

Bathing and Swimming After Interventional Spine Procedures

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Myth: Patients should wait at least 24 hours prior to bathing or swimming after undergoing a needle-based interventional spine procedure (i.e. epidural steroid injection, intra-articular injection, medial branch block, radiofrequency ablation).

Fact: There is no clear evidence that bathing, swimming, or use of hot tubs after a needle-based interventional spine procedure is linked to an increased risk of infection.

Bathing restrictions for patients vary among interventional spine practices. Mitigation of infection risk through strict sterile technique is a high priority for spine interventionists. Theoretically, allowing a patient to bathe immediately following a procedure may expose the procedure site to pathogens, which could travel directly to the spinal canal via the needle tract. Conversely, restricting patients from bathing may promote immobility and allow for the development of a nidus for infection. Furthermore, many patients with chronic severe pain report substantial therapeutic benefit from showering or bathing in a tub. Therefore some interventionists may enact a restriction in regard to bathing and swimming after procedures, but others may not. The benefit of bathing restrictions is not established, possibly deeming it unnecessary for most interventional spine procedures.

Evidence

An extensive literature search failed to identify a single published case report of a spinal infection related to post-injection bathing or swimming. This void in the literature requires exploration beyond spinal injection procedures in order to create an evidence-based recommendation regarding post-injection bathing.

A systematic review in 2013 evaluated the recommendation of keeping surgical incisions dry during the course of healing in patients who underwent a variety of minor surgical procedures [1]. Nine studies were reviewed with varying restrictions on bathing or swimming, ranging from allowance of immediate post-op showering in the control group to delaying showering for 72 hours after surgery in the intervention group. Overall, there was no difference in infection rate between the early versus delayed bathing groups in this review article.

Literature in regard to bathing after spinal procedures is limited to spine surgery. One study prospectively examined 100 consecutive patients who were allowed to shower early (2-5 days) compared to 100 patients who were instructed to keep the incision clean and dry for 10-14 days. The number of deep and superficial wound infections were greater in the group that adhered to more traditional delayed bathing restrictions [2].

It has been suggested that the use of public pools or hot tubs exposes one to different pathogens after a spine intervention, though no pertinent literature exists to evaluate this. Recreational water illnesses have been found to be on the rise, likely due to the growth of chlorine-resistant organisms [3]. Skin and soft tissue infections for those without a recent procedure can range from self-resolving rashes to life threatening illnesses. The risks of public bathing are also variable on proper water maintenance and introduction of pathogens from other users.

Currently, there are no published guidelines concerning bathing or swimming following spinal injections for pain. The American Society of Anesthesiologists give "No recommendation" to cover an incision closed primarily beyond 48 hours, or on the appropriate time to shower or bathe with an uncovered incision [4]. The Mayo Clinic recommends that, "Don't use a bathtub, hot tub or whirlpool for two days. You may shower." [5]. There are many bathing policies discoverable through a Google search such as The University of Wisconsin: "No bathing or soaking the injection site for 24 hours after the procedure (ESI). Taking a shower is OK" [6]. Although these recommendations are available, they are inconsistent across institutions and societies, highlighting their anecdotal nature resulting in a lack of consensus.

Recommendations from other medical societies concerning water exposure following injections or surgery show variability. The immunization guidelines from the American Academy of Pediatrics do not include any prohibitions against bathing after intramuscular or sub-cutaneous injections in children [7]. The American Orthopedic Foot and Ankle Society states patients are, “able to resume normal showering or bathing after joint injections” [8]. The American Congress of Obstetrics and Gynecology recommends showering with all post-operative incisions and furthermore recommends sitz baths 2-3 times a day for incisions of the perineum [9]. The Centers for Disease Control and Prevention (CDC) has no bathing policy statement [10].

Conclusion

In conclusion, there is no convincing evidence that bathing or swimming restrictions reduce infection rates following a needle-based interventional spine procedure. Many interventional spine practitioners have traditionally prohibited showering, bathing, hot tub, etc for 24-48 hours following a spinal injection. Because the incidence of epidural abscess is very low, it is unlikely that any study would find a difference between showering or not showering immediately after the procedure. It seems more likely that epidural infections are related to other factors such as proper antisepsis and use of sterile techniques as these are better-established risk factors for post-procedure infections. Based on surgical literature in other fields of medicine, early bathing following surgical interventions suggests no difference in infection rates associated with post-operative bathing. Factors such as an individual patient’s medical comorbidities (e.g., diabetes, vascular disease, immune deficiencies) [11-12] and operator technique may have a more important impact on infection risk. Swimming in pools or immersion in hot tubs, with the potential to expose skin to unusual pathogens, may be a theoretical concern due to variability in water quality.

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