



# Hughston Health Alert

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## Inside...

- Scaphoid Fractures
- Osteonecrosis of the Foot & Ankle
- Safety Gear - Keeping Kids Safe
- **Hughston Health Alert**

## Outpatient Total Joint Arthroplasty

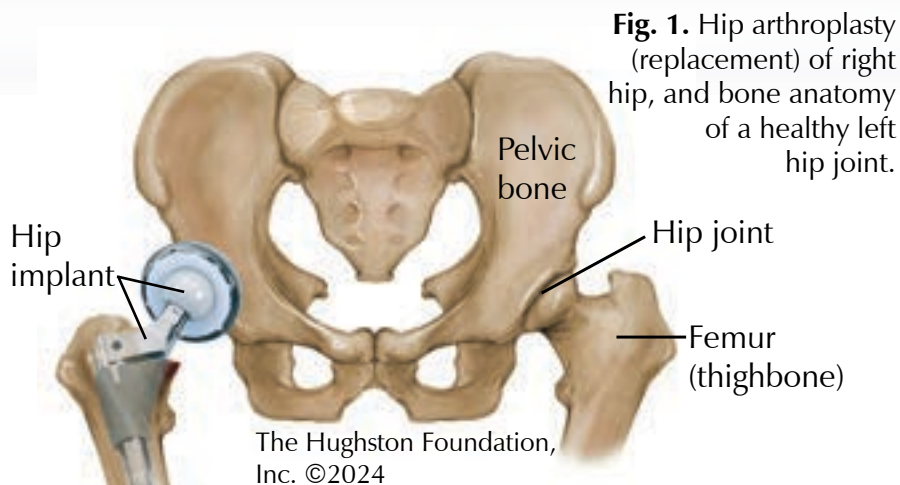
### Should you have outpatient surgery?

Arthritis and rheumatic conditions are leading causes of disability among adults in the US. More than 30 million Americans suffer from osteoarthritis, a painful condition that causes the cushioning cartilage between the bones to wear away. As the population ages, researchers expect the number of people who need treatment for knee and hip arthritis pain and disability to skyrocket.

Joint arthroplasty (replacement) is the surgical treatment option designed to relieve pain when nonoperative options have failed (**Fig. 1**). In the past, patients who had hip and knee problems would undergo complicated surgical procedures that made them immobile for months and required a lengthy recovery process. Medical device manufacturers have improved the surgical instruments and implants over the years, while orthopaedic surgeons have refined their skills, techniques, and surgical approaches. These advancements have come together, so now surgeons can offer some patients the opportunity to have their joint replaced and to go home on the same day.

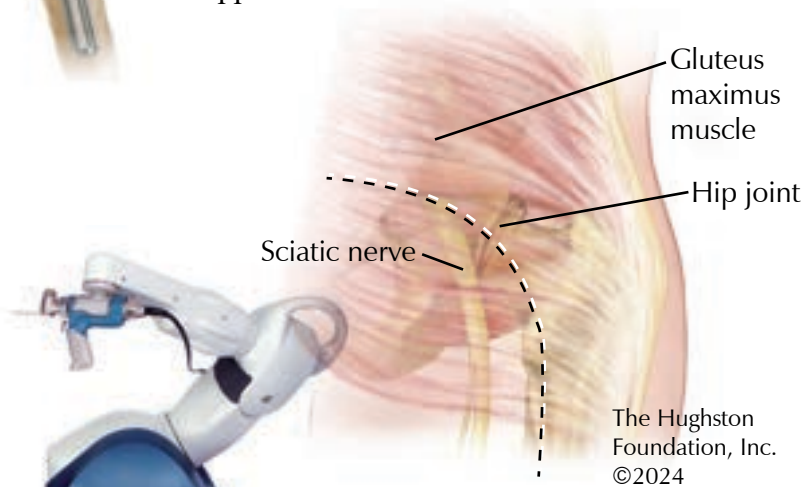
### What is outpatient arthroplasty?

Outpatient total joint arthroplasty is a surgical procedure to replace a damaged or worn-out joint, such as a hip or knee, with an artificial joint. The difference between outpatient and a traditional inpatient joint replacement is that an outpatient procedure allows the



**Fig. 1.** Hip arthroplasty (replacement) of right hip, and bone anatomy of a healthy left hip joint.

**Fig. 2.** A posterior (back) right hip joint surgical approach. Dotted line shows incision.



**Fig. 3.** Mako SmartRobotics™ surgical system, image provided by Stryker®

patient to return home on the same day of the surgery, whereas an inpatient procedure requires the patient to stay in the hospital overnight or for several days.

