# The Shoe Update Winter 2021



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### The Shoe Update Winter 2021

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LadySport

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### **Commentary**

We have all learned to adapt personally and professionally over the last 10 months. We can only hope that the adversity of a pandemic has made each of us a little stronger and a bit more patient. High fives are coming soon!

In the meantime, here is some light reading on that ever-changing, compelling, controversial and often confusing conversation that is ...athletic footwear!

This is the 34th year of the Shoe Update. As always it represents our effort to look at footwear through a more pathological and problem-solving lens. It strives to be much more than a simple review of what's new on the market this season.

We hope to answer some tough questions like:

- -What shoes are considered 'go to' models when trying to manage foot related issues as part of a multidisciplinary approach to patient care?
  - -How can shoes be part of my patient's recovery?
  - -How can shoes help keep my customers stay active and therefore healthier?

Enjoy the reading and please call any time with questions or even to start a lively debate. There is no right and wrong when it comes to shoes...there's just what works! So, let's try and find the answers together and keep people moving ahead.

Happy 2021

Thank you,

The FitFirst and LadySport Team



### Key Models

		Running				
		4				
Motion Control (wide			1.4	147	D : D	
Available at FitFirst	Widths	Model	Men	Women	Price Range	
Chability (band forms	<b>✓</b>	Saucony Redeemer	✓	✓	\$190	
Stability (hard foam r	nealally)	Asics GT 2000 - 9	•	•	\$170	
	•	Asics Kayano 27	<b>*</b>	<b>✓</b>	\$220	
•	<b>✓</b>	•	<b>*</b>	<b>✓</b>	·	
•	<b>~</b>	Brooks Adrenaline 21	<b>✓</b>	•	\$170	
~	-	Mizuno Wave Inspire 16	<b>~</b>	~	\$175	
✓	<b>~</b>	New Balance 860v11	<b>✓</b>	<b>✓</b>	\$170	
✓	-	Nike Infinity React	<b>✓</b>	<b>✓</b>	\$215	
<b>✓</b>	<b>✓</b>	Saucony Guide 13	<b>✓</b>	<b>✓</b>	\$170	
-	<b>*</b>	Saucony Omni ISO2	<b>~</b>	<b>✓</b>	\$180	
	Neutr	al Supportive (firm neutral n	nidsole)			
✓	<b>~</b>	Brooks Dyad 11	<b>~</b>	<b>✓</b>	\$160	
✓	<b>*</b>	New Balance 840v4	<b>&gt;</b>	<b>✓</b>	\$170	
✓	<b>*</b>	New Balance 1540v3	<b>&gt;</b>	<b>✓</b>	\$210	
<b>✓</b>	<b>✓</b>	Saucony Echelon 7	<b>~</b>	<b>✓</b>	\$160	
Cushion (soft neutral	midsole)					
<b>✓</b>	<b>~</b>	Asics Cumulus 22	<b>✓</b>	<b>✓</b>	\$160	
✓	-	Asics Cumulus 22 GTX	<b>✓</b>	<b>✓</b>	\$180	
✓	<b>*</b>	Asics Nimbus 22	<b>*</b>	<b>✓</b>	\$200	
✓	<b>*</b>	Brooks Ghost 13	<b>~</b>	<b>✓</b>	\$170	
✓	-	Brooks Ghost 13 GTX	<b>✓</b>	<b>✓</b>	\$185	
<b>✓</b>	<b>✓</b>	Brooks Glycerin 18	<b>~</b>	<b>~</b>	\$200	
✓	<b>~</b>	Mizuno Wave Rider 24	<b>*</b>	<b>✓</b>	\$175	
<b>~</b>	~	Mizuno Wave Rider 24 GTX	<b>*</b>	<b>✓</b>	\$200	
✓	<b>✓</b>	New Balance w880v10	<b>~</b>	<b>✓</b>	\$165	
<b>~</b>	~	New Balance w880gx10	<b>~</b>	<b>~</b>	\$185	
<b>✓</b>	<b>✓</b>	New Balance 1080v10	<b>~</b>	<b>✓</b>	\$210	
<b>✓</b>	-	Nike Pegasus 37	<b>~</b>	<b>✓</b>	\$155	
<b>✓</b>	-	Nike Vomero 13	<b>✓</b>	~	\$190	
✓	<b>✓</b>	Saucony Triumph Iso 5	<b>~</b>	<b>✓</b>	\$195	
<b>~</b>	<b>~</b>	Saucony Ride 13	<b>✓</b>	✓	\$165	

		Trail Running			
✓	-	Asics Fuji Trabuco 7	<b>~</b>	✓	\$160
~	-	Asics Fuji Trabuco 7 GTX	<b>*</b>	<b>~</b>	\$180
-	-	Asics Sonoma	<b>~</b>	<b>~</b>	\$130
<b>~</b>	-	Brooks Cascadia 15 GTX	<b>*</b>	<b>*</b>	\$175
-	<b>✓</b>	Hoka Speedgoat 4	<b>✓</b>	>	\$190
-	-	Hoka Speedgoat 4 GTX	<b>&lt;</b>	<b>&gt;</b>	\$200
<b>~</b>	-	Hoka Challenger Mid GTX	<b>&lt;</b>	<b>&gt;</b>	\$220
<b>✓</b>	-	Hoka Challenger Low GTX	-	<b>&gt;</b>	\$200
-	-	Hoka Challenger ATR 5	-	<b>*</b>	\$160
✓	-	On Cloudventure	<b>✓</b>	<b>~</b>	\$190
~	-	On Cloudventure Shield	<b>*</b>	<b>&gt;</b>	\$210
✓	<b>✓</b>	Saucony Xodus 3	<b>✓</b>	<b>✓</b>	\$180
~	<b>~</b>	Saucony Peregrine GTX	<b>✓</b>	<b>✓</b>	\$180
✓	-	Nike Wildhorse	<b>✓</b>	<b>*</b>	\$170
~	<b>~</b>	New Balance Hierro v5 GTX	<b>~</b>	<b>*</b>	\$200
Minimalism					
✓	-	On Cloud	<b>✓</b>	<b>✓</b>	\$160
✓	-	On Cloud WTPF	<b>~</b>	<b>*</b>	\$180
✓	-	Brooks Pureflow 7	<b>~</b>	<b>~</b>	\$130
Maximalism and Stift	Rocker				
<b>~</b>	<b>✓</b>	Hoka Bondi 7	<b>✓</b>	<b>&gt;</b>	\$170
<b>*</b>	-	Hoka Bondi SR	<b>~</b>	<b>*</b>	\$190
✓	<b>✓</b>	Hoka Carbon X	<b>~</b>	<b>&gt;</b>	\$225
✓		Hoka Stinson ATR 6	<b>✓</b>	<b>&gt;</b>	\$175
<b>✓</b>	<b>✓</b>	Hoka Clifton 7	<b>~</b>	<b>~</b>	\$170
-	-	Hoka Speedgoat 4	<b>~</b>	<b>✓</b>	\$190
-	-	Hoka Speedgoat 4 GTX	<b>~</b>	<b>*</b>	\$200
<b>✓</b>	-	Hoka Challenger Mid GTX	<b>~</b>	<b>&gt;</b>	\$210
<b>✓</b>	-	Hoka Sky Kaha	<b>~</b>	<b>*</b>	\$300
✓	-	Hoka Sky Toa	<b>✓</b>	<b>✓</b>	\$200

<b>✓</b>	<b>✓</b>	New Balance More V2	<b>~</b>	<b>✓</b>	\$200
<b>~</b>	-	Asics Glide Ride	<b>~</b>	<b>✓</b>	\$200
<b>✓</b>	-	Asics Meta Ride	<b>~</b>	<b>~</b>	\$300
<b>~</b>	-	Saucony Endorphin Shift	~	~	\$180
-	<b>~</b>	Gravity Defyer XLR8	-	<b>✓</b>	\$260
Walking					
-	✓	New Balance 1350	-	<b>~</b>	\$170
-	<b>✓</b>	New Balance 1400	-	<b>~</b>	\$190
<b>*</b>	<b>~</b>	New Balance 928 v3	<b>✓</b>	<b>✓</b>	\$170
<b>~</b>	~	Saucony Grid Integrity ST 3	~	~	\$130
Cross-training, Coul	rt and Fitnes				<b>#400</b>
Cross-training, Coul	rt and Fitnes				
-	-	Hoka Tivra	-	<b>✓</b>	\$160
✓	-	Nike Metcon 5	-	<b>✓</b>	\$170
-	-	Asics Tactic 2	-	<b>✓</b>	\$120
Tennis			!		
✓	-	Asics Resolution 8	✓	<b>✓</b>	\$180
✓	-	Asics Gel Game 7	<b>✓</b>	<b>✓</b>	\$100
-	<b>✓</b>	New Balance 806	-	<b>✓</b>	\$140
-	-	Wilson Rush Pro 3.0	-	~	\$180
<b>✓</b>	-	New Balance Minimus Prevail	<b>~</b>	~	\$150
<b>~</b>	-	Asics Challenger	-	<b>✓</b>	\$130
Aquafit					
i de la companya de	1	Columbia Drainmaker	1	1	\$120

