

Infection Control for Instruments

Starter Guide for PIH (Personal)

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Personal Hygiene (PH) is the collection of habits that manage the sanitary care of a person's self, space, and stuff. That includes body and skin care, oral and dental care, and grooming of nails and hair. It includes washing clothes, cleaning accessories and personal spaces, and food and water supplies. PH (good or bad) influences all other endeavors. The goal is to care for the body and keep its microbiome from getting out of hand or transient germs from taking over. That always begins with ***Hand Hygiene (HH), the best way to fight infection*** [CDC 2016]. Hands should be cleaned or sanitized often, especially after using the restroom or interacting with others, and before preparing food, eating, drinking, or touching the face or mouth. HH when entering spaces also reduces personal litter wherever we go, and HH when exiting leaves germs behind. That's true for our activities too. ***Players should also perform hand hygiene before and after handling instruments.*** The body is the full physical presence of the human organism, and hygiene helps preserve and protect our fleshly in all we do.

The body is protected by its largest organ, the skin. It is essential to keep it clean and dry, intact, and supple, because it shields what's inside from what's outside. It helps regulate our temperature and gathers information about things we touch or that touch us. The skin is constantly changing and renewing itself, bringing new cells to the surface almost every day, and replacing itself every other week [Larson, 1999]. The outer layers contain the oldest cells and lots of transient bacteria and debris. This needs to be washed away with soap and clean water even when it doesn't look dirty. Dirt, debris and oils, and germs are often layered, and soap works molecule by molecule, so we have to use enough to get the job done, give it time to work, and wash more than once if needed. That's true about cleaning all sorts of things too.

Skin areas with more body hair can shield extra layers of skin, oil, and germs, so they might need more attention. Some body washes or body bars contain more oils than soap, while others with harsh chemicals may strip, dry, or even burn skin. Since some kinds of skin are more sensitive than others, many face and body washes are specially made to cause less irritation. It is important to follow the directions on product labels, especially about contact time. Most people would

say they know that soaps need 20-30 seconds to neutralize and lift away germs, but this doesn't always translate to diligent contact times at the kitchen or bathrooms sink. In that case, the likelihood that the body is getting that contact time with soap everywhere in the shower is pretty slim. It's even possible that some of the benefit of luxury products is the contact time that their extra fuss encourages, rather than the actual contents of their fancy containers.

Fabric can harbor a lot of debris, including soil and microbial bioburden, and it doesn't always wash away. Clothing can trap dead skin and germs against the body, especially where it is layered or where skin folds, like underarms, toes, and groin. Clean clothes are needed every day, especially in layered areas. Those who don't wear socks can't change them, so their toes sit in un-washable shoes, full of growing germs, dead skin, and debris. Efforts in energy and water conservation have reduced wash temperatures, and colored wash loads often avoid germicidal detergents to preserve their bold designs. As a result, more socks and underpants are left with bioburdens than in the past, supporting relapses in those recovering. When those germs spread to other body parts or other people on fabrics washed with them, one person's foot fungus or jock itch can become a whole family's problem [Ritchie, 2015]. Fabrics we think are clean may also retain and spread fecal bacteria to the rest of the wash, including dishtowels [Borrelli, 2013]. Many opportunistic germs die off in the open, from desiccation and harsh environments, but in dark or wet places, adding more with every wearing, some eventually reach infectious payloads. Dark, wet, and undisturbed machines house growth in the same way. Thought must be given to sanitary laundry methods, pretreatment as needed, and even to the wash basins used.

Bedding also gathers body soil, as the average person spends 49-63 hours week in their sheets [NSF, 2019]. Sheets, pillowcases and blankets in direct body contact with sleepers should be washed weekly, and the other non-decorative layers should be washed at least monthly. Outer accessories, like coats, hats, shoes, or backpacks are cleaned less often than the shirts and pants that go right into the laundry. That may not be a concern for the parts that don't interact closely with the body, but these and other personal items like jewelry and keys are carried so closely and constantly that their sanitary cleanliness should really be addressed as part of personal care. Phones, checked 47 times a day, may be 10 times dirtier than toilet seats [Abrams, 2017]. Since phones also touch the face, they really should be sanitized regularly.

Dirty fingernails also add extra germs to foods and toys and can cause infections while scratching itches. Many string players need short left-hand fingernails, and classical guitarists shape their right fingernails for picking. Grooming for appearance and playing function is up to players and teachers. For hygiene, nails must be cleaned often, especially before preparing food, eating, or touching the face. According to the CDC, handwashing is one of the best ways to stop the spread of germs and disease, and diligent hand hygiene can literally save lives [CDC 2020].

The feet and toes are the furthest from our heads and may be the furthest from our minds. *“The average person will walk the equivalent of twice around the world in a lifetime,”* according to HappyFeet.com [Labarge, 2016], so we should take care of them. Shorter toenails fit better in shoes and are easier to clean but cutting them too short or round may cause painful ingrown toenails. Toenails should be trimmed straight across and their sharp edges filed away. It is also essential to wash and scrub the feet and toes every day, and to keep them clean and dry. Wear socks so they can be changed every day, or twice on long sweaty days. Rotate which shoes are worn daily to let them dry well [IPFH, 2016]. Foot care is crucial in activities that add friction or abuse. Feet are dark and sweaty in shoes for hours and walking on them builds strong calluses. These provide natural armor while walking and marching, but they also offer extra layers and crevices for germs to hide in, waiting for a chance to break inside [MacMillan, 2018].

