



Flooring's Role in School Health & Wellness

By Cory Corullo and Don Brown

As the air has started to turn cool and school doors have reopened again for the first time since spring, the health and wellness of students and staff have never been more on the minds of parents, school officials, maintenance and facility crews, health departments, as well as state and national governments. While schools were closed, these groups spent considerable amounts of time thinking about how they would safely reopen schools.

Now that kids in some areas of the country are back in school, leaders are examining their definition of wellness more than ever. Wellness has never just been about the physical exercise students experience during a fitness class, sports competition, or recess. High-quality flooring choices play a huge role in maintaining wellness throughout the school's campus, both indoors and outdoors.

Flooring Is the Base of Activity

Whether walking down a hallway, playing basketball in a gym, competing in a tennis match on an outdoor court or changing in a locker room, every person who enters a school's grounds uses its floors for a purpose. Below are some factors to consider as you assist in floor system decisions when upgrading or constructing academic buildings and outdoor areas.

Classrooms, Libraries and Other Areas

Many schools choose to carpet their classrooms and libraries because of comfort, acoustics and reduction of slips and falls. While carpeting offers benefits, it also collects fluids, dust, mold, pesticides, dirt, and germs. As carpeting gets older, it's tougher to sanitize, making it easy for bacteria to get trapped before eventually releasing into the air as people walk on it.

As schools decide to update or select new flooring, they should consider seamless epoxy and urethane synthetic flooring. These synthetic floor systems offer a multitude of benefits, especially with current concerns about keeping everything sanitized for students, teachers, and staff. One benefit is maintenance teams will spend less time and money doing regular carpet cleaning. Most synthetic floors offer



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seamless and non-porous surfaces, eliminating grouts and cracks where germs and harmful bacteria can hide. Synthetic floors also offer a variety of coatings that can be proactive in resisting mold, fungus, and bacterial growth. Industrial grade epoxy synthetic floors work especially well in places like hallways, locker rooms, showers, food service areas, woodworking shops, science labs, and home economics classes. These types of floors are disinfected with an auto scrubber machine, making clean-up more efficient for maintenance crews.

Flooring materials also directly affect air quality. Air quality can be negatively impacted by water trapped in or under carpet, which may encourage mold and mildew to grow, causing asthma and other serious respiratory hazards. Emissions from floors, called volatile organic compounds, or VOCs, have been proven to contribute to breathing issues, irritations, and sometimes even life-threatening diseases. Pad and pour synthetic floor systems can be optimal products to consider because they are manufactured as low-VOC. Maple flooring can also be third-party certified as low-VOC building material. Regardless of the flooring that is chosen, it should be FloorScore®-certified to ensure it is low-VOC and will not affect indoor air quality. Better air quality means schools can proactively protect their students, resulting many times in better overall health for students and staff, fewer absentee days and many times, higher student cognitive scores.

There are other major benefits to epoxy and urethane synthetic flooring for both the floor contractor and the school. In most situations, schools do not need to close during installations. Many synthetic floors offer solvent-free products with non-toxic, water-based topcoats, so there's no noxious fumes or chemicals to put people at risk of harm. In addition to being durable, there are many types of synthetic



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flooring that are maximized to provide comfort. This is especially important for teachers who stand most of their day.

Gymnasiums and Outdoor Areas

The flooring system you'd choose for the main learning areas within a school might be quite different than the system you'd need for sports areas. The flooring that is installed in these areas can impact the overall well-being of athletes and help avoid injuries.

For example, high-quality hardwood courts in gymnasiums should be considered to provide ideal levels of shock absorption. Shock absorption makes a gym floor easier on athletes' bodies and can help protect the joints of their lower extremities. The Maple Floor Manufacturers Association (MFMA) calls for hardwood sports floors to have at least 50% shock absorption, depending on the system. While it is not considered a measure of safety, and there's no definitive evidence that it reduces acute injuries, adequate shock absorption is easier on an athlete's body. Appropriate shock absorption may also prevent athlete fatigue.

Traction is critical for sports flooring as well. The right amount of traction can help student athletes achieve peak performance and help prevent injuries caused by slips and falls. The ASTM F2772 standard indicates compliant surfaces will have a sliding coefficient value between 80 and 110. For optimal

traction, the chosen floor system should be selected according to the activity it will be used for. A maple floor system should be considered for an inside surface where basketball, volleyball, or aerobic activities happen. On the other hand, pad and pour sports floors that offer a polyurethane topcoat surface are a better choice for activities like tennis or pickleball that are typically played on outdoor courts and require a slip resistance feature due to environmental factors. These pad and pour sports floors also have an added benefit of UV protection from the sun.

The durability of a school's floor is another important factor to consider in order to avoid trips or falls. Synthetic sports floors are often used in multi-purpose gymnasiums or areas that see a lot of traffic and a variety of activities. Pad and pour sports floor systems are an excellent option if the gym doubles as a school cafeteria or if bleachers and tables are moved often across the surface. Two of the most important measurements relating to durability in synthetic flooring are tear strength and elongation at break. Elongation at break measures a floor's ability to avoid punctures from things such as table legs, while tear resistance measures the ability for the surface to withstand objects moving across it. High elongation at break is ideal for applications like indoor or outdoor tracks or dugouts where spikes or cleats are used.

With many schools being closed for almost half of this year, the overall appearance of your sports floor

is essential in reconnecting students and community with your school or university. Many schools are not permitting students to watch sporting events in person this fall; therefore, the branding of your sports floor – the school colors and mascot – are the main sources of school pride for spectators who may be watching virtually and as motivation for the players. Synthetic flooring installed seamlessly has aesthetic advantages. One type of synthetic flooring can be installed in a weight room in one color, versus another type can be installed on a track in another color versus another type can be installed in a physical fitness classroom with a third color. Different colors of synthetic flooring can act as a visual cue to the athlete that the floor is used for a different purpose.

Create a Foundation for Success

There are specific standards and testing procedures that measure sports floor performance. Understanding these characteristics helps schools identify a system that fits the activities, budget, and expectations of coaches, athletic directors, and athletes. An experienced floor contractor can advise on the best type of system based on use, environmental factors, and geographic region.

The flooring system you choose during a remodel or build within school grounds requires thought and consideration. The inside areas of the school where the majority of people spend a great deal of time needs flooring that is easily cleaned and free of allergens, whereas the sports floor areas need to consider shock absorption, traction, and durability. In addition to functionality, the floors within a school need to be aesthetically pleasing and solvent-free. In a challenging year when the focus on wellness and health are at an all-time high, the investment made in quality school floor systems will contribute to the foundation of a successful and safe year.

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