### **Shoe Construction**

#### Terminology and Definitions

#### **Motion Control**

To be deemed worthy of the term motion control, the shoe should have at least six of the following ten features:

- Thermoplastic Heel Counter
- Medial Midsole Plug
- Torsional Rigidity
- Straight Last
- Motion Control Collar
- External Arch Support
- Medial Strapping/Upper
- Broad Sole Plate
- Firm Midsole
- Heel Counter Medial Extension

Numbers (1), (2), and (3) are virtual necessities to classify a shoe as "motion control". The label of motion control is difficult to achieve, and rarely given to any shoe other than a running shoe. The reason is because running shoes are designed to take issue with the biomechanical peculiarities of the heel-toe gait pattern under high impact. Problems resulting from misalignment due to excessive pronation during this gait pattern are well-documented (ex. patella-femoral syndrome, plantar fasciitis, etc.). Shoe designers and biomechanists are very conscious of foot type when building these shoes, so motion control is usually front and center.

With cross-trainers, tennis shoes, basketball shoes, and others, sport specific attributes are more important to the designer than are the mechanical or foot specific features. Therefore, true motion control is a rare commodity outside of the running market. More pronation control walkers and running oriented cross-trainers will likely be introduced in the near future as the

population ages, and consumers become more cerebral about even the most recreational of purchases: their sneakers.

#### Stability

We define stability as a relatively straight lasted shoe that has many of the qualities of a motion control shoe, with torsional rigidity, a strong heel counter and firm midsole. Where it differs is that it is less pronounced in its medial posting. Instead of a plastic plug or post, it has only dense medial foam (eg. Asics *Duomax*). In other words, a pronation control shoe without the exclamation mark! The designers clearly have the excessive pronator in mind, but are trying to create a nicer ride without too much control. Some feel that the chance for lateral midsole collapse is reduced because the difference in density of the midsole, from medial to lateral, is less than in the classic motion control shoe.

Many orthotic providers are reluctant to put their orthotics in shoes with medial posting. The denser medial column may influence the correction of the orthotic, and with extended wear, cause premature collapse of the lateral rear midsole. This fear of lateral collapse may be as much from design influences on the rear-foot, aimed at slowing the rate of pronation as from the medial posting. See the attached article for more on lateral heel design evolution.

#### **Neutral Supportive**

In this style, the last shape and firmness of the lateral midsole column is similar to that found in most stability shoes. The difference here is there is no dense medial midsole material of any kind. The entire midsole is quite firm, to act as a supportive foundation for an orthotic or the impact of a heavier/harder heel strike.

Neutral supportive is the most common referral category for orthotics, as the platform is the same on both sides. One thing to keep in mind is that if the lateral column is soft, then the shoe may collapse to the outside, regardless of the presence of any denser medial posting. Firm lateral columns made of dense EVA or, even better, polyurethane may be the answer. So, if the orthotic provider needs a little extra from the shoe some medial posting in the right shoe may prove useful. Just ask that the lateral midsole be appropriately firm to last the life of the shoe.

#### **Neutral Cushion**

Slightly more curve lasted, but not necessarily more torsionally flexible. The midsole is softer than a neutral supportive shoe and has a more squishy, bouncy ride. An orthotic wearer who has some shock attenuation issues may do better here than in a neutral supportive model.

#### Flexible and Ultra Cushioned

A forgotten category! It seems that torsional flexibility in the midfoot and marshmallow soft midsoles are a thing of the past, possibly because designers think that torsional flexibility does not necessarily help a rigid cavus foot to pronate. Therefore, they support it into the midfoot and give it lots of shock attenuation. That would mean one should fit that cavus foot in a standard cushion shoe above.

### **Minimalist Running**

A minimalist running shoe has a combination of features that differentiate it from a traditional runner.

- The ramp angle, or drop, is less than 10 mm. Drops are usually 4-8 mm, but can be as low as 0 mm.
- Lightweight These shoes are lighter weight, much of that due to the reduction in the midsole.

#### Minimalist (Natural)

This minimalist category is defined by its torsional flexibility and lack of supportive upper. The midsole flexes in all planes, and the heel counter is often non-existent.

#### Minimalist (Traditional)

This minimalist category is defined by its traditional torsional rigidity and supportive upper. The midsole doesn't flex in all planes and the heel counter is firm.

#### Last Type

The last is the mold around which the shoe is made. It influences many things about the shoe including, most importantly, the fit and support. A shoe is designed around a last just like a dress is designed around a pattern. The last is the culmination of all the designer's wants and needs with respect to the fit of the shoe. Now depending on the materials chosen and the manufacturing process, the end result may or may not reflect the last mandate, but when the same mold is used there is a greater chance of consistency.

Straight lasted shoes generally provide superior support for the pes planus, or flatter foot, a common excessive pronator.

The curved last is often associated with the cavus, or high rigid arched foot, and can commonly be sculpted or dished away under the long arch, making the shoe torsionally more flexible.

Lasts that are neither very straight, nor very curved can be denoted semi-curved (SC), as even the straightest of the straight lasts used in athletic shoes have a curve of approximately 8 degrees.

#### Board Last, Slip Last & Strobel Last

When manufacturing a shoe, there are 3 basic ways to laminate the upper to the midsole or foamy base of the shoe:

- Board lasting is where the sides of the upper of the shoe are tucked under a board and
  the board is glued to the midsole holding the two together. This board usually stops just
  before the metatarsals. From here the sides of the upper are joined together, sewn and
  glued down. The board creates increased torsional rigidity in the rearfoot with maximum
  flexibility in the forefoot.
- **Slip lasting** is what occurred in the forefoot of example (1). The upper is sewn together as one piece from heel to toe; negating the need for a board to bind the sides of the upper. This moccasin or slip lasting is used in some shoes from heel to toe to increase flexibility and aid in achieving a snug contoured fit to the foot.
- **Strobel lasting** is now the most popular way to construct an upper. It is really a modification of the slip last. It's like sewing a flat insole around its outer edge to the rest of the upper. The midsole sits on this sole-shaped piece of material. Companies are using midsole materials for this base piece to get enhanced cushioning in the shoe.

#### **Combination Lasting**

A method of lasting where the forefoot is slip lasted and the rearfoot is board lasted. This allows for flexibility in the forefoot and extra support in the rearfoot. Combination lasting is mostly used to add torsional rigidity in shoes. In the charts we say "board lasting" as a short form for combination pronators.

#### Midsole

The midsole is the area between the upper and the outersole of the shoe. Usually made of EVA pre-compressed foam or polyurethane, this is where all the shock-absorbing bells and whistles are housed. Air bags, hexalite gel, etc., along with the foam, helps to attenuate the shock while its firmness or softness dictates the shoe's rating for stability, rigidity and often its motion control capabilities. It is also here that densities of material are varied to increase medial control and forefoot flexibility depending on the durometer, or firmness, of the material that is chosen and placed in key areas of the shoe.

### **Dual Density Midsole**

A firmer density of EVA located on the medial side of the midsole which guards against premature medial midsole breakdown, common to excessive pronators.

#### **Medial Post**

Lodged into the medial, or inside aspect, side of the midsole are firm plastic or urethane plugs that keep the foams from collapsing under the extra pressure exerted by excessive pronation. In some cases, this plug is an integral part of the heel counter and acts as a restrictive post and a control mechanism for rearfoot pronation. In other cases, the post is simply a firmer, higher density material on the medial aspect of the shoe. Many posts are now incorporated as part of the *midfoot shank* (see below) and extend into the medial midsole. Posts are rarely found in the forefoot.

### **Midfoot Shanks**

Companies have a variety of proprietary names for their midfoot shanks, which separate the forefoot from the rearfoot of the shoe. It allows the designer to cut away part of the midsole, and replace it with a hard, lightweight hytrel plastic, reducing the weight of the shoe, while enhancing torsional rigidity. Asics uses two *trusstic* plates, with a space between them, so that the midstance and foot sink towards the ground, enhancing the windlass effect of the shoe (See the Asics website for more info on the *Space Trusstic System*).