The procedure is typically the same for inpatient and outpatient surgery. The surgery often takes a few hours to complete, and then the surgical recovery staff monitors the patient for a short period in a recovery area before discharging the patient home. Surgeons often perform this type of surgery in specialized surgical centers or outpatient clinics, rather than a hospital.

When considering outpatient surgery, your surgeon's goals are to return you to maximum joint function with minimum risks. Therefore, the surgical approach the surgeon uses is to gain enough visual exposure to complete the surgery while minimizing the effects to the surrounding tissues. For example, some surgeons prefer the posterior approach and using the Mako SmartRobotics™ surgical system (Figs. 2 & 3). First, the medical team takes a CT scan of your hip, which provides a 3D virtual model of your joint. They use the model to precisely evaluate your joint for disease severity, joint alignment, and determine the size, placement, and alignment of your hip implant. During surgery, the doctor uses the Mako robotic arm to remove the arthritic bone and cartilage from the hip as preplanned.

### What are the advantages of the surgery?

The most significant advantage of outpatient total joint surgery stands out—the patient goes home on the same day of the surgery. This means you can recover in the comfort of your own home rather than spending several days in the hospital. Since you go home a short time after surgery, you have a lower risk of hospital-acquired infection. Often, the surgery can be less expensive than traditional inpatient joint replacement since the hospital stay is shorter and you use less hospital resources. However, patients must carefully follow their postoperative care plan to ensure a successful outcome.

### Are you a good candidate?

Surgeons offer outpatient joint replacement surgery to patients who are healthy enough to undergo surgery and who have a support system at home to help with recovery. First, you cannot proceed to surgery until you receive clearances from your other physicians, such as your primary care doctor. You may also see your dentist, cardiologist, pulmonologist, or any other specialist to give the "OK" that you are healthy enough to proceed with surgery. Clearances are important for lowering the risk of complications during and after surgery. Your physicians can schedule x-rays, bloodwork, and other tests related to your health. The results will be shared with the surgeon prior to surgery.

### Who may need to go the traditional route?

Not all patients are candidates for outpatient joint

replacement surgery. Discuss the advantages and disadvantages of outpatient joint replacement surgery with your surgeon to determine if the option best fits your individual needs and circumstances. Patients who have certain medical conditions or those who require procedures that are more complex may require an overnight hospital stay. Patients who may require significant pain control or lack adequate support at home may need to stay in the hospital for a longer period.

### Preparing your home

Since you are going to recuperate at home, you need to do some preplanning. For example, make yourself a recovery room/area. Please see the checklist of suggestions below (Box). When getting ready for surgery, think about the safety of your home, especially since you may be

#### Box. Recuperating at home? Plan ahead

- Have your ride to and from the hospital lined up
- Be aware of entrance/exit to your home – stairs or transitions
- Fill your prescriptions ahead of time
- Complete chores to create a neat, clean area
- Remove throw rugs, electrical cords, and other obstructions
- Wash loose fitting/comfortable clothes and make them easily accessible
- Ask someone to take care of your pets
- Shop for food and plan meals that don't require much cooking or cleanup
- Prepare meals that can be stored in the freezer and easily heated
- Install nightlights in bathrooms, bedrooms, and hallways
- Make yourself a recovery room: be aware of stairs and what level of your home you will stay on
- Accessible table for drinks, snacks, tissues, and other items you may need
- Store prescriptions in an easily accessible location
- Gather books and magazines that you may want
- Use a TV with a remote
- Place a wastebasket within reach
- Have your phone and phone charger within reach
- Keep the reacher/grabber close by and use it
- Set a shower caddy with supplies and chair or bench inside the shower within reach
- Add clean linen to your bed and have an extra set of linen nearby if needed
- Set your walker near the bed or chair so it is easily accessible
- Keep the bedside commode near the bed or in the bathroom as needed

moving around with a walker for a time. Remove items that block your path to the bathroom and kitchen, or any other rooms that you might use. Remove throw rugs, electrical cords, and other obstructions from walkways. Install nightlights in bathrooms, bedrooms, and hallways. You want your return home to be as easy as possible for you and your caregiver.

