CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Braces, Splints and Supports

What it is

Braces, splints, and supports are removable devices that hold your joints or bones in place to help them heal. They act like a protective shell, giving injured tissues the rest they need while still allowing you to move your other limbs. Your doctor may recommend these instead of a traditional plaster cast. Orthoses (supportive braces) offer a good alternative to plaster casts, especially for stable fracture types. This can save you time and reduce the number of hospital visits you need to make.

These tools are used for a wide range of injuries. For example, removable splints help heal minimally displaced distal radial fractures (wrist breaks). In children, supportive bandages, removable splints, and walking casts are all well-tolerated options for low-risk ankle fractures. For hand issues like trigger finger, splinting provides symptom relief and functional improvement comparable to corticosteroid injections. It is an effective short-term conservative treatment. For knee injuries like ACL tears, the Cross Brace Protocol offers a non-operative option that may lead to satisfactory healing for certain patient groups.

How they work depends on balancing movement and rest. Maintaining the right balance between mobilization and immobilization has a decisive impact on tissue healing and your recovery. For instance, after shoulder replacement surgery, pain and functional outcomes are comparable whether you use a three-week immobilization period or no immobilization at all. In some cases, like scaphoid waist fractures with significant bridging, the bone may consolidate between one and five years without intervention. Your doctor will choose the specific device that best supports your body's natural healing process.

Does it work?

Braces, splints, and supports can be effective tools for healing, but their success depends on your specific injury. For broken wrists, removable splints save you time and hospital visits. They are a good alternative to traditional plaster casts, especially if the break is stable. For older adults with most wrist fractures, four weeks of immobilization is usually enough to heal.

For broken wrists in children, waterproof casts might seem convenient, but we need more high-quality studies to confirm they work well or save money. In ankle fractures for children, there is no clear winner. Supportive bandages, removable splints, and walking casts are all well-tolerated and have similar complication rates.

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For thumb injuries, splinting offers quick relief for trigger finger. It works as well as corticosteroid injections in the short term. You can choose between different types of splints based on your pain and how easy they are to wear. For elbow ligament tears in athletes, using an internal brace during repair leads to excellent results. These outcomes are similar to those seen with more complex reconstruction surgeries, including returning to your previous sport level.

Shoulder injuries also respond well to support. After reverse total shoulder replacement, three weeks of immobilization helps with pain and function just as much as no immobilization at all. For shoulder impingement, adding specific exercises or taping to your routine improves pain and disability more than exercises alone. This is true for both general adults and military personnel with recurrent dislocations.

Healing in the hand relies on finding the right balance. Too much rest can stiffen tissues, while too much movement can delay healing. Your doctor will guide you on when to move and when to rest. For scaphoid bone breaks in the wrist, small displacements may heal on their own over one to five years without intervention. However, if the break is larger, you will likely need a cast first, followed by surgery if it does not heal.

In some cases, evidence is weak or mixed. We cannot yet say that certain splints are superior to others for all hand conditions because many studies lack control groups. Always follow your doctor's advice, as they will tailor the support to your unique healing needs.

Is it right for you?

Braces, splints, and supports often help you heal without surgery. You may benefit if you have a minimally displaced wrist fracture. Removable splints save you time and money by reducing hospital visits. They also work well for stable ankle fractures in children, offering similar comfort and safety to walking casts. For trigger finger, splinting provides pain relief and better hand function, matching the results of steroid injections. Some patients with knee ligament tears or shoulder replacements also find relief through specific brace protocols or short immobilization periods.

However, these devices are not for everyone. They may not be the best choice if you need long-term stability or have complex fractures. For example, initial surgery is often better for certain wrist bone breaks, as casting alone may not heal the bone fully. While waterproof casts exist for children, more research is needed to confirm their effectiveness and cost. You should also know that 3D-printed braces have durability concerns and lack standardized testing.

Your doctor will help you weigh the pros and cons. The goal is to balance rest with movement to support healing. This shared decision ensures you get the right level of support for your specific injury. If you are unsure, your doctor may use a decision aid to help you choose between surgery and conservative care. Always follow your doctor's advice on when to start moving again, as too much or too little immobilization can affect your recovery.

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The bottom line

Braces and splints are often effective, low-cost alternatives to casts for many fractures and joint issues. You may save time on hospital visits and experience similar pain relief compared to injections or surgery. For example, four weeks of immobilization is usually enough for elderly wrist fractures, and splints help trigger finger just as well as shots. However, the right choice depends on your specific injury. Your doctor will balance rest and movement to ensure your tissues heal properly without stiffness.

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