#### **Exceptional Heel Counter**

The formed thermoplastic cup inside the heel portion of the upper of the shoe is the most important structural part of any piece of footwear. All control begins and ends with this feature. Some models have plastic or molded collars added externally to the heel counter that reinforce it and/or hook into the medial posts; these are deemed worthy of the label exceptional! Rarely

does a running shoe make it on the wall without this feature. Some are bombproof, but most are very good.

#### Decoupled Heel

One of the early design efforts to slow the rate of pronation was to put a slice through the outsole and a bit of the midsole of a runner at an acute angle to allow the heel to decouple upon heel strike, thus reducing the lever arm at that moment. The outsole and midsole would widen out, creating less lateral collapse of the midsole, and a broader base of support. This was a revolutionary feature which, though it has evolved, is around in some form in all technical running models. Adidas has taken the concept the furthest by almost hinging this section so that it truly decouples at heel strike.

#### Foot Bed

This term refers to the insole of the shoe, which, though made with numerous types of materials, essentially acts as a comfortable liner for the shoe. Rarely does it enhance support, and it is often replaced by an off-the-shelf arch support or a custom orthotic. Almost all of the better athletic shoes have this removable insert. Manufacturers should dedicate more time and money to making this a useful, supportive accessory.

### Foot Frame/Cupsole

In shoes which are designed for court or lateral activity, the midsole is molded up the side of the foot at key stress areas to aid in keeping the foot over the sole plate, decreasing the risk of inversion sprain and lateral breakdown of the shoe. The feature is found in court shoes (when made properly) and in cross-trainers.

#### Saddle

This is the area of the upper that wraps the arch, the portion of the shoe that the eyelets are cut into. Often the company logo is placed here and sewn in such a way to enhance the midfoot support of the shoe. Plastics are sometimes used to add substance to this region, but at the cost of fit. Some are using cables, hooked into the eyelets to gain support as the shoe is laced up.

#### Toe Spring

The amount of upward tilt of the toe of the shoe, internally defined by the last used to create that shoe. The greater the toe spring of the shoe, the more the toes are dorsiflexed. The toe spring is often part of the overall *rocker profile* (see definition below) of the shoe.

#### Rocker

The rocker is defined by the amount of taper in the midsole. Forefoot rocker is made by tapering the midsole at the ball of the foot, thinning it out distally. The apex of the rocker can be set at different points, measured as a percentage of the length of the shoe. A forefoot rocker set at 60% of the length from heel to toe will affect the pressure relief at the metatarsals differently than one set at 80%, or closer to the toe of the shoe. The same principle applies to rear foot rockers in reverse, and effects different biomechanics.

### Rocker Profile

The rocker profile of a shoe is a combination of rocker tapering and toe spring. This is the usual term used to describe most off-the-shelf running and walking shoes.

#### Drop

The drop of a shoe is the difference in height of the between the heel and the ball of the foot.

#### Ramp angle

The ramp angle of a shoe is the angle that the shoe pitches forward from heel to toe.

#### Stack Height

The stack height of a shoe is the height from the bottom of the shoe sole to the bottom of the foot in the shoe. That is, the addition of the thickness of the outer sole, midsole, and insole.

#### Stretchable Uppers

Traditional upper materials like leather and synthetic leathers, which have a limited amount of give, are being combined with 4 way stretchable materials, including Lycra and spandex, to help accommodate foot abnormalities (bunions, hammer toes, claw toes, etc.).

XSensible footwear combines thin leather or suede skins with a combination of Lycra and spandex to create orthopedic magic in a dress casual shoe. Athletic suppliers are also using stretchable material insets to accommodate protruding Taylor's bunions. Some orthopaedic companies like Propet, Pedor, and P.W. Minor are making shoes with completely elastic toe boxes, which are useful for fitting individuals with diabetes or arthritic feet.

#### Rocker Soles

The most popular prescription right now is for a stiff rocker soled shoe to help manage many forms of metatarsalgia. Many types of athletic designs increase the "rocker profile" or "toe spring" of the shoe and the toe of the shoe often appears slightly "turned up". When this "rocker profile" is combined with a lack of flexibility, a rocker sole effect is often achieved. True rocker soles are internally flat and have a rocker that is apexed in the forefoot. Some shoes have a heel/toe rocker whose shape is much like that of a rocking horse.

In these shoe designs, the toes sit in a dorsi-flexed position when the foot is bearing weight. This is a very useful strategy for limiting movement at the metatarsals and can act like a splint for the forefoot, while letting the individual ambulate normally.

#### Hokas and "Maximalism"

Developed by a European trail runner, this platform "moonboot" running shoe is winning trail runs all over Europe. Its application here is far more often as an orthopedic device to manage metatarsalgia in the general population. The stiff rockered thick sole provides an extremely light weight and cushioned base that is stable and supportive. By splinting the forefoot there is minimal flex at the MT heads and relief for the neuroma, hallux rigidus, and rheumatoid arthritis sufferer. Goofy looking, but it can put a smile on the face of the crankiest foot!

#### Skeletal Heel Counter

In some cases, heel counters are being minimalized by removing some of the girth of the counter leaving only a skeletal framework to support the rearfoot. This is done primarily to reduce weight, and promoted as being just as strong as the traditional "bomb proof" heel counters celebrated for their control of rearfoot motion. You be the judge!

#### **Minimalism**

The barefoot movement created a visceral response by the athletic shoe manufacturers to develop a "new" category of shoes called "minimalist" footwear!

Unlike the traditional jogging shoe which has a fairly consistent midsole heel to toe grade of 12mm (eg. 24 mm heel height and 12 mm forefoot height), minimalist shoe grades are anywhere from 0 mm to 8 mm. The shoe heights from the ground are as varied as the number of styles. In some way,s the variety of heel heights can be useful as long as one knows what they are putting their feet into. Recommending styles to patients becomes a daunting task with all these different measurements!

The idea behind wearing "less shoe" is the conventional running shoe and its progressive pronation control systems are causing more harm than good. Feet were made to move freely and are therefore stronger and more efficient when left unshod. With the minimalist shoe, the gait returns to a more natural midfoot strike and many injuries are avoided. Which injuries, and who exactly are candidates for this strategy is the million-dollar question!

Most minimalist shoes are recommended as an adjunct to your traditional footwear. You are to introduce it gradually and see if indeed "less" is "more". So far, a lack of education and compliance has been the biggest hurdle, but with a well-designed strategy and the right amount of minimalism... sometimes the most stubborn problem is only a "minimalist "step away! There are two main categories of minimalist shoes, Tradition and Barefoot.

- Traditional Minimalism: Some shoes have the traditional heel counter support and torsional rigidity; they are just thinner and more "minimal" in that respect. These shoes are a throwback to the old racing & training shoes of the late '70s. Running with an athletic midfoot strike has always been the ideal gait pattern for this style of footwear. One should be aware of the reduced heel height and possible extra strain on the Achilles and gastroc/soleus. A good example of a traditional minimalist shoe is the New Balance 1400, or the Saucony Cortana.
- Barefoot Minimalism: This type of minimalist shoe is, in the same design way, attempting to create more freedom of movement by minimalizing the amount of support in the shoe. This is usually done by all but eliminating a heel counter and designing the midsole/outsole to be torsionally flexible, thus mimicking a shoeless scenario. The midsole thickness and heel grade can vary significantly, but are usually relatively low profile.

The Nike Free is a barefoot minimalist shoe category developed by Nike which allows maximum foot flexibility in all planes while still offering protection with some cushioning and a sock-like upper. The idea is to allow the athlete an opportunity to exercise the foot, increase proprioception, and build intrinsic strength. It is suggested to initially use in conjunction with your regular footwear, as a training tool for your feet.

There are two main styles of the Free shoes; the 5.0 and the 3.0. The 5.0 is thicker than the 3.0, and is built with a 7 mm grade. The 3.0 is one step closer to being shoeless, with its low profile and narrower midfoot.

The Vibram Five Fingers line is another example of barefoot minimalist shoes. The Five Fingers is a foot covering where the toes go into five finger-like sleeves. This shoe line is a staple for the barefoot fundamentalist.