### Home equipment

Before your surgery, your surgeon can recommend specific adaptive equipment to help when you return home. For example, if you have hip or knee replacement, your doctor may recommend a 2-wheeled walker so you can safely move and a 3-in-1 commode to place on top of the toilet or at bedside. You will not be able to submerge your incision for some time, so the commode seat, a bench, or a shower chair can be helpful while showering. Also, some facilities provide a total joint kit that contains useful tools for home use. The kit can include items such as a reacher, sock-aid, long-handled shoehorn, or a long-handled bath sponge. If the facility does not provide these items, you may want to purchase them.

Once you have the equipment that your doctor recommends, be sure to call the doctor's office or

let your surgeon know at your preoperative visit. Without the home equipment, your doctor may recommend that you stay in the hospital longer.

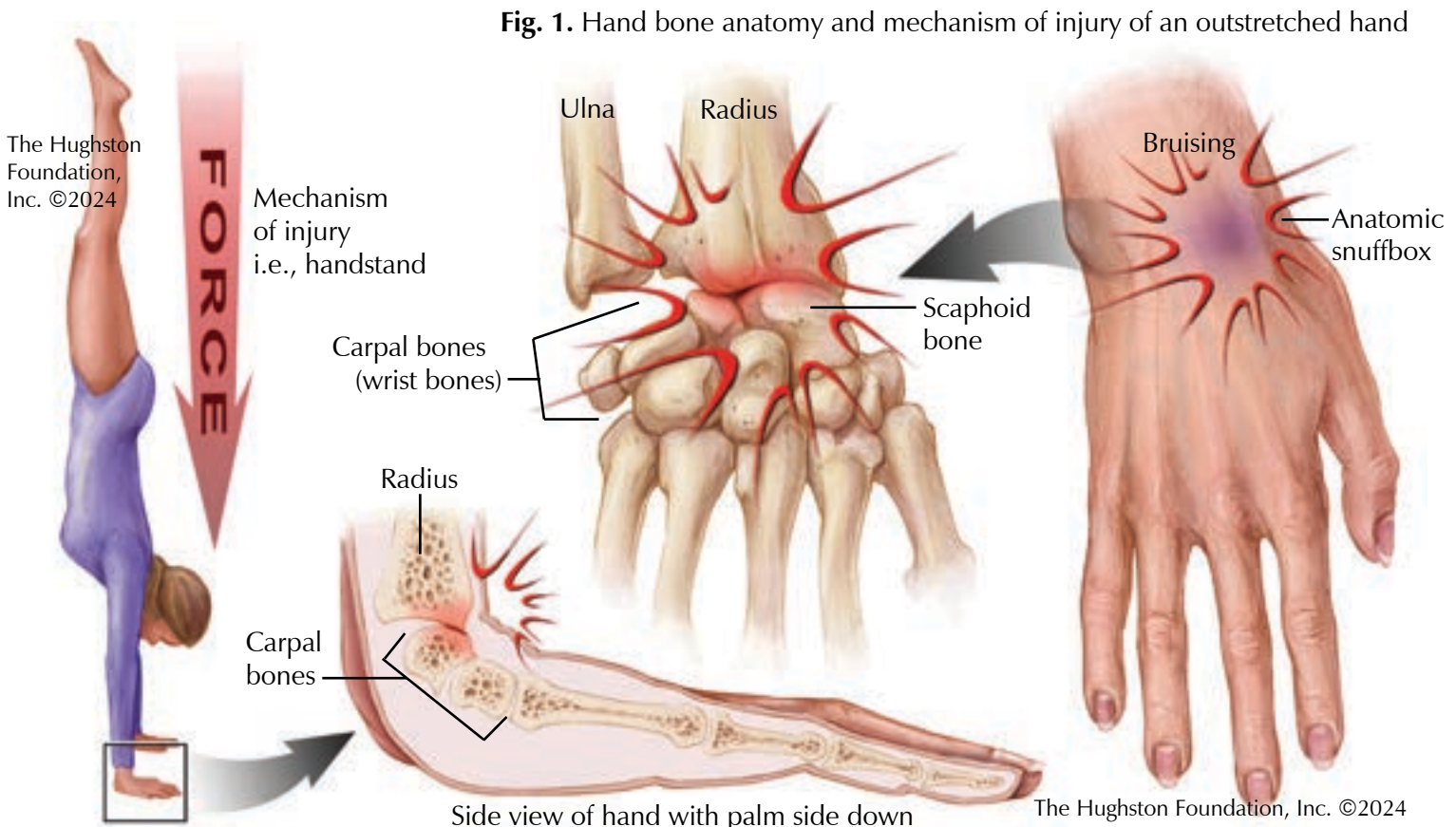
### Going home

Often, patients stay in the recovery area several hours before going home. During that time, your medical team may give you some goals to achieve before you can leave recovery. Most patients go home after surgery; however, some patients are discharged to an inpatient rehabilitation center if you need more assistance.

