



Wrist Splint (Custom Moldable)

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Summary

This is a wrist splint that molds to the shape of your wrist.

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Tags: [wrist](#) [injury](#) [cast](#) [splint](#)

This splint prints flat and can be easily molded to perfectly fit your wrist with a little heat (hot water, heat gun, oven, etc.). It is designed to comfortably immobilize your wrist, preventing ulnar and radial movement, while still remaining easy to put on and remove. The splint supports and immobilizes the thumb (if needed) but leaves all other fingers free for movement.

Print a few to keep in your emergency kit!

Sizing:

This model is optimized to be the maximum size printable on a 210x250mm print bed. As provided, it fits wrists with a circumference of approximately 16–21cm (18cm ideally). To achieve the best fit, adjust the scaling percentage when slicing: use an 18cm circumference as your 100% reference and scale down from there. Properly scaled, the splint should extend to approximately 1cm above or below the base of your pinky finger

and leave enough space along the back of your forearm for comfortable entry and removal without causing pain.

Material and Molding:

I recommend printing this splint with PLA. PLA offers enough rigidity to effectively support an injured hand while having a low melting point, becoming moldable at around 80–90°C. This temperature is typically safe and unlikely to burn skin during thermo-molding. For precision molding, a heat gun or hair dryer is ideal, although hot water works effectively as well.

Before molding, wrap your wrist with a thin layer of fabric or bandage material (1–2mm thick) to protect your skin from heat and to create a gap for comfort while wearing the splint. If using hot water, remember the wrapping material will absorb water, potentially becoming hot—take care to avoid burns.

Using Straps:

For additional security, velcro straps can be used. The splint includes velcro channels along both sides, providing multiple options for strap placement. If your velcro strap is wider than 20mm, you can easily expand these channels by carefully removing channel supports in the desired area.

Disclaimer:

I'm not a medical professional, and this splint design is not claimed to be an approved medical device. It should only serve as a temporary solution, starting point, or emergency measure—not as a substitute for professional medical advice, diagnosis, or treatment. Always consult a qualified healthcare provider for proper medical assessment and care. Use this splint at your own risk; I assume no responsibility for injuries or complications resulting from its use.

Model files

wrist-splint.stl



Print files

wrist-splint_02mm_pla_mk3s_4h53m.gcode



PLA 0.40 mm 0.20 mm 4.88 hrs 48 g Prusa MK3/S/S+

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