• Minimalism Guidance: For a complete guide to Minimalist shoes and a minimalist shoe rating scale visit ...... <a href="therunningclinic.com">therunningclinic.com</a>. On the shoe charts in the shoe update we have used their minimalist ratings to help you differentiate one minimalist model from another. At the back of the shoe update you will find a helpful flow chart showing the transition times recommended for those desiring to move to more minimalist footwear from their traditional supportive shoes. Notice the extensive adaptation time required to even have a chance of success. The body needs time to adapt and the runner must understand the requirements for success. Keep in mind that the founders of the runningclinic.com do favor the minimalist approach to running but also realize that many acute foot and ankle pathologies may need more support and cushioning in at least the short term. Sharing philosophies and listening to varied points of view and research is fundamental in having a healthy holistic approach to problem solving!

### Injury Management

What Shoe Is Right for You

( )=Order of preference

Footwear Choice (1)-Acics Glideride (2)-Asics Metaride	-Early-stage stiff rocker	Pathothogy/Injury Management  -Ankle fusion  -Ankle replacement  -Ankle OA  -Tight achilles  -Limited ankle flexion
<ul> <li>(1)-Hoka Bondi</li> <li>(2)-Hoka Clifton</li> <li>(3)-NB More V1/V2</li> <li>(4)-Saucony Endorphin Shift</li> <li>(5)-Hoka Stinson</li> <li>(6)-Hoka Challanger</li> <li>(7)-Hoka Speedgoat Trail</li> <li>(8)-Hoka Carbon X</li> </ul>	-Stiff rocker	-Hallux rigidus/limitus -Metatarsalgia -Plantar fasciitis
(1)-Basketball Models (2)-Most Tennis Models	-Cupsoling (the midsole and/or outsole wraps up the side of the upper)	-Lateral torque activities -Athletic inversion sprains.
<ul><li>(1)-Brooks Ariel</li><li>(2)-Brooks Addiction</li><li>(3)-Mizuno Horizon</li><li>(4)-NB 940</li></ul>	-Straight last -Wide sole plate -Medial post	-Post tib dysfunction -Extreme heel varus -Adult acquired flat foot
(1)-Brooks Dyad (2)-NB 840 (3)-Saucony Echelon	-Straight last -Wide sole plate -Neutral midsole	-Excellent for more substantial orthotics -Pes planus
<ul><li>(1)-Asics Nimbus</li><li>(2)-Brooks Ghost</li><li>(3)-Mizuno Wave Rider</li><li>(4)-Gravity Defyer</li></ul>	-High heel offset -Cushion -Stiff rocker	-Cavus foot -Equinus -Forefoot off-loading when standing

(1)-Propet Bianca Velcro Oxford	-Seamless toe box or	-Bunion in (1st MTPJ)
	stretch elastic toe box	-Tailors Bunion/Bonionette

(2)-Most Road Runners with	-Wide fittings or extra	-Hammer/Claw toes
Engineered Mesh (Especially NB and	depth	-Diabetic foot
Brooks) Available in Wide Fittings		
(3)-Propet Cushion Foot Slipper (velcro)		
(4)-Portofino Stretch Leather Oxford		
(velcro or lace)		
(5)-Asics Metaride		
	Stiff rocker (no wides)	
(1)-Most Vionic Styles	-Shoes with built in arch	-Longitudinal arch and
(2)-Earth Casuals and Sandals	support	enhanced midfoot support

### **Motion Control Running Shoes**

Major medial enhancement for the excessive pronator.

Brand	Model	Price	Dense Medial Foam	Plastic Medial Post	Forefoot Flexibility	Heel Counter Firmness	Drop/ Offset	Torsional Rigidity	Ladies	Men	Available at LadySport	Available at FitFirst Footwear	Width Sizing Available	This model will be Replaced by	Description
Saucony	Redeemer	\$190	Extensive	<b>√</b>	Moderate	Very	8mm	High	✓	✓	<b>√</b>	<b>√</b>	✓	Discontinued	The fit of a contoured neutral shoe with best in class medial support
Brooks	Ariel	\$200	Extensive	<b>√</b>	Moderate	Very	10mm	High	✓	-	✓	-	-	Mar, 2021	Classic bomb proof pronation control shoe. Excellent fav PTTD
Mizuno	Horizon	\$200	Extensive	√	Firm	Very	12mm	High	✓	-	√	-	1	Jan, 2021	The medial post is not that obvious – but with other features it controls exessive pronation well. Limited options in this classic category.

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### **Stability Running Shoes**

Guards against some excessive pronation/ moderate medial enhancement by way of some dense medial midsole foam.

Brand	Model	Price	Dense Medial Foam	Plastic Medial Post	Forefoot Flexibility	Heel Counter Firmness	Drop/Offset	Torsional Rigidity	Ladies	Men	Available at LadySport	Available at FitFirst Footwear	Width Sizing Available	This model will be Replaced by	Description
Asics	GT 2000-9	\$170	Slight	-	Moderate	Very Firm	10 mm	High	√	√	√	√	√	Sept, 2021	The benchmark shoe in the stability category. It seems that the fit of this classic model is finally getting back to its original wonderful seamless fit
Asics	Keyano 27	\$220	Slight	-	Flexible	Very Firm	Womens: 13 mm Mens: 10 mm	High	√	√	√	√	√	June, 2021	Continuing with their 13 mm heel offset this highly cushioned model is excellent for the CAVUS foot
Brooks	Adrenaline 21	\$170	Dense rail	✓	Moderate	Very Firm	12 mm	Moderate	✓	√	✓	√	✓	Nov, 2021	The guiderail system for pronation control seems to be a solid modernization of traditional medial posting.
Mizuno	Wave Inspire 16	\$175	-	✓	Flexible	Very Firm	12 mm	High	✓	√	√	√	-	Sept, 2021	This shoe is a constant reminder of how Mizuno does not try to reinvent the wheel each time; rather, they make minor tweaks to improve key styles. This allows an easy transition from one shoe to the next.
New Balance	WW860v11	\$170	Slight	-	Moderate	Very Firm	10 mm	High	√	√	√	√	√	Oct, 2021	As with many of the shoes the heel design is sleeker but manages to maintain the great fit of this classic model.
Nike	Infinity React 2	\$210	-	-	Moderate	Very Firm	9 mm	High	√	√	√	✓	-	Jan, 2022	Building off the re-imagination in stability in version one. Version 2 offers a comfier fitting upper and traditiuon tounge enclosure. In testing runners with this shoe were less prone to injury.
Saucony	Guide 13	\$170	Slight	√	Moderate	Very Firm	8mm	Moderate	√	√	√	<b>√</b>	✓	Feb, 2021	We are pretty keen on this update with a better arch fit and new posting system for light stability
Saucony	Omni ISO2	\$180	Slight	<b>√</b>	Lightmoderate	Very Firm	8 mm	High	√	<b>√</b>	✓	-	✓	Sept, 2021	With a more pronounced medial post it is a higher level of stability then the Guide

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### **Neutral Supportive Running Shoes**

Ideal for orthotic providers who want a neutral but firm platform for an orthotic device,

Brand	Model	Price	Midsole	Sole Plate width	Forefoot Flexibility	Heel Counter Firmness	Drop/ Offset	Torsional Rigidity	Ladies	Men	Available at LadySport	Available at FitFirst Footwear	Width Sizing Available	This model will be Replaced by	Description
Brooks	Dyad 11	\$160	Firm	Wide	Moderate	Very Firm	10 mm	Strong	✓	✓	√	√	✓	Date TBD	The newly designed seamless toe box is more accommodative combine this with a great heel fit and we have something special.
New Balance	WW840v4	\$170	Moderate	Wide	Moderate	Moderate	10 mm	Strong	√	✓	√	✓	√	July, 2021	The newly designed seamless toe box is more accommodative combine this with a great heel fit and we have something special.
New Balance	WW1540v3	\$210	Firm	Wide	Moderate	Very Firm	8 mm	Strong	√	√	√	√	√	Date TBD	Comes in the widest fittings available from new balance with a wide toe box very firm sole excellent for heavier individuals with extremely flat feet.
Saucony	Echelon 8	\$160	Firm	Wide	Moderate	Very Firm	8 mm	Strong	√	√	√	√	√	Date TBD	A classic in the neutral supportive category its wide platform and lightweight upper make it excellent for all kinds forefoot pathologies

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### **Cushion Running Shoes**

For the neutral to cavus foot that requires exceptional cushioning and a softer ride.