Before you head home, your medical staff will go over instructions that are relevant to your medical care. You will have a list of some do and don'ts, and some symptoms to watch out for during your recovery. The staff will also explain your medications and tell you when to come back to see your surgeon. If you have home health or physical therapy as part of your treatment, they will provide information about when these services will begin. If you have any questions or concerns, you can call your surgeon's office. While you recuperate in the comfort of your home, be sure to follow the postoperative care plan to ensure a successful outcome.

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## Scaphoid Fractures



**Fig. 1.** Hand bone anatomy and mechanism of injury of an outstretched hand

The carpus, or wrist, contains 4 bones in 2 rows for a total of 8 bones. The scaphoid is a boat shaped bone in the wrist and is the keystone for the other bones. In architecture, the keystone is a central stone at the top of an arch that links and locks the structure together (**Fig. 1**). The scaphoid acts as the keystone for the carpal bones and links the 2 rows together. It is also the most commonly fractured carpal bone in the wrist.<sup>1</sup> Younger patients often injure the bone during sporting events while older patients tend to fracture the bone during a fall on an outstretched hand.

## Symptoms

A patient who has a scaphoid injury often presents with pain and swelling on the radial (thumb) side of the wrist. Occasionally, bruising may be present. The injury can also present as pain at the anatomic snuffbox (base of the thumb). The patient often has limited motion of the wrist, especially while pushing on an object with the wrist extended (backwards). If you have an injury along with any of the above signs or symptoms, especially if they persist more than a few days, then you should have your hand and wrist evaluated by an orthopaedist.

## Screening and diagnosing your injury

During your clinic evaluation, your physician will ask you about the history of your injury and examine your wrist, checking for tenderness, and range of motion. Your doctor can order radiographs (x-rays) of the wrist to determine if you have a fracture. Due to the nature of a scaphoid fracture, it may not appear on radiographs for up to 2 weeks after injury. If this is the case, options are available. Your physician may have you return to clinic for repeat radiographs. Alternatively, if there is a high suspicion, your physician can elect to complete a magnetic resonance imaging (MRI) of the wrist to evaluate for an occult (hidden) fracture.<sup>2</sup>

## Types of scaphoid fractures and treatment

The scaphoid is divided into 3 parts: proximal pole, waist, and distal pole (**Fig. 2**). The presence of blood flow to the scaphoid drives the treatment plan. Blood enters the scaphoid at the distal pole and then has retrograde (reverse) flow to the proximal pole. Based on imaging, your orthopaedist can determine the location of the scaphoid fracture and displacement (how far apart the fracture fragments are). Using this information, your doctor will develop an appropriate treatment plan tailored to you and your injury.

## Distal pole

Since the distal pole has a good blood supply, doctors often treat a fracture with a cast for 4 to 6 weeks. The specific type of cast is determined by the orthopaedist but a variety of casts can be used for successful union (healed fracture).<sup>3</sup> If the fracture has significant displacement (>1.5 mm), then operative treatment is preferred.<sup>2</sup>

## Waist

Physicians treat scaphoid waist fractures either operatively or nonoperatively. After cast treatment, union occurs for approximately 90% of non- or minimally-displaced scaphoid waist fractures. Operative treatment can also be considered as it has the advantage of earlier return to function by 3 weeks.<sup>2</sup> Operative treatment is definitively indicated if the fracture is displaced more than 1.5 mm.

## Proximal pole

The proximal pole of the scaphoid has a tenuous (weak) blood supply, an articular surface (joint) on one portion, and ligamentous attachment (tissues connecting bone) on the other. For these reasons, proximal pole fractures are often treated operatively.<sup>1</sup>

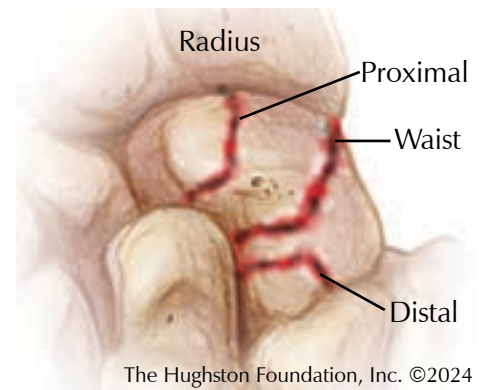
## Complications

The most common complications of scaphoid fractures are delayed union, nonunion, arthritis, reduced wrist motion, and loss of strength. If untreated or undiagnosed, it can lead to a degenerative condition known as scaphoid nonunion advanced collapse (SNAC wrist), which eventually causes abnormal joint movement, reduced grip and pinch strength, stiffness, and pain.

