

# Introduction to DAFO<sup>®</sup> Braces



Fast Fit<sup>®</sup> Chipmunk<sup>®</sup>



JumpStart<sup>®</sup> Leap Frog<sup>®</sup>



DAFO 3.5



DAFO Tami2



DAFO Turbo

Helping Kids lead healthier, happier lives<sup>®</sup>

CASCADE<sup>®</sup>  
dafo<sup>®</sup>

# Common Questions

## Why does my child need braces?

For every child, an important part of physical development is experimentation. A child may not have a “typical” gait until 6 or 7 years of age. A child who lacks voluntary control, if left untreated, never experiences the repeated success that normal movement provides. An important part of physical therapy and bracing is to develop a typical pattern of movement.

## How will my child benefit from wearing an orthotic device?

When wearing a brace (also called an orthosis and sometimes a “splint”), your child is held in a more functional foot position when standing, walking, or resting. This makes the sensation and movement experienced more typical. Over time, bracing encourages appropriate patterns of position and movement that should help improve motor skills, balance, and endurance.



## What is a DAFO?

Cascade Dafo is the original creator of the Dynamic Ankle Foot Orthosis—commonly known as the DAFO®. More than 35 years of manufacturing, testing, and continuous innovation have made us leaders in pediatric bracing, and have even sprouted DAFO imitators.



## What makes a DAFO unique?

The intimate contact of a thin, flexible, contoured brace, wrapping around the entire foot, provides better foot sensation and alignment than a traditional rigid AFO.

We believe children learn movement by moving. Rather than bracing heavily, we want the foot to experience as much useful movement as possible. A child needs to explore foot position in a guided range—like guardrails on a highway, with the freedom to move ahead but with protection from danger. That's why we make braces with as much flexibility as possible along the planes where a child has good foot control, providing support only where needed. We believe in the least amount of support to get the job done.

Since Cascade Dafo's sister company, Cascade Prosthetics & Orthotics, serves patients who have mobility challenges, clinical experience actively influences every product refinement. And clinical practice keeps us close to why we're doing this—we are committed to pediatric mobility.

Cascade Dafo is known for innovation. We're your partners in bracing, with comprehensive customer support to help you choose, order, use, and adjust our products.

**We don't stop until  
your brace is right.**

Our Full (90-Day) Warranty covers both our custom DAFOs and prefabricated Fast Fit orthoses.

# Why Cascade Dafo?

## The DAFO Story

In the early 1980s, Cascade Dafo founder Don Buethorn, CPO, met Nancy Hylton, PT, LO, at a seminar. Nancy had a patient who inspired her to make a new two-part plaster brace for therapy. It was effective but hard to live with because of the plaster's temporary nature. They solved the technical fabrication problems using plastic instead, and Don began supplying thin, flexible, wrap-around DAFO braces to patients in the area. Word spread—DAFOs were demonstrating high effectiveness—and other practitioners requested them. Today we are the industry's leading manufacturer of pediatric orthoses, creating effective solutions for patients worldwide.

We focus entirely on the mobility challenges of patients. Our products are primarily for pediatric patients, most of whom have neuromuscular challenges, but many adults also benefit from our DAFOs. Better mobility gives patients access to more experiences, more success in the activities they choose, and more control over their lives.

At Cascade Dafo, patient needs stimulate product design, customer support, educational programs for practitioners, and research and development to improve our braces. Cascade Dafo encourages the team approach: patient, parent, caregiver, orthotist, physical therapist, and physician collaborating for the best patient outcome.



## Support

Our dedicated Customer Support team is here to help you with issues large and small. We don't stop until your brace is right.

## Practitioner Education

At Cascade Dafo, education and support are top priorities. Our complimentary online courses and easy-to-use educational resources can assist you with patient evaluation, clinical planning, and care for our custom and prefabricated orthoses. Visit Cascade Dafo Institute, our education hub, to find out more.