Brand	Model	Price	Midsole	Sole Plate width	Forefoot Flexibility	Heel Counter Firmness	Drop/ Offset	Torsional Rigidity	Ladies	Men	Available at LadySport	Available at FitFirst Footwear	Width Sizing Available	This model will be Replaced by	Description
Asics	Cumulus 22	\$160	Soft	Medium	Moderate	Moderate	10 mm	Moderate	<b>√</b>	<b>√</b>	<b>√</b>	√	√	April, 2021	They are trying in getting back to their traditional fit this is a good update in the neutral category.
Asics	Cumulus 22 GTX	\$180	Soft	Medium	Moderate	Moderate	10 mm	Moderate	<b>√</b>	<b>√</b>	√	✓	-	April, 2021	Same as above with a waterproof membrane. This makes a shoe a touch less forgiving in the forefoot.
Asics	Nimbus 23	\$200	Soft	Mod- Wide	Moderate	Firm	Women13 mm Men10mm	Very	<b>√</b>	<b>√</b>	√	√	√	Sept, 2021	Same as above with a waterproof membrane. This makes a shoe a touch less forgiving in the forefoot.
Brooks	Ghost 13	\$170	Firm	Wide Heel and Forefoot	Moderate	Firm	12 mm	Moderate	√	✓	√	✓	<b>√</b>	Dec, 2021	Available in narrow medium in wide this seamless toe Box with a narrow heel fit is one of the best fitting models year to year.
Brooks	Ghost 13 GTX	\$185	Firm	Wide Heel and Forefoot	Moderate	Firm	12 mm	Moderate	<b>√</b>	✓	<b>√</b>	√	-	July, 2021	Same as the shoe above exept a waterproof mambrane.
Brooks	Glycerin 19	\$200	Soft	Medium	Stiff	Firm	10 mm	Moderate	✓	✓	✓	✓	✓	Aug, 2021	This has become a best seller a classic with a narrow heel and seamless forefoot fit
Mizuno	Wave Rider 24	\$175	Moderate	Moderate	Flexible	Firm	10 mm	Moderate	✓	✓	✓	✓	✓	May, 2021	An excellent update with a seamless upper and deep and narrow heel fit.
Mizuno	Wave Rider 24 GTX	\$200	Moderate	Moderate	Flexible	Firm	10 mm	Moderate	√	<b>√</b>	✓	✓	-	Sept, 2021	Same as the shoe above except a waterproof membrane. This can make the shoe a touch less forgiving in the forefoot.
New Balance	W880v10 /also in GTX	\$165	Soft	Medium	Moderate	Moderate	10 mm	Moderate	√	<b>√</b>	✓	√	√	-April, 2021 -Sept 21 For GTX	This shoe is our store's top seller A fairly significant change in structure and look relative to the previous model but it is still a top fit performer.
New Balance	W1080v10	\$210	Firm	Wide forefoot	Moderate	Moderate	8 mm	Moderate	√	✓	√	✓ 	√	Feb, 2021	Wide base for excellent stability, firm forefoot flex and a seamless toebox. Update significant changes from the previous model, the extremely stretchy toe box will be ideal for those with hammer toes and bunions. Very soft cushioning.
Nike	Pegasus 37	\$155	Soft	Moderate	Stiff	Weak	10 mm	Flexible	√	<b>√</b>	√	√	-	May, 2021	A narrowish toe box fitting with aerodynamic styling, classic for a one with good biomechanics.
Nike	Vomero 13	\$190	Soft	Medium	Stiff	Moderate	10mm	Moderate	✓	<b>√</b>	✓	✓	-	Sept, 2021	A more cushioned version of the above Pegasus.
On	CloudFlyer	\$210	Soft	Medium	Moderate	Firm	10mm	Moderate	<b>√</b>	<b>√</b>	✓	✓	-	Date TBD	An extremely soft ride with above average forefoot stability.
On	CloudSwift	Due	Soon											Feb, 2021	
On	CloudFlow	\$170	Moderate	Moderate	Flexible		6 mm	Flexible	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>	July, 2021	More supportive than the cloud, but still a speed trainer for someone with good foot mechanics

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Saucony	Triumph 18	\$195	Firm	Narrow Midfoot	Stiff	Moderate	8 mm	Firm	✓	✓	✓	✓	✓	July, 2021	A significant styling change with a new highly padded heel collar excellent for those with sore Achilles and issues with rearfoot upper fits.
Saucony	Ride 13	\$130	Firm	Mediumwide	Flexible	Moderate	8 mm	Firm	√	<b>√</b>	√	<b>√</b>	√	April, 2021	Like above the padded and smooth color may be useful this shoe also as excellent forefoot cushioning
Mizuno	Wave Sky	\$200	Firm	Mediumwide	Flexible		12 mm	Moderate	<b>√</b>	<b>√</b>	√	✓	<b>√</b>	July, 2021	A firm cushioned shoe with a great base for most orthotics

### **Trail Running Shoes**

Running shoes that are made specifically for off road running.

Brand	Model	Price	Туре	Dense Medial Foam	Heel Counter Firmness	Drop/ Offset	Torsional Rigidity	Ladies	Men	Available at LadySport	Available at FitFirst Footwear	Width Sizing Available	This model will be Replaced by	Description
Asics	Fuji Trabuco 9	\$160	Neutral	-	Very	8 mm	Moderate	<b>√</b>	<b>√</b>	✓	<b>√</b>	-	Jan, 2022	A shoe with great heritage – it is neutral and very functional on trail and road
Asics	Fuji Trabuco 9 GTX	\$180	Neutral	-	Very	8 mm	Moderate	✓	✓	1	✓	✓	Jan, 2022	Waterproof version of the shoe above and has a relatively stiff forefoot flex
Asics	Sonoma 5 GTX	\$130	Neutral	-	Firm	8 mm	Moderate	✓	✓	1	-	-	Feb, 2021	The most affordable of the Gore-Tex running models. This one is for the trail slimfit. Exellent value.
Brooks	Caldera 5	\$160	Neutral		Firm	4 mm	High	✓	✓	<b>√</b>	<b>√</b>	-	Feb, 2022	Lower stack height than Hoka, but it delivers many of the same rocker applications.
Brooks	Cascadia 15 GTX	\$175	Neutral	-	Firm	10 mm	Moderate	✓	✓	<b>√</b>	✓	-	Oct, 2021	The upper is a bit stiff affecting the first feel, but otherwise a durable run/hike option
Hoka	Speedgoat Mid WP	\$210	Neutral	-	Firm	4 mm	High	✓	✓	1	✓	-	Oct, 2021	One of the only high-top trail running shoes on the market GTX upper and classic stiff-rockered sole.
Hoka	Speedgoat 4 /also in GTX	\$200	Neutral	-	Firm	4 mm	High	√	✓	<b>√</b>	<b>√</b>	-	Date TBD	A slimmer base than the Stinson it is less suited for the problem of fit but great for unloading the forefoot of a healthy shaped foot.
Hoka	Challenger Low GTX	\$200	Neutral	-	Firm	5 mm	High	<b>√</b>	-	<b>√</b>	✓	-	Discontinued	All-terrain shoe for walking and hiking. Waterproof. Stiff rocker sole and leather upper. One colour.
Hoka	Challenger Mid GTX	\$220	Neutral	-	Firm	5 mm	High	<b>√</b>	<b>√</b>	✓	<b>√</b>	-	Discontinued	All-terrain shoe for walking and hiking. Waterproof.
On	Cloudventure /also in WP	\$190	Neutral	-	Firm	6 mm	High	√	1	✓	<b>√</b>	-	-Aug, 2021 -Sept, 2021 for WP	The newest version has a firmer upper and is a bit less accommodative for orthopedics but with the stiff forefoot and great lug outsole it performs on the trail.
On	Cloud Ultra	Due	Soon										Mar, 2021	
Saucony	Xodus 3	\$180	Neutral	-	Very	4 mm	High	<b>√</b>	<b>√</b>	<b>√</b>	√	<b>√</b>	Oct, 2021	I am sounding like a broken record fix the tongue fit PLEASE!

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Saucony	Peregrine 11 GTX	\$180	Neutral	-	Very	4 mm	High	<b>√</b>	<b>√</b>	<b>√</b>	✓	✓	Feb, 2021	Not for the pronator it does have a relatively stiff flex comes in waterproof as well very light for the support it offers.
Mizuno	Rider TT	Due	Soon										Mar, 2021	
Nike	Nike Wildhorse 6	\$170	Neutral	-	Very	4 mm	High	√	<b>√</b>	√	✓	-	Aug, 2021	A trail shoe with wonderful cupsoleing around the foot to frame it in and enhance lateral support noth on and off road.
New Balance	NB Hierro v5 GTX	\$200	Neutral	-	Very	4 mm	High	√	<b>√</b>	√	✓	√	April, 2021 Sept, 2021	Available in wide fitting and supstancial tread makes it an exellent slightly stiffer off road shoe to accomodate wide foot issues
New Balance	WTMORV1	Due	Fall										Sept, 2021	Current model is being phased out
New Balance	Arishi GTX	Due	Fall										Spet, 2021	New style!