## Follow-up care

Depending on the fracture, your doctor can treat the injury with cast immobilization or surgery. Typically, you will follow-up with your orthopaedist 2 to 4 weeks post-injury. At the clinic visit, the doctor may remove the cast or splint to examine the skin, and take new radiographs to see how the fracture is healing. Most fractures will heal with immobilization, but depending on the fracture location, it can take 3 months or more to heal.

**Fig. 2.** Types of scaphoid fractures



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# Osteonecrosis of the Foot & Ankle

The bones and bone marrow of the human body are living tissues with cells that require an adequate blood supply to remain healthy. If blood flow to these bone cells decreases or stops, the supply of essential nutrients and oxygen ultimately leads to cell death. This can lead to localized bone collapse if it occurs within the marrow. Orthopaedists refer to this cycle of decreased blood flow and cell death as osteonecrosis, but physicians also refer to it as aseptic necrosis or ischemic necrosis of bone. Osteonecrosis can occur as a localized process of a single joint or as a systemic (affects the whole body) event. Osteonecrosis can happen to any bone, but the elbows, ankles, feet, wrists, and hands are less commonly affected. Often, it develops at the ends of the long bones of the femur (thighbone) and humerus (upper arm bone). When cell death and bony destruction occur adjacent to a joint surface, it can lead to the collapse of the joint surface and progressive destruction of the joint space.

## What causes osteonecrosis?

Trauma or repetitive microtrauma to the bone adjacent to a weight-bearing joint can cause localized osteonecrosis. Systemic or multifocal (3 or more sites) osteonecrosis can also occur. Many factors are capable of triggering osteonecrosis, such as exposure to high-dose glucocorticoids (steroid medication), sickle cells (red blood cell disorder), nitrogen bubbles (caisson disease), excessive alcohol consumption, or blood clotting abnormalities. Connective tissue disorders, such as systemic lupus erythematosus, and metabolic disorders, such as hyperlipidemia, have been associated with the development of osteonecrosis. Cytotoxicity (chemotherapy) and genetic factors could also be involved. Cellular injury may ensue regardless of the precipitating mechanism, leading to critical ischemia (restricted blood flow) and cell death. However, osteonecrosis remains uncommon even if the patient is exposed to one of these numerous risk factors.

## Osteonecrosis of the foot and ankle

Remarkably, 25% of the bones in the body are found in our feet (**Fig.**). The foot and ankle form a complex structure consisting of 28 bones and 33 joints. The skeletal structure of the ankle, or tarsus, has 7 bones. The talus bone articulates above with the bones of the lower leg (tibia and fibula) to form the ankle joint. The other 6 tarsal bones are tightly bound together by ligaments (tissues connecting bone) below the talus and function as a strong weight-bearing platform. Osteonecrosis of the talus can result from many conditions; however, trauma is the most common cause of damage to the fragile blood supply of the talus. Idiopathic (an unknown cause) and spontaneous osteonecrosis of the isolated tarsal bones in the foot and ankle can occur. In approximately 10% of the osteonecrosis cases, the cause remains unknown.