CASCADE **dafo** INSTITUTE

[cascadedafo.com/cascade-dafo-institute](http://cascadedafo.com/cascade-dafo-institute)

### On-Demand Education

*On your own—anytime, anywhere.*

Designed to take approximately one hour each to complete, our online courses include:

- Instructor narration
- 190 videos featuring more than 65 patients
- Graphic illustrations
- Interactive learning reinforcement

Pick and choose the courses that best meet your needs as you learn practical, real-life skills to enhance your clinical practice.

### Introduction to Dynamic Bracing Course Series

**Course 1: Assessment for DAFOs** (1.5 credits\*)

**Course 2: Brace Selection** (2 credits)

**Course 3: Casting and Scanning for DAFOs** (1.5 credits)

**Course 4: Ordering Custom DAFOs** (1.5 credits)

**Course 5: Fit & Wear** (1 credit)

**Course 6: Fast Fit Solutions** (1 credit)

### Beyond the Basics Course Series

**Brace Optimizations** (1.5 credits)

**Using DAFOs in Treatment Plans for Patients with Cerebral Palsy** (2.5 credits)

**Brace Planning for Crouched Gait** (2.5 credits)

**Toe Walking Intensive** (2.5 credits)

**\*Free continuing education credits available.**

ABC-approved practitioners can earn up to **17.5 credits** for completing all available courses. Visit [cascadedafo.com/cascade-dafo-institute](http://cascadedafo.com/cascade-dafo-institute) for details and registration for our online courses.



### In-service Support Packages

We offer complimentary training materials, including PowerPoint presentations, for you to provide practical education to colleagues, clinical team members, and students. For details, email [bized@dafo.com](mailto:bized@dafo.com).



### Cascade Glossary

A comprehensive and illustrative guide to common bracing terms. Visit: [cascadedafo.com/cascade-dafo-institute/glossary](http://cascadedafo.com/cascade-dafo-institute/glossary)



### Cascade Library

The home for everything DAFO-related: how-to and case study videos, documentation, newsletter articles, research, and more. Visit: [cascadedafo.com/cascade-library](http://cascadedafo.com/cascade-library)



### Video Consultations

Submit patient videos to Customer Support for help with brace selection. For filming tips and how to upload to our website, watch this video: [cascadedafo.com/video-consultations](http://cascadedafo.com/video-consultations)



# Our Braces | *Fast Fit*



## Fast Fit

Our Fast Fit shoe inserts and braces require no casting: they are fit to measure. For fast-growing feet, they're an affordable alternative.

### HotDog®

Minimum support shoe insert



- For very mild pronation.
- Two layers of dense foam with partial heel cup and optional foam arch fill.

### Bug™

Moderate support shoe insert



- For mild to moderate pronation.
- High density foam with low profile trimlines and partial heel cup.

### Carbon Fiber Footplate

Shoe inserts for patients with Idiopathic Toe Walking



- Rigid support helps prevent tow walkin by blocking MP extension.
- Slight toe angle assists with toe off.

## Shoe Inserts

Along with providing foot control, our shoe inserts can also balance out volume and leg length for children who wear a brace on only one foot.

### PattiBob®

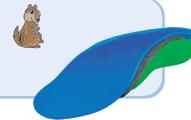
Moderate support shoe insert



- For mild pronation.
- Foam plus plastic with partial heel cup and optional foam arch fill.

### Chipmunk®

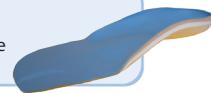
Maximum support shoe insert



- For moderate pronation.
- Built-in arch padding and internal foam contours.
- Deep heel cup with stable external base and easy toe-off trimline.

### JIA

Shoe inserts for patients with Juvenile Idiopathic Arthritis



- Contoured support for JIA patients, with excellent pressure relief.

## Unfamiliar words?

Refer to the glossary on page 15 for definitions of bracing terms.



## JumpStart

The JumpStart members of the Fast Fit family are designed especially for very young patients. They have a precision-molded double-shell (one nested inside the other) for both wrap-around control and extra heel stabilization. JumpStarts consist of a translucent inner liner and solid outer foundation.