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### **Walking Shoes**

People walk in all kinds of shoes from athletic to casual. These shoes are specifically marketed towards the walker. They are chosen for their support and ability to accommodate an orthotic.

Brand	Model	Price	Туре	Midsole	Rocker	Stiff Midsole	Rearfoot Depth	Torsional Rigidity	Ladies	Men	Available at LadySport	Available at FitFirst Footwear	Width Sizing Available	This model will be Replaced by	Description
New Balance	WW1350	\$170	Support	Neutral	Very	Yes	✓	Rigid	√	-	<b>√</b>	-	<b>√</b>	June, 2021	Stiff forefoot flex with a minimal rocker profile. A great country walker/light hiker option with an extra deep forefoot in the 2E (extra wide) fitting.
New Balance	WW1400	\$190	Support	Neutral	Very	Yes	High top	Rigid	✓	-	✓	-	✓	Dec, 2022	Stiff forefoot flex with a minimal rocker profile. A great mid top country walker/light hiker option with an extra deep forefoot in the 2E (extra wide) fitting.
New Balance	WW928V3	\$170	Support	Neutral	Very	Yes	-	Rigid	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	Date TBD	An inline tweak to the upper was needed to create the roomy midfoot/forefoot fit that is classic to this iconic series.
Saucony	Grid Integrity ST3	\$130	Neutral	Neutral	Very	No	Moderate	Moderate	✓	<b>√</b>	<b>√</b>	√	<b>√</b>	Date TBD	No changes and don't change it PLEASE. Closest thing to a runner un 3 colour options.
NB	WW1300	\$175	Neutral	Neutral	Moderate	Yes	Low	Rigid	√	<b>√</b>	√	✓	√	Dec, 2022	A popular model for walking + Light hiking especially when one wants to avoid the very thick midsole of a maximalist shoe. Heel slippage is an issue

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### **Court, Cross-training and Fitness Shoes**

Styles work for individuals with or without orthotic devices.

Brand	Model	Price	sport	Sole Plate width	Forefoot Flex.	Heel Counter Strength	Deep Heel	Torsional Rigidity	Ladies	Men	Available at LadySport	Available at FitFirst Footwear	Width Sizing Available	This model will be Replaced by	Description
Asics	Gel Game 7	\$100	Tennis	Moderate	Stiff	Firm	-	Rigid	<b>√</b>	<b>√</b>	✓	✓	-	Jan, 2021	Marked as a pickleball shoe it is a lighter weight less expensive tennis shoe that does well on both indoor and outdoor courts.
Asics	Resolution 8	\$180	Tennis	Moderate	Very Stiff	Firm	-	-	✓	✓	✓	1	-	Date TBD	Consistently a superior fit for the narrow-ish foot and a real players shoe.
Asics	Tactic 2	\$120	V-Ball/ Xtrain	Moderate	Flexible	Frim	-	-	<b>√</b>	-	✓	-	-	July, 2021	Marketted as a volleyball shoe and makes an exellent pickleball shoe for indoor use on the gym floor. Could easily have been marketed as a cross training shoe.
Asics	Challenger 12	\$130	Tennis	Moderate	Moderate	Firm	-	Rigid	✓	-	✓	-	-	Date TBD	The mesh toe box makes it a great choice for individuals with hammer toes. Also is great for breathability.
Columbia	Drainmaker 4	\$120	Aqua	Moderate	Flexible	Soft	-	Flexible	✓	-	✓	✓	-	Date TBD	A nice alternative to the Ryka for water aerobics and better for outdoor water sports.
Hoka	Tivra	\$160	X-train	Wide	Stiff	Firm	-	Rigid	<b>√</b>	-	✓	-	-	Date TBD	Maximum cushion but limited lateral support it is a first attempt at cross training for them hope for more next time.
Nike	Metcon 5	\$170	X-train	Moderate	Stiff	Firm	Moderate	Rigid	<b>√</b>	<b>√</b>	✓	✓	-	Sept, 2021	Lower profile than above model. Nice for plyometrics and CrossFit.
New Balance	WC806	\$140	Tennis	Wide	Moderate- stiff	Firm	Moderate	Rigid	✓	-	✓	-	✓	Oct, 2022	Width sizes are useful here and it is a consistent line to go back to.
New Balance	Minimus Prevail	\$150	X train	Flexible	Flexible	Firm	-	Flexible	✓	✓	✓	✓	-	Date TBD	A low profile low drop shoe excellent for plyometrics and general in gym quick lateral movements.

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### **Ladies Dress, Casual, and Orthopedic Shoes**

Styles work for individuals with or without orthotic devices.

Brand	Model	Price	Type	Removable Insole	Closure	Stretch Elastic	Forefoot Flexibility	Rocker	Rearfoot Depth	Torsional Rigidity	Width Sizes Available	Description
Aravon	Farren	\$170	Casual	Full length	Lace-up	-	Flexible	None	Moderate	Moderate	✓	Seamless leather upper; deep; accommodative; a good fit.
Django & Juliette	Roxanne + Raquel	\$185- \$210	Casual	Full length	Lace-up	-	Stiff	Yes	-	Stiff	-	A new supplier for us. These are very fashionable shoes with stiff soles. Unfortunately not available in widths but low and boot top options available.
Merrell	Slides	\$130	Casual	Full length	Slip-on	-	Moderate	Moderate	N/A	Flexible	-	Slides come in both leather and mesh upper. Excellent for around the house, and take orthotics. A cute shoe with a rigid forefoot, excellent cork foot bed; very deep.
Naot	Sea	\$215	Dress Casual	Full length	Mary-Jane	-	Rigid	Good	Moderate	Rigid	-	A cute shoe with a rigid forefoot, excellent cork foot bed; very deep.
Portofino	Stretch Leather	\$200	Dress Casual	Full length	Velcro	<b>√</b>	Flexible	Moderate	Deep	Rigid	-	A very important shoe with seamless, full stretch toe box and velcro closure. Wide base and dressy look!
Propet	Cush'n Foot	\$100	Slipper Casual	Full Length	Velcro	<b>√</b>	Flexible	-	Moderate	Flexible	-	Neoprene upper, one large velcro strap. Excellent slipper or outdoor shoe.
Propet	Bianca	\$150	Ortho	Full length	Velcro	<b>√</b>	Flexible	-	Deep	Flexible	-	Extremely important shoe due to the super-flexible elastic lycra toe box Handles the most difficult orthotic foot very well.

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### **Ladies Sandals**

Most sandals come with removable foot beds to accommodate orthotics or have specific orthopedic qualities.

Brand	Model	Price	Туре	Removable Insole	Closure	Sole Plate Width	Forefoot Flexibility	Rocker	Back Strap	Torsional Rigidity	Width sizing Available	Description
Portofino	Open Toe	\$165	Casual	Full length	Velcro	Moderate	Moderate	None	✓	Moderate	-	A closed heel sandal. It's an excellent option for extremely posted orthotics or use of a heel lift. Also creates better rear foot stability in case of extreme hallux varus, for instance.
Sole	Flip Flop	\$90	Casual	None	Slip on	Wide	Moderate	Good	-	-	-	Excellent arch support built off of the sole off the shelf insoles. Best for arch support in young looking sandal for the road or beach.
Teva	Tirra	\$110	Casual	None	Velcro	Wide	Moderate	Good	✓	Rigid	-	Best for arch support in young looking sandal for the road or beach.
Vionic	Revere Miami	\$165	Dress	Full Length	Velcro	Moderate	Flexible	Slight	-	Moderate	-	Non-removable insole, but comes with excellent arch support, unique adjustable straps that are accommodating for wider feet.
Wolky	Jewel	\$230	Dress	Full Length	Velcro	Wide	Rigid	Good	√	Rigid	-	The best stiff-rockered walking sandal made. Extremely supportive sandal. Birkenstock look with a good heel offset, rigid rocker, and a removable foot bed. Also, a sport sandal with removable foot bed.
Cambrian	Delphi	\$210	Dress	Full Length	Velcro	Wide	Rigid	Good	√	Rigid	√	Extremely supportive sandal. Birkenstock look with a good heel offset, rigid rocker, and a removable foot bed. Also, a sport sandal with removable foot bed.
Cambrian	Marina	\$180	Casual	Full Length	Velcro	Moderate	Rigid	Good	✓	Rigid	-	The look of a Birkenstock but it has a heel strap on the back removeable footbed great for wide based orthotics and heavier individuals widths available.

