

Hockey's dirty little secret

GERM WARFARE: A filthy hockey bag is not just 'a guy thing', it can be a toxic time bomb waiting to strike.

BY HUGH ADAMI
CANWEST NEWS SERVICE



No
Wonder reporter Randy Boswell looks grim. a lab test reeld 188,650 living, reproducing bacteria on just eight samples of gear in his hockey bag

- CANWEST NEWS SERVICE/OTTAWA CITIZEN

OTTAWA - Felix Skora unfolded the sheet of paper and slid it across the desk for his guest to see. The information on it was numbing.

"This is very bad," Skora said quietly. Germ warfare. That's what Skora's Gatineau laboratory, Micro B, found in Randy Boswell's hockey bag after we took it there to see if the CanWest News reporter's sippy, rank equipment posed a hazard to his health and to those around him when he's on the ice trying.

Skora suggested some fast action be taken in the laundry room.

"There is a need to disinfect this equipment," Skora said. "Possibly with chlorine, alcohol and perhaps washed at a high temperature. Then you should be able to eliminate the bacteria, the yeast, and the mould."

What Micro B found lurking around Boswell's equipment was a cesspool for bacterial growth. "Very high concentrations," Skora explained.

Dr. Barry Dworkin, who writes a health column for the Ottawa Citizen, said the bacteria could include numerous types of pathogenic germs, viruses and fungal substances which can lead to a variety of illnesses and skin infections, some of which he's treated.

While the lab didn't test for moulds and yeast, Skora said the high bacterial concentrations would virtually guarantee their presence. In fact, said Dr. Dworkin, heat and humidity stimulate growth of fungal matter.

Dworkin also said that in extreme cases, dirty hockey equipment can be a habitat for the hepatitis B virus, which causes high fever, weakness and jaundice. The virus is found in infected blood and other bodily fluids, like sweat and saliva.

"It's disgusting," Dworkin said of what can lurk in a stinky hockey bag.

Having dirty sports equipment, he said, "is no different than not following routine hygiene like changing your socks and underwear." Bacteria- and viral-contaminated equipment is a very easy means of transmitting infection.

People who play sports are particularly susceptible to infections for various reasons: Germs grow when athletic equipment gets warm and moist; sweating softens the skin's main barrier, the stratum corneum, to the body; and germs enter the body from scrapes, cuts and bruises.

professional hockey players - who are covered

refuse to update their equipment.

But at least professionals, and players through the junior and university ranks, have training staffs responsible for maintaining equipment. It's those who play at the minor level, children and beer-leaguers, who may have most to worry about if they just leave their wet equipment in their hockey bags until it's time to play again.

Not hanging up wet, smelly equipment to dry is a major reason for severe bacterial contamination. While some may wash their jerseys, hockey socks and undergarments before the next game, leaving the rest of the stuff in the bag, like Boswell does, is not uncommon. There doesn't seem to be a reasonable explanation from those who let their equipment rot, other than offering the frequent refrain "it's kind of a guy thing."

"This is very bad. There is a need to disinfect this equipment, possibly with chlorine, alcohol and perhaps washed at high temperature."

-- Felix Skora, laboratory owner on the cesspool of bacteria in Randy Boswell's hockey bag.

Allowing equipment to dry kills a lot of bacteria, although Dworkin suggested that cleaning equipment with disinfectants should also be part of the process, to make sure you're getting more bacterial and any spores left by dead germs.

It is highly recommended that players do not share any piece of equipment.

Health issues are not the only problem with dirty equipment

"What [damages] equipment is bacteria and mould build-up," said Darren McCready, co-owner of Hockey Wash, an Ottawa company that specializes in cleaning sports gear in what basically is a huge washing and drying machine that uses special detergents and sanitizers.

"[Dirty equipment] eventually rots and falls apart. Equipment is expensive. By keeping it clean, you're protecting your investment."

Skora's lab, which primarily conducts microbiological tests for bacteria in wells, air, restaurants and food-processing plants, took bacteria samples from five-by-five-centimetre surfaces of eight pieces of Boswell's equipment - helmet, shoulder pads, pants, skates, elbow

Victims: Infection can hit even the best of them

Boston Bruins star Joe Thornton was put on intravenous antibiotics in January 2003 after he fell and bruised his left elbow during practice and developed an infection a few days later. It was believed that the infection came from bacteria in his elbow pad or



from bacteria in his hand, which he transmitted by rubbing the bruise.

Former Toronto Maple Leafs forward Mikael Renberg had a run-in with a group-A strep and nearly lost a hand as a result. While tying his skates for a practice in late December 2002, a lace opened a blister on his left hand. The hand became so infected the next day that he developed a 104-degree fever and ended up in a



Vancouver Hospital, where doctors considered amputation over fears that the infection could spread

and kill him.

from head to toe in protective padding, and sweat profusely during play – can be very susceptible to infection because many, for superstitious reasons,

pads, athletic support, gloves and shin pads.

Some other NHL players who suffered bad infections in recent years include Detroit Red Wings forward Darren McCarty (elbow), Leafs goalie Eddie Belfour (hand), and former San Jose Sharks defenceman Gary Suter (shoulder). Suter's infection ate a large part of one of the triceps muscle in his upper arm.



A count of 25 or fewer of bacteria on hard surfaces (such as a restaurant counter) is considered acceptable under Quebec provincial guidelines. Anything above is considered a potential health hazard and disinfection is recommended. There are no guidelines to bacteria levels in hockey equipment, although Skora said the levels in Boswell's equipment were simply too high to ignore out of concern for infection.

