

# SCHOOL HAZARD FACTS FOR FAMILIES

## UNITE FOR SCHOOLS FREE OF HAZARDS

### FROM CONSTRUCTION AND RENOVATIONS

If families and school staff work together then schools free from hazards caused by construction and renovation are more likely and all will benefit. See the *Unite for Healthy Schools* factsheet for how to do this.

Hazards associated with construction and renovation include dust, asbestos fibers, lead-contaminated debris, noise, fumes from equipment and from toxic substances. Precautions are needed to prevent illnesses. Children learn best in a healthy environment.

## ASBESTOS

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Asbestos can be found throughout many schools in products such as roofing shingles, floor and ceiling tiles, cement pipe and insulation for boilers. Asbestos fibers are considered relatively safe when they are firmly bonded or compacted within other material, such as wall board or floor tile. However, when asbestos-containing materials are loose or crumbling because of aging, water damage, abrasion or by pulverizing during construction, microscopic fibers are released into the air and are easily inhaled. Most asbestos exposure in school buildings occurs during renovation and construction if asbestos containing products have not been removed before construction begins. Asbestos can cause cancer years after exposure.

By Federal law (Asbestos Hazard Emergency Response Act: AHERA), every public school in the country must be inspected for asbestos. The school district must develop a management plan (MP) for asbestos which shows where it is located, the condition it is in and how it will be handled. The MP must be updated every three years. Staff and families can access this plan. By knowing where the asbestos is in the school, families,



staff and contractors can make sure it is not disturbed during construction and renovation. If construction is in an area where asbestos is located, it must be removed before work begins and treated as an asbestos abatement, which is strictly regulated.

## LEAD

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The primary source of lead in schools is deteriorating paint. As with asbestos, lead paint that is in good repair and is not flaking or crumbling, poses minimal risk. However, paint can become a threat when it is damaged due to aging, abrasion, poor maintenance, water damage, renovation and construction. Renovation can release lead particles, especially if it involves breaking through and disturbing a lead painted wall or ceiling, or if layers of paint are physically removed by sanding before repainting. Mental and physical problems, nervous system and kidney damage, and anemia are among the many adverse health effects from exposure to lead.

## ROOFING

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Roof repairs and replacement are common, especially in schools with flat roofs that crackle, buckle and spring leaks from exposure to sun, ice, snow and wind. This can have a significant impact on indoor air quality. All roofing involves the use of toxic chemical-based materials which are hazardous to health when breathed in by students and staff. If old roofing material is being removed, there will also be the possibility of exposure to dust which may contain asbestos.

## FLOORING

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Many solvent-based products are still widely used in the installation and finishing of hardwood floors. When they are improperly handled they can cause acute or chronic health effects to students and staff who may breathe in the toxic vapors and gases. Carpets, adhesives, sealers and varnishes contain organic solvents, epoxies, formaldehyde, polyurethane and additives, all of which are hazardous to health when breathed in.

## PAINTING

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Painting can introduce many toxic substances into the school environment. These include paints, strippers, primers and thinners which are likely to contain toxic solvents that evaporate and contaminate indoor air. Although many paints are water-based, most paints still contain at least some measure of toxic volatile organic compounds (VOCs) which can cause adverse health effects.

## NEW FURNISHINGS

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Formaldehyde, one of the most common pollutants in school buildings, is found in furniture, new carpets, particle board, plywood and many other products associated with renovation. As it deteriorates, formaldehyde gives off gases which even at low levels can cause irritation of the eyes and respiratory system. Formaldehyde can also cause cancer.

## DUSTS AND GASES

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A variety of dusts are produced during construction, which come from lead paint, metal, plastic, wood, brick and cement and may contain asbestos, lead and mold.

## WHAT FAMILIES CAN DO

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Families should work with school staff before renovation or construction begins and during the project to request that schools undertake major renovation projects when schools have no occupants, during vacations, over a weekend or after school. The area should be aired out before it is re-occupied.

Engineering measures to prevent exposure to asbestos, lead and mold include isolation and exhaust ventilation which will protect students and staff. Safer materials should be substituted for more toxic substances.

The Public Employees Occupational Safety and Health Act (PEOSH) can only be utilized by school employees, not students and their families, so families should work through school staff and their unions to determine if they want to involve PEOSH. Families should attend SDA/Board meetings to learn about upcoming renovation and construction projects.

This factsheet is one of a series prepared for the Healthy Schools Now Coalition by the New Jersey Work Environment Council, 7 Dunmore Ave., First Floor East, Ewing, NJ 08618 (609) 882-6100. Website at: <http://www.njwec.org/healthyschoolsnow.cfm>. Funded in part by the Princeton Area Community Foundation and the Schumann Fund for New Jersey.

Healthy Schools Now is a coalition of parents, educators, students and public school advocates dedicated to ensuring that all New Jersey children and school employees learn and work in safe, modern school buildings.

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