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### **Stiff Rocker**

Brand	Model	Price	Туре	Heel Counter	Offset	Heel Counter Firmness	Rocker Stiffness	Ladies	Men	Available at LadySport	Available at FitFirst Footwear	Width Sizing Available	This model will be Replaced by	Description
NB	MoreV3	Due	Soon										June, 2021	This is one of the few stiff rocker maximalist shoes other than Hoka. It is important because of available multiple widths. The only concern with V3 is did they make it too flexible? We shall see!
NB	MoreTrailV3	Due	Soon		•••								Sept, 2021	The concern is did they make it more flexible in the forefoot and lose what makes this shoe special?
Hoka	Bondi 7	\$190	Neutral	Wide	4mm	Very	Very	√	✓	<b>√</b>	<b>√</b>	√	Date TBD	The classic stiff rockered shoe. It is now available as well in men's extra wide.
Hoka	Clifton 7	\$170	Neutral	Moderate	5mm	Very	Moderate	<b>√</b>	✓	<b>√</b>	✓	✓	June, 2021	This is the less bulky and slightly more flexible option.  Generally not as good a choice for the heavier patient who needs a very stiff flex rating.
Hoka	ŴP Ű	\$190 WP/\$200	Neutral Trail	Moderate	4mm	Moderate	Very	<b>/</b>	✓	√	<b>V</b>	-	Date TBD	A trail shoe that is available in wide. Very stiff model with excellent traction. Available in Goretex medium width only.
Hoka	Callenger WP Low	\$200	Neutral light hiker	Moderate	5mm	Moderate	Very	<b>/</b>	√	√	<b>V</b>	-	Date TBD	Available in mesh upper or leather waterproof. More of a light hiker/country walker with a stiff sole.
Hoka	Challenger WP Mid	\$220	Neutral light hiker	Moderate	5mm	Moderate	Very	/	✓	<b>√</b>	<b>/</b>	-	Date TBD	High top version of the country walker described above.
Saucony	Endorphin Shift	\$180	Neutral	Moderate	4mm	Moderate	Very	<b>√</b>	-	<b>√</b>	-	-	Date TBD	This model is Saucony's entry into the recreational maximalist stiff rockered category. One width only but similar to New Balance More and Hoka Bondi.
Saucony	Endorphin Pro	\$250	Neutral Racer	Soft	8mm	Flex	Very (plate)	<b>/</b>	<b>√</b>	-	<b>√</b>	-	Date TBD	A lightweight reasonably durable shoe with a plate. Keep in mind no heel counter.
Mizuno	Rebellion	\$240	Neutral	Firm	5mm	Very	Very	<b>√</b>	-	<b>√</b>	-	_	New	Stiff plated shoe with new geometry for fast performance, but plays in the orthotic stiff rocker category (racing level durability.
GD	Gravity Defyer	\$260	Neutral Walker runner	Firm	13mm	Firm	Very	✓	-	✓	-	-	Date TBD	The key with this model is the 13 mmeter offset which makes it excellent for the person with tight calf complex and possible Achilles issues.
Asics	Metaride 2	\$300	Neutral	Firm	10mm	Firm	Very	<b>V</b>		<b>√</b>	-	-	Feb, 2021	This is a very important model as the very early stage rocker makes it excellent for ankle fusions and ankle replacements. As well as any lack of dorsiflexion in this area.
Asics	Glideride 2	\$200	Neutral	Firm	10mm	Firm	Very	<b>V</b>	✓	<b>√</b>	✓	_	Feb, 2021	This is the less expensive version of the above model. Key difference is the above Metaride has a stretchy toe box which is excellent for hammertoes in bunions.
Hoka	Ora Recovery	<b>/\$</b> 80	Slide Slipper	No	5mm		Firm	<b>V</b>	✓	<b>√</b>	✓	_	June, 2021	This model is terrific for around the house and summer. The elastic toebox for hammertoes and breathability. Can also be used as an easy entry slide.
Hoka	Carbon X2	\$225	Neutral racer	Soft	5mm	Flex	Very (plate)	<b>√</b>	√	<b>√</b>	<b>√</b>	_	Jan, 2021	Primarily a racing shoe that is perfect if you want light weight and the stiffness offered by a plate in the midsole. Do not expect durability!
Hoka	Anacapa Low	Due	Fall										June, 2021	The new leather updated version of the light hiking challenger series.
Hoka	Anacapa Mid	Due	Fall										June, 2021	The new leather updated version of the light hiking challenger series.

### LadySport

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### FitFirst Footwear

### The Shoe Update – Spring 2020

Hoka	Bondi X	Due	Fall			•••		•••	•••				Their classic model now available in extra wide for men. (womens hopefully will be added)
Hoka	Stinson 6	\$175	Neutral trail	Wide	5mm	Stiff	Very	✓	✓	<	<b>√</b>	_	Very stiff wide toe box model which is excellent for off road.  Traditional Hoka thick stack height style shoe.

### LadySport

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### FitFirst Footwear



2021

# STIFF-ROCKER TECHNOLOGY





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- Defining Stability

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- Stiff-Rocker Shoes Overview
- Detailed Shoe Guides



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### **GLOSSARY**

### **WIDTH**

Shoe size based on frontal plane measurements. (ie. Narrow, wide, X-wide)

### **OFFSET (DROP)**

The difference in stack height between the heel and the ball of the foot.

### STACK HEIGHT

Height from the bottom of the shoe sole to the bottom of the foot in the shoe. This sums up the thickness of the outer sole, midsole, and insole.

### ROCKER

A midsole feature used to offload structures of the foot. The apex of the rocker can be set at different points to alter gait mechanics

### **META ROCKER**

This is a hoka-specific term used to describe the location of the rocker at the metatarsal heads.

### **DEFINING STABILITY**

Shoe stability is a complicated topic. In the world of running shoes, a stability shoe has specific structures to support the medial-longitudinal arch. None of the shoes in this booklet have arch support so are all considered neutral under this classification. Given that all of the shoes in this review are neutral, we take our definition of stability from someplace else.

In the world of biomechanics, dynamic stability is the ability to return an object's center of mass (COM) inside its base of support (BOS) while that object is moving. Dynamic stability is incredibly important for walking and running. Poor stability can result in falls and other issues such as joints moving too far in an injurious direction (ie. Ankle sprains). Footwear can help to stabilize gait using different features. The features we considered to classify each shoe are listed here:

- The shoe has a wide base with full ground contact to increase the foot's base of support.
- 2. The shoe can directly limit unnecessary movement at the ankle joint.
- 3. The **shoe's heel is firm** to stabilize the calcaneus (heel area).
- 4. The shoe's **upper is made from structured materials** that "hold" the foot in place.

### **CLASSIFYING STABILITY**

Footwear can stabilize walking/running gait in different ways. The features we considered to classify each shoe are listed here:

- 1. The **shoe has a wide base with full ground contact** to increase the foot's base of support.
- 2. The shoe can directly limit unnecessary movement at the ankle joint.
- 3. The **shoe's heel is firm** to stabilize the calcaneus (heel area).
- 4. The shoe's **upper is made from materials with high tensile strength** to resist stretching from foot movements.

Stability Rating	# of stability features
Minimal	0
Minimal/Moderate	1
Moderate	2
Moderate/Stable	3
Stable	4

### NOTES

- All of the shoes in this review will have at least one of the stability features listed. This means that all of the stiff-rockered shoes in this list have some inherent stability.
- a shoe to directly limit movement at the ankle joint, there
  needs to be some sort of structured fabric around the ankle to
  act as a movement barrier. As a result, the highest stability
  rating is reserved for hiking boots. No running shoe will meet
  this criteria.

### STIFF-ROCKER SHOE OVERVIEW

\$200+

\$300

\$200

\$200

\$300

\$180

\$260

All-terrain shoe for walking and hiking. Comes in low and high top. Waterproof.

Workers in the film industry). Waterproof .

High performance road running shoe.

Similar to the Glide Ride but with a more elastic toe box.

16 mm heel offset makes this model unique in this category.