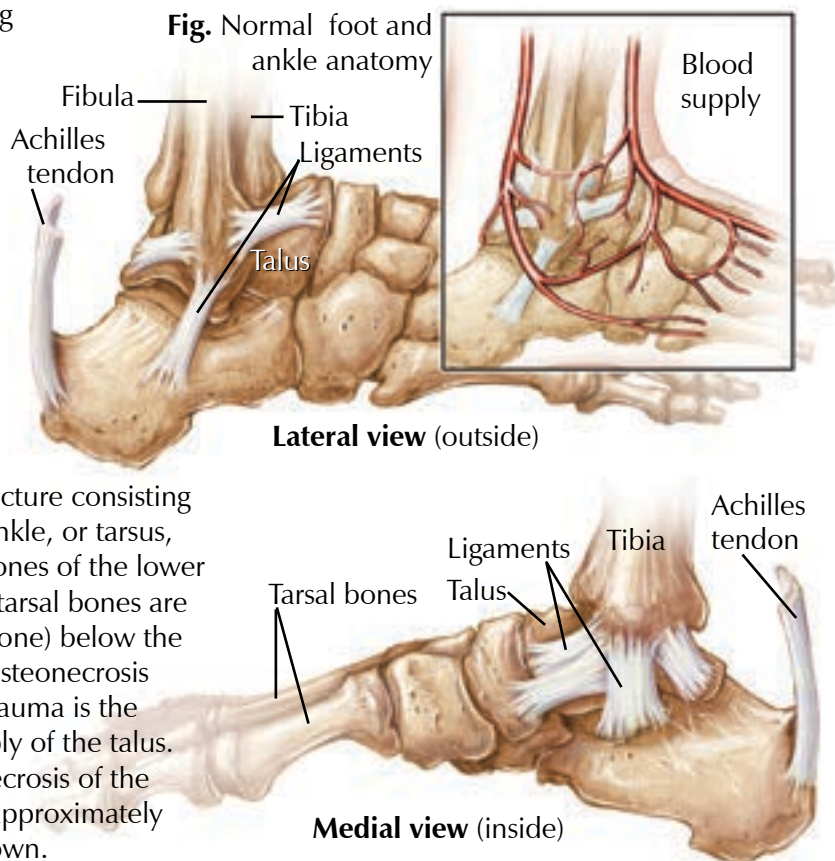
## Nonsurgical treatment

Physicians can treat osteonecrosis nonoperatively, focusing on preventing further damage to articular cartilage (covering the ends of bones). Nonoperative management can be successful in cases with early diagnosis, and its primary aim is to protect the bones involved until revascularization (procedure to restore blood flow) can occur. Treatment regimens consist of periods of nonweight bearing or partial weight bearing using splints and braces as needed. These methods reduce the breakdown of bone and decrease the progression of articular joint damage.

## Surgical treatment

Surgical treatment options can be divided into 2 categories: joint-sparing or joint-sacrificing. Joint-sparing techniques are used in the early stages of osteonecrosis, including core decompression and vascularized bone grafting. During core decompression surgery, the surgeon drills the avascular bony region and removes the diseased bone, allowing blood flow to reach the area. Vascularized (contains blood vessels) bone grafting similarly allows for a new, vascularized segment of bone to be inserted. In joint-sacrificing procedures, the surgeon replaces the existing necrotic bone with an implant or a fusion across the affected joint space. The surgeon may perform a talar replacement with a custom metal implant, depending on the patient.

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# Safety Gear

## KEEPING KIDS SAFE



As temperatures rise outdoors, families often enjoy recreational activities that are part of a healthy, enjoyable lifestyle. Biking and swimming are examples of common physical activities when beautiful days present themselves. However, using appropriate safety gear such as bike helmets and life jackets are critical to the prevention of injury; but also modeling a culture of safety for kids, as well as creating effective routine habits support quality of life goals for families. To improve these areas, Safe Kids Worldwide explores and implement programs to maximize safety gear, which includes proper fit, consistent use, and gear accessibility.

### Bike helmets

The Centers for Disease Control (CDC) Heads Up - Safe Brain, Stronger Future campaign indicates, “while there is no concussion-proof helmet, a bike helmet can help protect a child or teen from a serious brain injury.” Safe Kids Worldwide reports that helmets can reduce the risk of severe brain injuries by 88%; yet, only 45% of children 14 and under consistently wear a bike helmet.

Safety advocates developed bike helmets to protect riders from traumatic head injury in the case of an accident or collision. Proper fit of safety gear is paramount to the effectiveness it will yield during a crash. Safety gear should not be treated with the mindset of a child’s winter coat, which is often purchased a size larger to extend its use another year. For safety gear to protect the individual optimally, use the “right fit, right now” mindset. When considering proper fit of a bike helmet, follow the guidelines of the helmet manufacturer for head size. The helmet should fit snug on the rider’s head. Many bike helmets have adjustable pads to aid with sizing. The front of the helmet should sit on the persons forehead with no more than 2 fingers above the eyebrows, the side straps should make a “V” shape around the rider’s ears, and when snapped, you should not be able to fit more than 2 fingers between the chin and the helmet strap. Once you make all adjustments, check to make sure the helmet does not move side to side or from front to back (**Fig. 1**).