### JumpStart Leap Frog®

PF free, DF free,  
SMO trimline



- For young patients with moderate to strong pronation or supination and associated gait instability.
- Open ankle with a full wrap of heel and foot.

### JumpStart Bunny®

PF resist, optional DF resist,  
Tall SMO with proximal strap



- For young patients with inconsistent ankle motion, toe walking, or knee hyperextension.
- Provides mild influence on knee control.

### JumpStart Softback™

PF resist, DF free,  
AFO trimline



- For young patients with mild to moderate excess plantarflexion presenting as toe walking or knee hyperextension.
- Posterior pad and strap combination work together to resist plantarflexion while encouraging increased dorsiflexion.

### JumpStart Kangaroo®

PF block, DF free,  
AFO trimline



- For young patients with strong excess plantarflexion presenting as toe walking or knee hyperextension.
- Open anterior allows DF as lower leg flexes away from posterior section.



## Measuring is easy

Measure the size of the Fast Fit product that you need with our printable foot sizing jig. Size measurements are based upon foot length, not shoe size. Visit [cascadafo.com/library/documents/fast-fit-printable-sizing-jig](http://cascadafo.com/library/documents/fast-fit-printable-sizing-jig) to download and print, or call Customer Support to have one sent to you.



# Our Braces | Custom DAFOs

## Custom DAFOs

Made uniquely for each patient, custom DAFOs are created from a cast or scan of the patient's foot. Custom braces are ideal for patients whose feet cannot be corrected to a typical position, for larger feet, and for feet with a strong atypical gait.

### DAFO 4

PF free, DF free

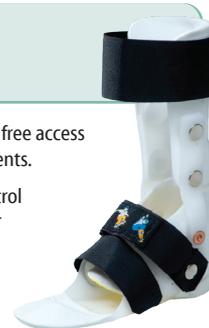
- SMO trimline and corrective wrap-around support for medial-lateral control of pronation and supination.
- Free ankle allows both dorsiflexion and plantarflexion.



### DAFO 2

Hinged PF block, DF free

- Hinged ankle design with free access to DF for ambulatory patients.
- Posterior PF block for control of knee hyperextension or excess toe walking.



### DAFO 5

Maximum control foot orthosis

- For patients with mild to moderate pronation in need of custom sizing.



## Optional liners

for Custom DAFOs

Consider these variations when choosing a liner for a two-part Softy DAFO. The Softy foam liner fully wraps the foot and ankle area with a foam layer; the Polyethylene (PE) liner offers a thin, pliable soft plastic interface; the OP Flex liner is a silicone blend of very soft plastic. There is a corresponding Softy DAFO for each of our custom DAFO designs.



Softy Liner [Softy](#)



Polyethylene (PE) Liner



OP Flex Liner

### DAFO 3

PF block, DF free

- For young emergent walkers with toe walking or consistent hyperextension.
- Solid posterior upright.
- Excellent hindfoot and forefoot control.



### DAFO 3.5

PF resist, DF resist

- For toe clearance problems, helps provide consistent mild DF during swing phase.
- Excellent medial and lateral stability throughout gait cycle.
- Flexible posterior upright provides "spring" action.
- The DAFO 3.5 Softy makes an excellent resting splint.



### DAFO Softback

PF resist, DF free

- For patients with moderate excess plantarflexion presenting as toe walking or knee hyperextension.
- Posterior pad and strap combination work together to resist plantarflexion while encouraging increased dorsiflexion.



### The casting process

Casting is an accurate process for measurement. The fiberglass tape warms slightly as it cures, which can be relaxing for the patient. The clinician holds the wrapped foot in a position as close to typical as the patient can comfortably maintain.



# Our Braces | Custom DAFOs

## DAFO 9 Softy

Adjustable night-stretching brace

Softy

- Easy-to-adjust night brace for increasing DF range.
- Softy liner comes standard for comfort.



