data are available to support this since body piercing is a recent trend in the U.S.

3. There is no evidence for or against the idea that restricting the age at which people may obtain piercings has any effect on reducing complications. Although some authors suggest that age restriction may actually increase the risk because it may motivate adolescents to do the procedure at home under less than optimal conditions, no data are available to support this theory.

B. Recommendations

1. If body piercing is to occur, it is mandatory that aseptic technique be used to reduce infectious complications. There are certain areas of the body that cannot be effectively decontaminated, therefore, caution should be used about piercing these areas.
2. The IDPH should take steps to make the public aware of these recommendations, conclusions and concerns.

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IV. Appendix I: Summary of Complications of Ear Piercing and Related Studies

Ear Piercing and Risk of Hepatitis

Principal author	Type of study	Year/journal	Type	Subjects	Country	Association with ear piercing	Notes
Alter	Prevalence	1997 <i>Hepatology</i>	HCV	248 blood donors	US	in males only	
Conry-Cantilena	Prevalence	1996 <i>N Engl J Med</i>	HCV	481 blood donors	US	in males only	
Kim	Case-control	1996 <i>Korean Med Sci</i>	HCV	64 cases, 128 controls	Korea	none	
Chen	Prospective case-control	1995 <i>J Med Virol</i>	HCV	38 cases, 76 controls	Taiwan	none	inj. with non-disposable needles OR=4.17
Mele	Case control	1995 <i>Scand J Infect Dis</i>	HBV and non-A, non-B	6395 HBV, 2558 non-A non-B, 4789 HAV	Italy	with HBV and non-A, non-B AOR=2.76	no healthy controls
Neal	Case control	1994 <i>Epidemiol Infect</i>	HCV	74 cases, 150 controls	UK	no association	
Mac-Lennan	Prevalence	1994 <i>Transfus Med</i>	HCV	100 cases, 771 controls	UK	in males only	
Wu	Prevalence	1993 <i>J Gastroenterol Hepatol</i>	HDV	653 prostitutes	Taiwan	significant (p<0.02)	
Hardiman	Prevalence	1993 <i>Aust NZ J Med</i>	HCV	31 blood donors + for HCV	S. Australia		3 had tattoos/ear piercing
Nuchprayon	Case-control	1992 <i>SE Asian J Trop Med Public Health</i>	HBV	876 cases 1750 controls (blood donors)	Thai-land	no association	RF included: ear piercing of F in dept. stores
Tsai	Prevalence	1991 <i>Chung Hua Min Kuo</i>	HCV	1135 blood donors	Taiwan	no association	
Abdool	Prevalence	1988 <i>Int J Epidemiol</i>	HBV	805 urban, 238 rural, 127 instit. black children	S. Africa	in females only	
Coates	Prevalence	1986	HBV	243 male, 230 female liver biopsy pts	Canada	no association	

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Related studies

Bauer	Retrospective cohort and case control	1990 <i>MMWR</i>	27 cases 374 controls in hospital with HBV outbreak	US	fingerstick device responsible for HBV transmission
Cortese	Cross-sectional (survey)	1971 <i>AFP</i>	100 nursing students	US	73% had pierced ears 50% had friend or self do piercing 52% had complications
More	Cross-sectional (survey)	1999 <i>Pediatr Emerg Care</i>	14 local businesses	US	ear piercing procedures surveyed
Simplot	Cross-sectional (survey)	1998 <i>Am J Otolaryngol</i>	552 hospital nurses on piercing of ear lobe or cartilage and other body sites	US	82% ears; 35% complication; same for both ear sites 1 % required antibiotics 1% major complication <1% (4) noses; no complications <1% (3) other sites; no complications
Boardman	Cross-sectional (survey)	1997 <i>CDA J</i>	2 piercing parlors in San Francisco; 63 respondents	US	51/63 tongue 2/51 req. med/dental treatment 3/51 infection

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IV. Appendix II: Relevant Citations

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V. Identify a communications strategy

- A. Report to requester
- B. Press conference with subcommittee members