**Fig. 1.**  
Proper  
bike  
helmet fit



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### Life jackets

The Hidden Hazards study by Safe Kids Worldwide reveals open water, including both natural and man-made bodies of water (such as lakes, rivers, reservoirs, and retention ponds), has hidden hazards that increase the risk of drowning (**Figs. 2 & 3**). The study reveals that more children and teens drown in open water than in pools, and more than 8 in 10 fatal open-water drowning victims among children 0 to 19 years were male.<sup>1</sup> The use of a US Coast Guard approved life jacket when boating or swimming and keeping weak and nonswimmers in a life jacket when they are around water are the best steps to prevent drowning.

Often mandated by law, personal flotation devices (PFD), commonly referred to as life jackets, provide floatation to individuals who cannot swim, may be tired, injured, or even unconscious. They also provide support in the water to allow the head to remain above the water line and may include additional head support for infants. For a proper fit, select a life jacket according to weight, size, and class. First, confirm that the manufacturer’s label indicates the PFD is US Coast Guard approved and that the device is the appropriate weight range for the individual wearing it. The straps of a properly sized PFD will adequately fit around the person’s mid-section. Then fasten the life jacket so it will remain on the individual if they fall or wander into the water. The class of life jacket needed relates to the type of water and activity the person plans to encounter. To fit check, ask the individual to hold their arms straight up while you gently pull upward at the top of the arm openings. The life jacket should not ride up over the chin or face.

### Getting the right gear

Financial barriers to obtain proper recreational gear is a reality for some families. Many communities support organizations such as Safe Kids Coalitions, which are designed to prevent unintentional injuries and deaths and whose mission includes the distribution of safety gear, such as bike helmets, car seats, and life jackets. Loaner stations at boating docks make PFD’s readily accessible for individuals enjoying outdoor activities near open water. Water recreation enthusiasts can locate area loaner stations by visiting [boatingsafety.com](http://boatingsafety.com). Access to safety gear preserves the health and safety of a community during recreational activities.

### Creating good habits

Properly fitted gear paired with consistent usage can mitigate the risk of injury. Many states such as Georgia have laws that require bike helmet usage for kids 16 and under. The Lead the Way campaign by Safe Kids Worldwide urges consistent safety gear use for the entire family and challenges parents and adults to model appropriate gear usage every time. Parents are

encouraged to form a safety gear habit with their children from the very start in lieu of trying to discern strategies to change behavior when the child has adjusted to risk taking during recreational activities. One such example would be to hang the helmet near the bike but away from direct sunlight for ease of access prior to riding. This measure can be successful when combined with positive feedback when the helmet is used or temporary loss of bike privileges if not.

### Supervision matters

When considering child recreational safety, supervision is certainly the common denominator for success. Safe Kids Worldwide offers a Water Watcher Card for families to use during any water related activity. You can download the Water Watcher Card at [safekids.org](http://safekids.org). The card provides a no distraction reminder for a parent to keep eyes on the children in water for a specified time and then pass along the card to the next assigned parent. It empowers adults to use a safety plan so the fun can continue. Using properly fitted safety devices during recreational activities will keep your kids safe while cycling, boating, and swimming all summer long.