## DAFO FA

PF block, DF block

- For smaller patients needing wrap-around foot control.
- Solid ankle design.
- Excellent medial-lateral control.



## DAFO Tami2

Hinged PF block, DF free

- Inner liner provides both support and flexibility.
- Tamarack® hinge.
- Optional dorsiflexion assist hinge.



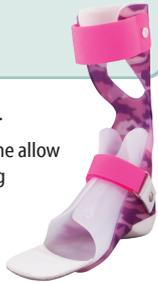
### Flexible support

Active patients need access to varied positions, including more dorsiflexion when running. The DAFO FlexiSport provides flexible yet strong support.

### DAFO FlexiSport

Strong PF resist, DF resist

- For the larger, active patient.
- Cutouts in the posterior frame allow smooth and repeated flexing without breakage.
- Posterior strut flexibility: moderately flexible or semi-rigid.



### DAFO Floor Reaction

Rear entry, DF block

- Solid anterior component firmly supports a crouching patient in weight bearing.
- Full-wrap inner liner allows alignment and control of forefoot, midfoot, and heel.



### DAFO Turbo

PF block, DF block

- Extremely durable brace for larger patients.
- Stiff posterior of outer frame provides strength and stability.
- Wrap-around inner liner comfortably reinforces stability.
- Solid ankle design.



## Creation Station

Our online interactive tool lets kids “try on” our various transfer patterns, ribbon designs, and padding colors with a virtual custom DAFO. It’s easy to use on all devices, and favorite designs can be printed or emailed ahead of the appointment. Young patients can also watch our video, “Let’s Visit the Orthotist: a Kid’s-Eye View.” Used together, these tools are a great way to help kids prepare for their orthotist visit and get excited about their new braces!

Visit [cascadedafocomp.com/creation-station](http://cascadedafocomp.com/creation-station)



# Our Braces | *More Solutions*

We offer additional solutions for mobility issues, ranging from custom shoe inserts to elbow and knee braces.

## DAFO R

Regular AFO, PF block

- Tall posterior, fixed ankle position, strong rigid plastic composition.
- Use when ankle stability is a primary concern and medial-lateral control is not of high importance.



## DAFO 4.5

PF resist, DF assist, no dorsal wrap

- Designed for patients with mild excess DF but good foot position.
- Will not resist strong excess PF or foot fixing.



## K3 Knee Brace

Hinged knee extension orthosis

- Adjustable lateral side ratchet joint.
- Full soft inner liner.
- Soft knee closure.



## DAFO KAFO

Knee-ankle-foot orthosis

- Knee-ankle-foot orthosis.
- Custom fabricated from cast.
- Fully integrated padding.
- Choice of knee joint.
- Combines with a variety of DAFO brace styles.
- Fully customizable.



## DAFO 7

Minimum control foot orthosis  
(custom HotDog)



- Custom-made sport and comfort foot orthosis.
- Three layers: foam, cork, and high density foam.
- Good option when prefabricated HotDog contours or sizes are not a good match.

## E1 & K1 Banana Peel

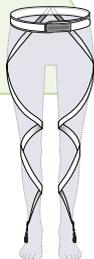
Fixed position elbow  
and knee sleeves



- Designed to maintain range.
- Position is fixed at the time of casting.

## Twister Straps

De-rotation straps



- Comfortable waist belt.
- Attaches easily to shoe laces or straps.
- Adjustable strap tension with non-stretch or elastic leg straps.
- Can be worn over clothes.



## Continued stretching

As the patient gains range, you can adjust the K3 Knee for continued stretching.

# Shoes & Socks

## Shoes

All of our products are meant to be worn with socks and shoes.

### What to look for:

- Wide and extended shoe tongue for ease of donning over braced foot.
- Shoe ties or straps that secure snugly over the instep.
- Removable insole that can be taken out to increase the volume available for the brace.
- Pull tabs at the rear for ease of donning.
- Wide toe box for extra space to comfortably accommodate the brace.



