Lab Notes

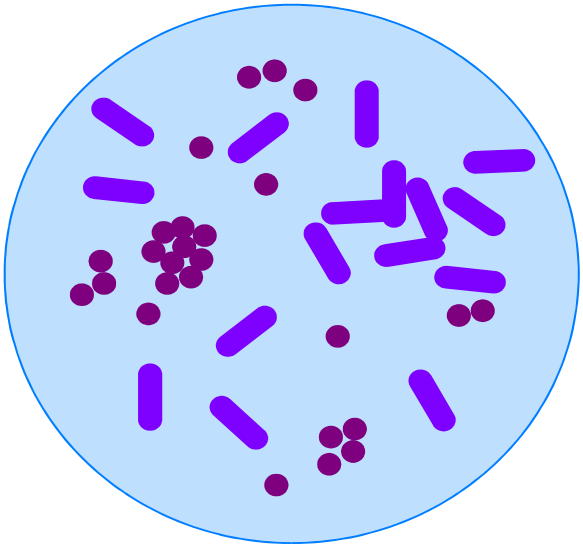
July 1999

IUPUI ENVIRONMENTAL HEALTH AND SAFETY

4th Edition of the CDC/NIH Lab Biosafety Guidelines Available

Biosafety in Microbiological and Biomedical Laboratories (BMBL) describes the combinations of standard and special microbiological practies, safety equiment, and facilities constituting Biosafety Levels 1-4, which are recommended for work with a variety of infectious agents in various laboratory settings.

These recommendations are advisory. They are intended to provide a voluntary guide or code of practice as well as goals for upgrading operations. They also are offered as a guide and reference in the construction of new laboratory facilities and in the renovation of existing facilities.



However, the application of these recommendations to a particular laboratory operation should be based on a risk assessment of the special agents and activities, rather than used as a universal and generic code applicable to all situations.

Since the publication of the third edition of *Biosafety in Microbiological and Biomedical Laboratories*, a number of events have occurred that influenced some of the changes made in this fourth edition.

C In response to global concern about emerging and reemerging infectious diseases, the section on Risk Assessment has been enlarged to provide the laboratorian with additional information to make such determinations easier.

C A considerable increase in the design and construction of biomedical and microbiological laboratories has occurred, particularly at Biosafety Levels 3 and 4. In response, clarification of and additions to the AFacilities@ sections have been incorporated, particularly in Sections III and IV, as an expansion of our performance-based approach to achieving appropriate containment.

C Interest in prion diseases increased significantly with the identification of bovine spongiform encephalopathy (BSE) in England. In response, an appendix has been added to address the varied biosafety concerns associated with working with these agents.

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- Several laboratory-associated infections have occurred involving both known and previously unknown agents. In response, various Agent Summary Statements have been modified or added to this edition.

- Concern has increased regarding the national and international transfer of infectious microorganisms. Each Agent Summary Statement now contains information regarding the requirements to obtain appropriate permits before transferring the agents from one laboratory to another.

- Finally, growing concerns about bioterrorism have caused considerable interest in biosafety matters in recent years. In response, an additional appendix is designed to help focus attention on the increased security needs of our microbiological laboratories.

This book, as well as other relevant biosafety

Autoclaving Tips Update

The January issue of ***Lab Notes*** had an article about safely using autoclaves for disinfection of biologically contaminated waste. One aspect on our campus was not considered. A waste that has biological and radioisotope contamination may require special treatment. Please contact the Radiation Safety Office at 274-4797 for specific information regarding treatment of such wastes.

NEW EMPLOYEE TRAINING SCHEDULE

Union Building Roof Lounge - 6th Floor

Jul. 12,19,26; Aug. 2,9,16,23,30; Sep. 13,20,27; Oct. 4,11,18,25-1999

9:00-10:00 AM **Bloodborne Pathogens-** For all employees who may be exposed to human blood, body fluids or tissue.

10:00-12:00 Noon **General Safety-** For all new employees.

Union Building (North) - Room 542

Jul. 13 1:30 - 3:30 PM **Chemical Lab Safety** - For all employees who work with chemicals in laboratories.
Aug. 18 9:30 - 11:30 AM
Sep. 21 1:30 - 3:30 PM

Survival of HIV-1 in Syringes

A study was recently published that tested the theory that HIV-1 may be viable for extended periods of time in contaminated blood remaining in used syringes. This study was done to determine the potential dose that users of illicit injectable drugs may get by sharing needles. An assay of the typical amount of blood found in used syringes (2-20 microliters) was developed. Using this assay, the investigators were able to recover viable HIV-1 from syringes that had been maintained at room temperature for periods in excess of 4 weeks.

A summary of the results indicated that the likelihood of encountering a potentially infectious syringe decreased with time and with the amount of blood remaining in the syringe. The likelihood for contact with an infectious syringe remained finite for an extended period of time. And the risk increased if the volume of infected blood was larger. Details of this study may be found in the ***Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology*** **20:73-80**.

This study extends the range of viability previously reported as 1-7 days for HIV. Other studies have shown that hepatitis B virus is viable for extended periods outside of the host and for up to 7 days in dried blood. Careful handling of all potentially-contaminated sharps is vital in preventing exposure to bloodborne pathogens for researchers, technicians, housekeeping staff and anyone who handles waste materials. Treat potentially-contaminated sharp items as carefully as loaded firearms. Your attention to this detail may save yourself or your coworker from a serious or deadly disease.

Special thanks to Dr. Ghalib Alkhatib for notifying EHS concerning this important safety issue.

Routine Housekeeping Improves Safety

Have you looked around you lab lately for safety hazards? Would it receive the Good Housekeeping Seal of Approval? While many housekeeping issues are unrelated to safety, there are some overlooked issues that can lead to hazardous situations.

Poor housekeeping increases the chance for slips, trips, falls and fires. Proper housekeeping techniques can eliminate conditions that could cause accidents and serious injuries. Housekeeping doesn=t have to be difficult - just done regularly.

Keep floors and work surfaces clear of unnecessary objects by making sure that walkways are free from objects that could trip someone. Common trip hazards include boxes, chairs, drawers and electric cords.

Check floor surfaces to make sure that they are not too slick or have any other hazards. If you find loose floor tiles, rough spots or other flooring surface problems, report it to Campus Facility Services.

Be sure that fire alarms and emergency exit signs are clearly visible and easily accessible. If clutter blocks emergency exits or alarms, it could endanger people trying to escape or warn others of a fire or

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other emergency.

Keep work surfaces clean and well organized to maximize efficiency and reduce ergonomic

Routine Housekeeping Improves Safety

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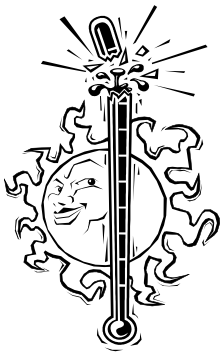
injuries. Regularly disinfect work surfaces as appropriate to inhibit the spread of infectious diseases.

Before you put this newsletter down, take a look around your lab. Can you improve housekeeping in your lab and improve the safe use of the lab? Make at least one small step today and



Prevent Heat Illness
Plan Ahead

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