The long-distance trekking boot built for rugged terrain. This shoe seems to work well for people on their feet outside all day (ie.

Very light and very stiff. The heel sits deep in the shoe making it feel very stable. Extra wide is available.

This model has a distinctive early rocker. Excellent for ankle fusion and ankle replacement.

	_							
Name	3	9	Widths	LDS	FF	Offset <sup>2</sup>	Price	Description
Hoka Bondi	/	1	·	1	1	4 mm	\$190	The most cushioned shoe by Hoka. The Bondi sets the standard for the classic Hoka fit. Comes in mesh and leather.
Hoka Clifton	1	1	<b>/</b>	1	1	5 mm	\$170	Provides the signature Hoka ride in a lighter weight package than the Bondi. This shoe is slightly less stiff than the Bondi.
Hoka Carbon X	1	1		1	1	5 mm	\$225	Hoka's high-performance road shoe. Achieves speed through using a carbon pate.
Hoka Speedgoat	1	1		/	1	4 mm	\$200+	Provides maximal protection on technical terrain. Waterproofed with GORE-TEX technology. Excellent traction achieved with a Vibram outsole.
Hoka Stinson	<b>√</b>	/		/		5 mm	\$190	Wider fitting trail shoe with high stack height. This trail shoe tends to feel similar to the Bondi.

5 mm

0 mm

4 mm

16 mm

Hoka Challenger

Hoka Sky Kaha

New Balance More

Asics Glide Ride

Asics Meta Ride

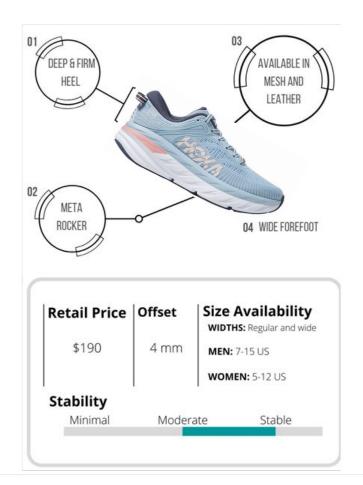
Saucony Endorphin Shift

Gravity Defyer XLR8

### HOKA BONDI

#### HOKA'S MOST CUSHIONED ROAD SHOE

This model is one of the most important styles in the Hoka lineup. Not only is it one of the stiffest models but it is very accommodative and receives most orthotic devices seamlessly. This fall, an extra wide option for men and women will become available. Extra width is particularly important for forefoot pathologies that require additional toe box space.

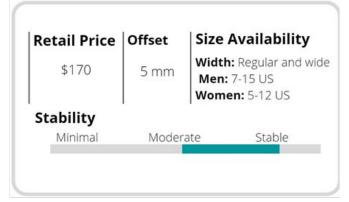


### HOKA CLIFTON

#### SIGNATURE HOKA RIDE IN A LIGHTWEIGHT PACKAGE

This style is popular with most patients and customers because of its sleek and relatively attractive design. The lighter construction is attributed to the lower stack height, lower sidewalls, and slightly softer midsole. For those who need less stiffness, this model can be very useful. This model also comes in a wide-fitting for men and women who need more space in the toe box.



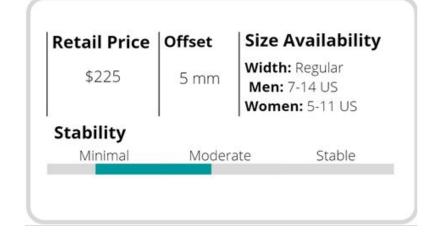


# HOKA CARBON X2

#### HIGH PERFORMANCE ROAD SHOE

The Carbon X is a specialized, lightweight, stiff rocker model that is very popular with top flight runners. The most significant feature is the carbon plate lodged in the midsole. This feature helps ensure that it's splintlike stiffness remains intact. Reviews suggest that, this shoe shines in performance but lacks in durability.



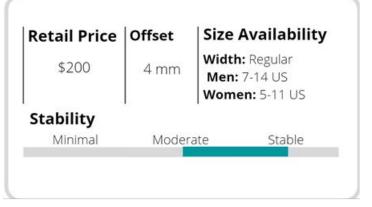


### HOKA SPEEDGOAT

### MAXIMAL PROTECTION FOR TECHNICAL TERRAIN

Available in mid- and low- top versions, this waterproof trail series is excellent for running, walking, and light hiking in all weather conditions. The Speedgoat has a high stiffness rating as well. The low version comes in all black and can easily double as a uniform shoe. This model is not available in wider

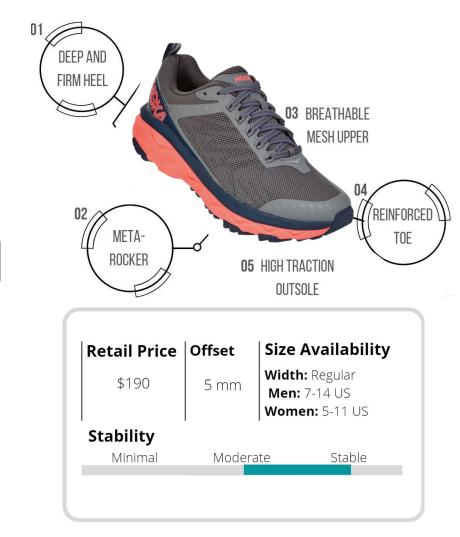




### HOKA STINSON ATR 5

#### MAXIMUM CUSHION & STIFFNESS FOR ALL-TERRAIN

This model is essentially the trail version of the Bondi. A very stiff style of Hoka that sports a robust treaded outsole for excellent grip off road. The one downside is that it only comes in regular width for men and women.



### HOKA CHALLENGER

#### ALL TERRAIN SHOE FOR WALKING AND HIKING

The waterproof leather Challenger is available in a high-top and low-top. The challenger collection is particularly useful for the people who want a less athletic looking stiff rocker shoe that performs well in the rain on various ground conditions. Note: price and stability is based on the cost for the low-top version. Both of these will be increased for the high-top



Retail Price	Offset	Size Availability
\$200+	5 mm	<b>MEN:</b> 7-14 US WIDTHS: D, 2E
		<b>WOMEN:</b> 5-11 US WIDTHS: B, D
Stability		
Minimal	Modera	te Stable

### HOKA SKY KAHA

#### THE ULTIMATE LONG-DISTANCE HIKING BOOT

These hikers will provide the most protection on even the most demanding terrain. The Sky Kaha possesses an impressive weight to cushion ratio which allows for a plush ride without the added heaviness. Like all of Hoka's other trail shoes, this model has a vibram outsole and GORE-TEX bootie making it comfortable and safe in various weather conditions.



### NEW BALANCE MORE

#### MAX CUSHION IN A LIGHTWEIGHT ROAD SHOE

The deep sidewalls in the rear-foot give this model excellent stability, especially for a shoe this light. The durability of the outsole remains questionable but the fact that it remains available in multiple widths, including extra wide, sets it apart.





### ASICS GLIDE RIDE

#### EARLY ROCKER WITH A RESPONSIVE RIDE

The Glide Ride sports the earliest stage rocker available in this footwear category. By placing the apex of the rocker behind the metatarsal heads, this model may be an excellent choice for people with limited ankle flexion. (Version 2 has a slightly less pronounced early stage rocker)





### ASICS META RIDE

#### EARLY ROCKER WITH ACCOMMODATIVE MESH UPPER

This model is virtually identical to the Glide Ride with one significant difference: the upper in the forefoot is made with a 4 way stretch material that nicely accommodates those with hammer toes and other forefoot deformities.





## SAUCONY ENDORPHIN SHIFT

#### SAUCONY'S MOST CUSHIONED ROAD SHOE

Brand new high performance model by Saucony. There are two other models in the Endorphin line but both are more expensive and less stiff so are not included. An excellent fit with a moderately wide toe box.



EARLY-STAGED ROCKER

Retail Price	Offset	Size Availability
\$180	5 mm	Width: Regular Men: 7-14 US Women: 5-11 US
<b>Stability</b> Minimal	Modera	ate Stable

# GRAVITY DEFYER XLR8

### OFFSET ALLEVIATES FOOT AND ANKLE STRESS

This model will be introduced in early April. Stocked with two different insole thicknesses and a very stiff rockered midsole this show is incredibly versatile. The most significant feature is the 16 mm heel/toe offset. This shoe should benefit a variety of conditions affecting ankle dorsiflexion, the Achilles tendon and the plantar fascia due to the higher stack height in the heel