### Tip for boots and high-tops

We recommend styles with a side or rear zipper, or some other wide-opening feature.

## Socks

### What to look for:

- Fits smoothly against the skin, without bunching or folding
- Wicks perspiration away from the skin (cotton/poly blends; CoolMax®)
- Seamless
- Resists wrinkling
- Extra-long for full coverage



### Tip for sock compliance

For taller AFO brace styles, consider using a colorful soccer sock (or any tall, seamless, moisture-wicking sock). When worn inside-out, the extra length can be folded down over the brace.

### Retail shoes

Stores offering a wide shoe selection often carry styles that are functionally appropriate, stylish, and less expensive than orthopedic shoes.

- Adidas
- BILLY
- Champion
- Converse
- DCs
- Dinsoles
- Keen
- Merrell
- New Balance
- Nike
- Pediped
- PLAE
- See Kai Run
- Skechers
- Stride Rite
- Tsukihoshi
- Vans

### Stores

- DSW
  - EMS
  - Fred Meyer
  - JC Penney
  - Kohl's
  - REI
  - ShopKo
  - Shoes.com
  - Target
  - Walmart
  - zappos.com
- See Adaptive page for orthotic-friendly shoes*

### Orthopedic specialty shoes

These shoe brands are designed specifically to accommodate orthoses:

- Answer2
- Hatchbacks
- Markell Shoe Company



For more information, see the Patient and Family section of our website: [cascadedafa.com](http://cascadedafa.com)

# Bracing Terms

## **abduction**

movement or positioning of the forefoot away from the midline of the body

## **adduction**

movement or positioning of the forefoot toward the midline of the body

## **ankle foot orthosis (AFO)**

a brace worn on the lower leg and foot to support the ankle

## **anterior**

position on or toward the front surface of the body

## **compliance**

the consistency and accuracy with which a patient follows a clinician's suggested regimen

## **distal**

position further from the origin or root of an appendage. The toes are distal to the heel

## **dorsal**

relating to the upper surface of the foot

## **dorsiflexion (DF)**

movement of the leg closer to the top of the foot. An ankle angle less than 90° is considered in DF

## **eversion**

bottom of the heel rolls away from midline (as in pronation)

## **floor activities**

movement or play that happens on the floor. Often a part of the transition to standing

## **foot orthosis (FO)**

a shoe insert that supports the foot

## **gait cycle**

the manner in which a person walks; a complex series of phases and interconnected muscle actions

## **hyperextension**

extension of a limb or body part beyond the normal range of motion

## **inversion**

bottom of heel rolls toward midline (as in supination)

## **lateral**

position further from the midline of the body

## **medial**

position at or closer to the midline of the body

## **metatarsal**

the five long bones that are part, with the five toes, of the skeleton of the anterior portion of the foot

## **non-ambulatory**

not able to walk about

## **plantar**

relating to the bottom surface of the foot

## **plantarflexion (PF)**

the movement of the leg further away from the top of the foot. In PF, the angle of the ankle is greater than 90°

## **posterior**

position on or toward the back surface of the body

## **pronation**

excessive use of the medial (inner) side of the foot for support or ambulation

## **proximal**

position closer to the origin or root of an appendage. The knee is proximal to the ankle

## **supination**

excessive use of the lateral (outer) side of the foot for support or ambulation

## **supramalleolar orthosis (SMO)**

a brace that covers the malleolus (ankle)

## **typical**

a foot position or gait that is common for functional mobility



Plantarflexion



Dorsiflexion



Pronation



Supination

# Our Commitment, Our Warranty

All of our orthoses are covered under our Full (90-Day) Warranty. For more information, contact Customer Support: 800.848.7332, customersupport@dafo.com. You can also find our full warranty description online: [www.cascadedafocom.com](http://www.cascadedafocom.com).



Helping Kids lead healthier, happier lives®

[cascadedafocom.com](http://cascadedafocom.com)



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