

White Paper

Getting out of the 1960s:

New thinking needed for
Locker Room Showers

Introduction

The idea of communal (aka gang) showers in athletic facilities, schools and team locker rooms was the norm for decades, and at their outset, the concept made sense – multiple showering “stations” within a given space increased efficiency, capacity and throughput. Pipe drops into multi-head showering stanchions reduced mechanical first costs in new construction.

But, times and culture change – new norms about bathing privacy and the entire transgender issue have raised new concerns and challenges as it relates to bathroom and shower design. Dial in the additional risks of serious bacterial infections for athletes, and the surface cleanliness issue must also be addressed.

This white paper seeks to lay out some of the factors that have brought us to this point, and offers a design alternative that may shape the locker room shower of the future.

Bathing Privacy

One of the clearest drivers on the issue of bathing privacy in multi-occupant facilities has been the co-ed integration of housing at colleges and universities. In a blog post on disadvantagedbydesign.com, author Kathryn H. Anthony, Ph.D., writes:

Communal bathrooms present many negative issues for their users, along with creating efficiency of space. These facilities require users to enter with a “shower caddy” full of their toiletries needed for bathing. I personally was not too bothered by this arrangement while living in student housing, but it did present some obstacles that others strongly disliked. One of which is the fact that after your shower, unless you get fully dressed while still in the bathroom, which is made difficult by the wet floor and cramped stall, you must walk through a (usually) co-ed hallway in your towel to return to your dorm room. While this is fine for some people, others experience stress in this situation.

Dr. Anthony knows what of she speaks. She is a Distinguished Professor in the School of Architecture at the University of Illinois at Urbana-Champaign. Dr. Anthony went on to say that several security breaches while living in the dorms meant greater risks on top of the discomfort some residents feel walking through coed hallways wrapped in a towel.

LGBTQ issues

Going almost hand in hand with privacy concerns is the explosion of the transgender bathroom issue that has swept America.

The “easy” route for gender accommodation is the installation of single occupancy restrooms with clear signage indicating the space as a gender-neutral restroom. This provides not only the needed privacy but also increased safety from harassment and assault.

However, the transgender restroom issue is fraught with confusion. Case in point: The city of Charlotte, N.C., passed an ordinance barring discrimination in public places based on sexual orientation or gender identity. That ordinance was then blocked by a bill passed by the North Carolina state legislature.

Developments like this lead us to offer a word of caution: Politics aside, one thing we discovered in researching this white paper is that there is a true patchwork of laws and ordinances developing. The challenge in such maneuvering is that those designing and operating such “public places” must wait until the dust settles to know what the requirements are so that restrooms can be designed and designated to achieve compliance.

Some of these gender and transgender discussions are beginning to move out from the bathroom stall and into the athletic locker room. In many ways, a discussion of locker room gender neutrality would be and is a natural extension of the conversation. For example, a school district debating restroom gender issues, may also need to take up the question, “What about the locker rooms?”

Absent a unifying design standard – that is, an adopted and widely published building code – on restroom/bathroom/locker room gender neutrality, those attempting accommodation may have to hope for the best when it comes to steering clear of violations.

We turn our attention now to another area of concern: Keeping locker rooms clean.

MRSA risk among athletes is real

Methicillin-Resistant Staphylococcus Aureus (MRSA, pronounced “mer-sah”) is classed by the Centers for Disease Control (CDC) and the medical profession as one of the deadly “Superbugs.” MRSA infections are extremely serious in that the bacteria have mutated resistance to some of the strongest antibiotics in medicine’s arsenal. In the worst case, the patient dies from the infection.

The roster of athletes who’ve been sidelined by MRSA is a lot longer than most people would imagine. For more than a decade, sports media is dotted with stories of MRSA diagnoses among sports teams:

- In 2003, five Rams players were affected by MRSA
- Since 2003, the Washington Redskins and Cleveland Browns reported outbreaks
- A tight end for the NY Giants had numerous surgeries related to a MRSA infection, and faced a possible amputation
- A 2013 study commissioned by NFL physicians found that 33 players contacts staph infection from 2006 to 2008
- The Tampa Bay Buccaneers dealt with an outbreak in the fall of 2013
- In March 2014, an infielder for the Philadelphia Phillies was diagnosed

Aside from the serious human health impact of MRSA, the economic and public relations aspects of such infections on the team and organization can be staggering. With today's pro athletes earning multi-millions a season, the loss of that athlete's talent while he or she battles a MRSA infection are significant. Amputation of infected limbs would end a career.

It appears staph infections are twice as prevalent in contact sports athletes, according to a 2014 [article on the MedicalDaily.com website](#). That article goes on to say MRSA is as prevalent in college sports as in pro teams.