Here's what the lab results show:

1. Shoulder pads: 480 bacteria reproducing – a concentration 19 times higher than the acceptable quota under the provincial guidelines.
2. Helmet: 750 (30 times higher)
3. Skates: 2,800 (112 times higher)
4. Pants 4500 (180 times higher)
5. Athletic support: 9400 (376 times higher)
6. Gloves: 79000 (3160 times higher)
7. Shins Pads: 86000 (3440 times higher)

In other words, in Boswell's equipment, the lab found 188,650 living, reproducing bacteria on just eight samples, measuring 25 square centimeters each. How many more were there? Three, four million?

There was no sample taken in the second test of Boswell's skates: he didn't want them cleaned for the fear that the slightest change after being washed might throw off his game.

While your skin is already a host to some of the bacteria found in the contents of a hockey bag, and some of that bacteria on your skin is considered "good" because it kills harmful germs, Dworkin said the "bacterial load on dirty hockey equipment is greater than what your body is used to."

Thus, bacteria and viruses that get into your system, or that of the player you just made contact with, can make either one of you as sick as a dog or cause excruciating pain.

Dworkin explained there are numerous ways for players to suffer or pass ailments caused by the bacteria and viruses. Most of it, he said, is through hand-to-hand contact.

One example is a player who adjusts a piece of equipment, such as his shoulder pad or athletic support, and then grabs a drink from a water bottle. Another player touches the same water bottle, either to move it or take a drink, and then adjusts his mouth guard, allowing the bacteria he picked up from the bottle to mix with his saliva, which carries it into his body.

Players colliding on the ice can send contaminated sweat showering into the air, and into the nasal or oral passages.

Skin infections occur as bacteria find their way under the skin through cuts, abrasions and bruises. Germs also get under the skin as it gets soft and prune-like from the body's heat and sweat.

Fungal infections such as athlete's foot also require heat and moisture to be stimulated.

Dworkin said various micro-organisms can cause problems once they get through the skin because they multiply rapidly in warm and wet cells.

Bacteria and viruses found in hockey equipment can cause nasty illnesses such as:

- Gastroenteritis (commonly known as stomach flu, which results in diarrhea and nausea);
- Other viral illnesses such as influenza, colds, pneumonia and chicken pox;
- Various skin infections, including impetigo, caused by either the streptococcus (strep) or staphylococcus (staph) germs.
- Diarrhea, bleeding and cramping, caused by a strain of E. coli, found in fecal matter and often ending up in the athletic support.

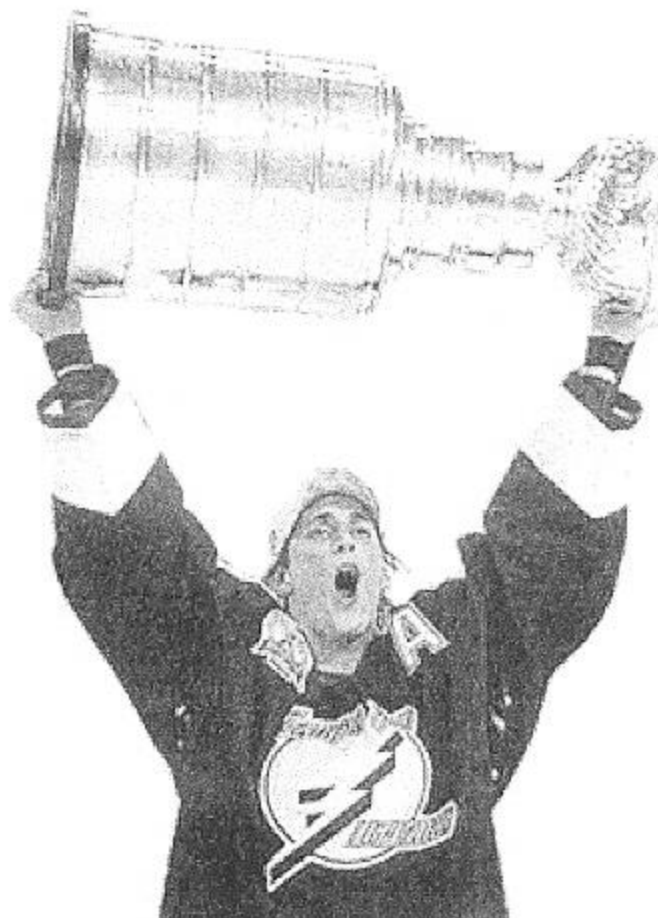
The streptococcus and staphylococcus families of bacteria can be extremely dangerous and are spread through broken skin. Staphylococcus aureus, or MRSA, is one that is particularly feared because it is resistant to certain antibiotics, can poison blood and even kill you. Sometimes, though, it causes no more than a mildly painful blister.

Recent cases of MRSA, considered a "superbug", have involved U.S. high school and university football players who developed infections through razor nicks from cosmetic body shaving. The infections spread through body contact.

Last year, several members of the NFL's Houston Texans developed MRSA infections and needed intravenous antibiotics.

Boswell? He claims he is as "healthy as a horse" and doubts he has ever suffered an illness related to his equipment.

-- Ottawa Citizen



In September 2003, Tampa Bay Lightning star Vincent Lecavalier was prescribed antibiotics after his right ankle became infected through scar tissue as he was breaking in a new pair of skates.