Pam Fair  
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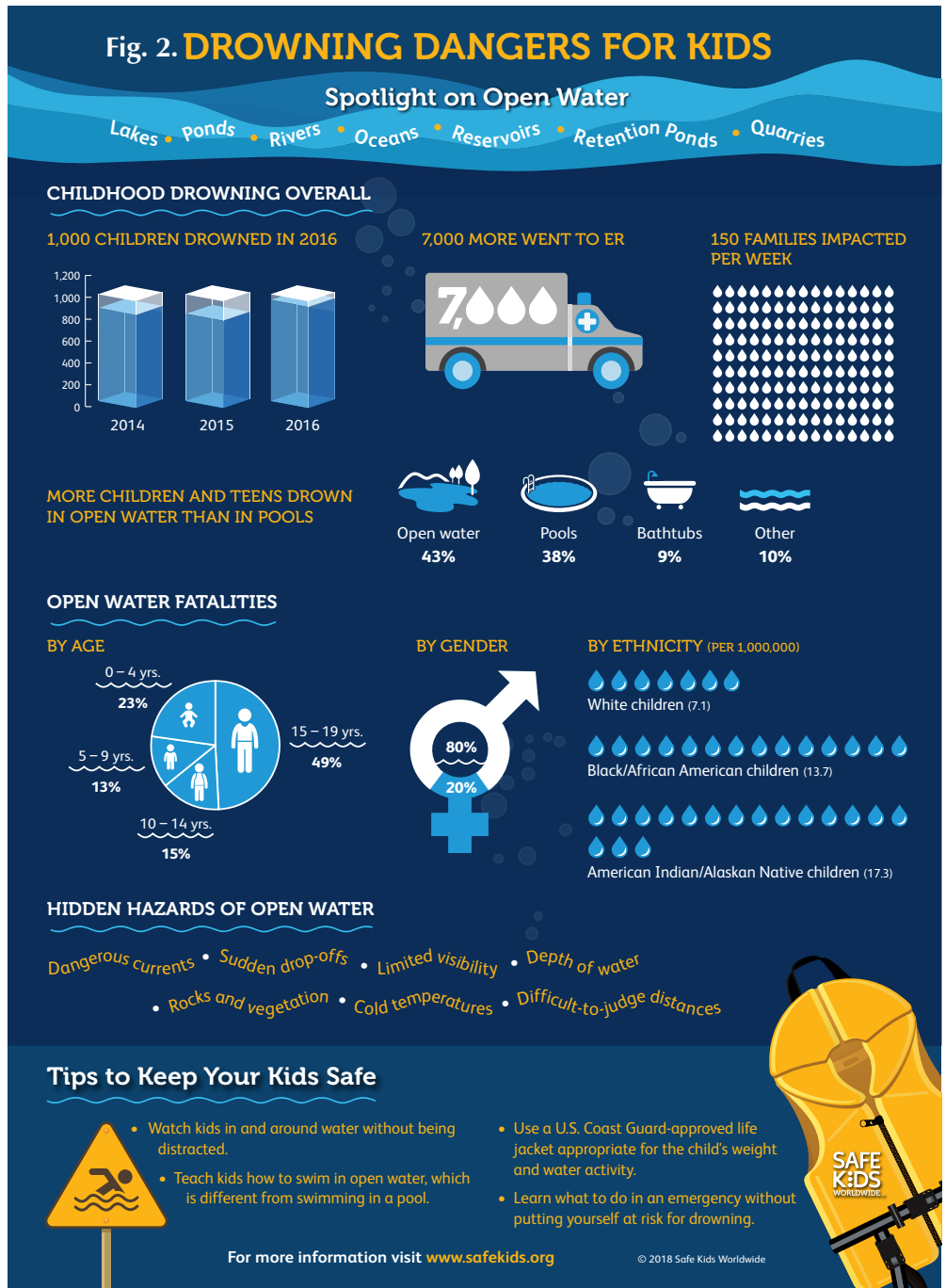
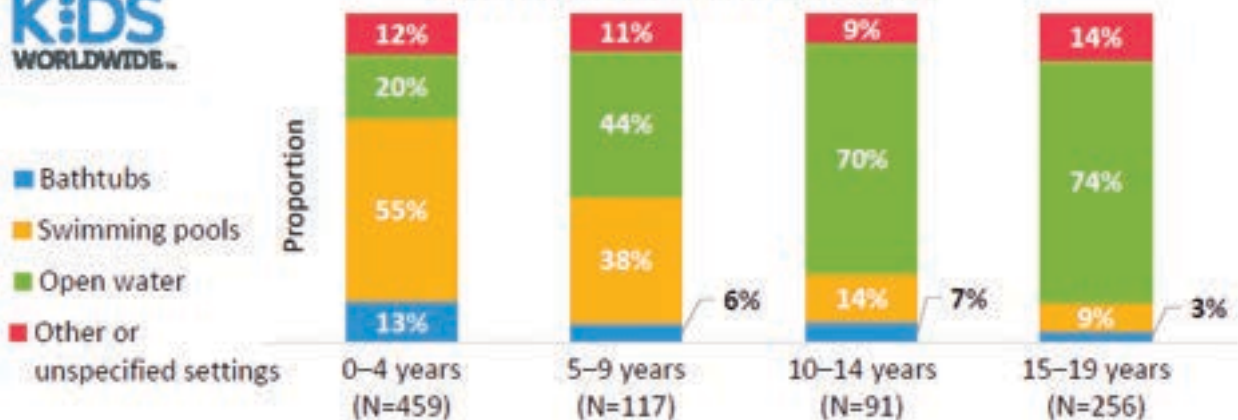


Fig. 3. Percent Distribution of Fatal Drownings by Age Group and Setting, Ages 0-19 Years, Year 2020





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- Providing training materials at meetings for healthcare professionals, such as occupational health nurses, and future healthcare providers.
- Materials distributed at sporting events, such as the Georgia High School Soccer Association Championship, and Safe Kids programs to educate the public about safety concerns for our youth.

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