The problem is so concerning that the CDC has an entire website dedicated to [Cleaning & disinfecting Athletic Facilities for MRSA](#). Among the guidelines, the CDC says:

- Cleaning procedures should focus on commonly touched surfaces and surfaces that come into direct contact with people's bare skin each day.
- Repair or dispose of equipment and furniture with damaged surfaces that do not allow surfaces to be adequately cleaned.

This second recommendation raises another point, and one that is often overlooked – broken tile and grout. It is a long-known fact that the grout between tiles can be a breeding ground for mold and mildew due to the porous nature of the material. And while there doesn't appear to be a wealth of academic research on the topic, it begs the question: What is the bacterial load in grout?

Given the significant number of tile and grout disinfectants and sealers on the market – and the CDC's clear instructions to clean locker rooms thoroughly – one can easily draw the logical conclusion that tile and grout harbor bacteria.

A final note on disinfectants – they are a temporary, palliative solution because germs can rebound. A study by Attaway, et al, (AJIC 40, 2012, 907-12) uncovered that surfaces cleaned with disinfecting solutions showed bacterial rebound within hours. Bottled disinfectant did reduce the average bacterial burden by 99%. However, the bacteria count rebounded to 30% of that found before disinfection by 6.5 hours after disinfection. Point being: Bacteria are resilient; Cleaning – even when done well – still means bacteria will come back.

Suggested solution: Individual showering compartments

One answer for better personal comfort for the bather is to construct shower spaces with adequate dry-floor changing space that allows bathers to disrobe and get dressed within that space. One example is seen in the images below from the Yocum Hall bathroom renovations at the University of Arkansas, part of a multi-year, campus-wide, multi-dorm updating project. The Yocum showers were re-designed with dry-floor changing space, and solid surface partitions for privacy.



Newly renovated bathrooms at Yocum Hall, Univ. of Arkansas have solid surface surrounds, receptors and partitions, and feature a private, dry-floor changing space.



In designs where space may not allow the combined shower and changing area, then a more inline approach with individual showering spaces can be used.



Product and material choices for cleaner bathrooms

Solid surface showers surrounds and receptors

One of the keys in combatting mold and mildew is to employ non-porous surfaces. Even better are surfaces that do not promote the growth of mold or bacteria.

With tile and grout, the porous grout is usually where the first black splotches of mold start growing. Where grout cracks or falls out, there is risk of water getting behind the tile leading to tiles failing or moisture seeping into the gypsum board or other substrate. Cleaning and resealing tile means more work for maintenance staff and leaves room for error.

Also, solid surface means quicker turnaround on installation over traditional tile. From start to cured finish, solid surface showers can be ready to use in as little as 4-5 days. Traditional tile can take up to 12 days by the time you tally up mortar bed prep and curing, grouting and curing, and finish seal cure. Solid surface receptors can be installed in as little as one hour versus a tile pan that can take up to three days to finish.



Solid surface panels are an excellent choice as a shower enclosure material. Since solid surface is non-nutritive, it does not promote the growth of mold and mildew, and resists bacterial growth.

There are numerous color and pattern options, and the ¼" or ½" sheets can be installed right over existing tile. S-curve (wavy) edges provide a good seal and their fit maintains a flat, flush seam where the wall may fluctuate. In addition, large sheet sizes mean fewer seams where dirt can accumulate. Recessed soap dishes or soap shelves can be easily incorporated into the shower surround.

Receptors made from solid surface can be poured into squares and rectangles of numerous sizes. The integral non-skid surface helps prevent slips and falls, and ADA edges and ramps can ease the transition from floor to receptor. Drain locations can be set to match existing plumbing, and trench drains are also an option.

One small, but significant green design advantage: Some manufacturers have created solid surface formulas containing rapidly renewable bio-based resins.

Conclusion

We believe that a strong case can be made that it's time to move athletic showers from the 1960s into the new millennium. The combined issues of bather privacy and increasing LGBTQ accommodation advocate for a new approach ... the logical extension of the gender-neutrality discussion regarding bathrooms must include locker rooms and showers in athletic facilities.

Multi-million dollar players sidelined by bacterial infections rob the player of their health and potentially their career, and there's serious financial risk to the team or athletic department. The fact that the CDC had to issue guidelines regarding MRSA in locker rooms points to a serious health issue.

We suggest the old, traditional gang shower must evolve to a more-private shower compartment. Solid surface shower surrounds and bases offer an excellent material option that is superior to tile and grout, and offer designers a broad array of configuration options. Finally, solid surface showers help improve facility cleanliness as the material does not promote the growth of mold and mildew, and resists bacterial growth.

In the best-case scenario, "sending a player to the showers" might just end up being a good experience.

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