Oral health is important too. The voice is the oldest human wind instrument, and a healthy mouth and airway is essential to truly excellent singing and speaking. The American Dental Association recommends brushing and flossing twice per day [ADA, 2020]. Good technique mechanically removes food and bacteria. Toothpaste and mouthwash chemically disrupt germs, but their instructions must be followed carefully, as they need time to work. It is also important to visit the dentist at least annually. Professional cleaning removes biofilms, like plaque, that shelter bacteria while it eats your enamel. Dentists can also detect many problems even before the average person notices them, and some germs may even lead to heart trouble [Salinas, 2019]. Great Woodwind and Brass-wind players count on a reliable embouchure, and this can be weakened by tooth and gum disease, or infections, or sores on the lips and tongue. Loss of teeth can affect the range of expression too, if “lipping” support is lost. Of course, it’s hard to deny the confidence supported by a broad and healthy smile on stage.

In addition to cleanliness, the body needs fuel for strong and resilient tissue, and high performance and higher thinking. On top of shorting the body of what it needs, unhealthy food choices offer additives, overages, and toxins that disrupt body processes over time. The CDC promotes healthy nutrition [CDC 2018], but the USDA offers best guidance about building your best plate [2018]. Most people don't need a special diet unless their doctor recommends one, but balanced nutrition should maintain bodyweight and supply proportionate macronutrients (fats, proteins, and sugars), and micronutrients (vitamins and minerals) [NAIMS, 2017]. The US Geological Survey says our bodies are 60% water. We may need over 2 liters of water every day to keep it functioning well (some of that comes from food) [USGC, 2019]. Dehydration can cause real and lasting health problems, so it is wise to make an active effort to drink enough water.

Resistance challenge helps prevent muscle atrophy and bone loss, while exercise that makes us breathe faster and harder also strengthens the heart muscle. That's why they call it cardio. At least 60 minutes per day of a variety of activities, like walking, jogging, biking, lifting weights, playing sports, and dancing are all good ways to build and preserve the body and its abilities. To help prevent muscle injuries, warm up before using great efforts or complex motions, to loosen and prepare muscle tissue for challenges, and cool down and stretch after working hard, to loosen the muscles that have tightened. Wear the recommended protective gear for your sport, like pads or helmets. Start slowly after periods of inactivity, and pay attention to fatigue, tension, and pain. Don't try to push through severe discomfort unless you know your body well or have a trainer to help you know when to stop, rest, or see a doctor. Use careful form, especially when bending, lifting, or twisting to protect your back [NIAMS, 2017].

Everybody has different needs, hopes, and struggles, but there are some concerns we all share. The President's Council on Sports, Fitness & Nutrition offers guidance about healthy habits in some of those areas, and how to take small steps to improve them [PCSFN, 2019]. For example, physical challenge builds and maintains the body's strength, flexibility, speed, and endurance. Lack of it not only neglects muscle, it also permits unused tissues, including muscle, to be dismantled and used for other things. Healthy activity signals both the preservation and the strengthening of existing muscle tissue, and it also improves circulation through the demand to feed it. It also promotes restorative sleep, through the exercise-sleep connection [NSF, 2020].

Before it is artistic, music making is both intellectual and athletic. The body's basic needs must be met for a musician to devote their full attention to any academic progress, athletic refinement, or technical performance. Poor nutrition, dehydration, physical weakness, or lack of sleep can all impair strength and focus, higher thinking, and virtuosic delivery, as can infection, illness, or even minor skin irritations. Good self-care empowers players to prepare and present their very best. Like germs, hygienic efforts can be infectious, and awareness can be contagious. PH influence on the move reduces both personal risk and biological footprint. Since everything touched leaves a mark, for better or worse, anyone can change the world, but hygiene always begins with the care of a person, as a person.

PH also applies to personal items like phones or instruments, and to spaces like practice rooms and restrooms, and to everything we encounter in endeavors, like music performance or work. Environmental surfaces that are rarely touched are cleaned, vacuumed, or polished, just to keep debris off and look nice. Things that are touched more often are cleaned with soaps to make them sanitary, especially when touched by multiple people. When items touch the airway, face, or mouth, like phones or instruments, they need to be sanitized or disinfected, especially if others used them. Environmental surfaces generally don't touch the mouth or airway, but may still shelter and grow germs. This is why wet surfaces like bathtubs and sinks should be cleaned and disinfected with products that are labelled to kill tough germs like fungus and bacterial spores. More intimate clothing, like underpants and socks, and foodservice fabrics, like dishtowels, need similar consideration and perhaps more regular replacement. Since ICI supports healthy interactions with instruments, Starter Guides are offered for Personal Hygiene (PH) and Instrumental Hygiene (IH). These help players as people and review general instrument families, but they don't cover routine maintenance per instrument. Players still need care guides for each instrument they play. The best would from makers because they know their products best. When care guides are not easily available, teachers, repairers, and mentors, can help players build their own. Some schools and shops have already seen the need and built supportive literature. When we don't know where to begin or when to quit, questions are always a great place to start looking for answers. ICI's IH Starter Guide has a list of questions to help players ensure they've got it covered. It's like a scavenger hunt, where everybody wins.