

# Monthly Newsletter

Free please take a copy



May 2024 | Issue Number 99



**Accepting new patients**

Contact Your Foot

Specialist/Chiropodist:

**The Footcare Centre**

**905-357-0214**

[niagara@thefootcarecentre.ca](mailto:niagara@thefootcarecentre.ca)

Suite 203,  
Stamford Medical Centre,  
4256 Portage Road,  
Niagara Falls, ON, L2E 6A4

Web: [www.thefootcarecentre.ca](http://www.thefootcarecentre.ca)

## Oh No!!

*In April we had 21 patients who failed to attend their appointment! Please do let us know if you cannot attend so we can offer the slot to a patient on our waiting list.*

## 3D Printed Orthotics

Orthotics are customized devices designed to provide support, correction, and relief for various foot and lower limb conditions.

They are commonly used to address issues such as arch pain, plantar fasciitis, and foot misalignments.

Orthotics can be invaluable in improving gait, preventing certain foot conditions from worsening, and managing pain.

Traditionally, orthotics were crafted through a manual and labor-intensive process involving plaster molds and skilled craftsmanship.

However, with advancements in technology, the landscape of orthotic production has been transforming and could increasingly be adopted into everyday practice.

### *3D Printing of Orthotics*

Three-dimensional (3D) printing is seen to be one of the breakthrough technologies in the field of orthotics, as it could help offer a highly precise and efficient production method.

The process involves creating three-dimensional objects layer by layer based on digital models. For orthotics, each device could possibly be tailored with incredible precision to match the unique contours of an individual's foot.

The latest technology in 3D printing of orthotics could allow for a level of customization and intricacy that was previously unattainable.



## 3D Printed Orthotics

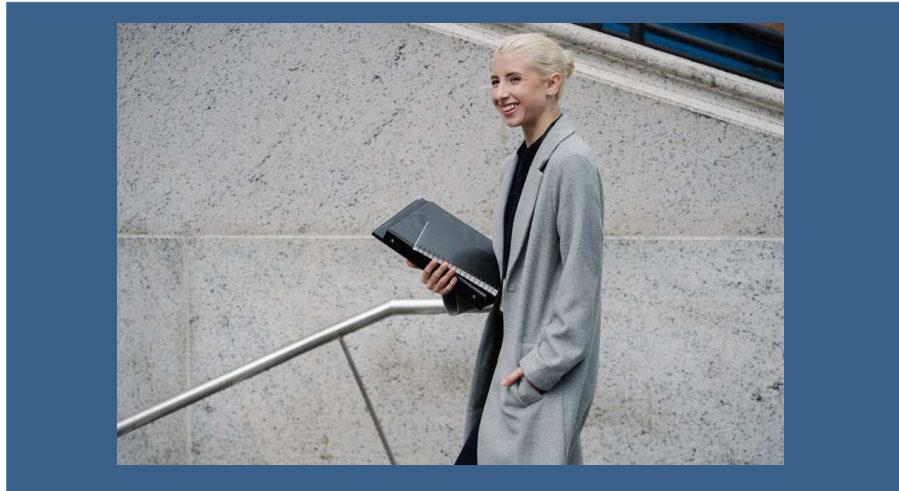
(Cont'd from previous page)

Computer-aided design (CAD) software utilizes 3d volumetric digital models of a patient's foot, taking into account anatomical details and existing conditions.

These digital models, via the re-determined prescription parameters, would guide the 3D printer to produce custom-made orthotics that aim to be effective, targeted and comfortable.

### *What Raw Material is Used in 3D Printing of Orthotics?*

The raw materials used could include thermoplastic or photopolymer resins. These materials are chosen as they are flexible, durable and 3d print well into orthotics that can be comfortable for the wearer. The blend of materials could vary based on an individual's specific needs.



The ability to select from a range of materials would allow for a personalized approach, ensuring that the orthoses are effective and suits the wearer's lifestyle, needs and preferences.

3D-printed orthotics could be suitable for a wide range of foot and lower limb conditions, including:

- Plantar Fasciitis: orthotics could provide targeted support to reduce inflammation and manage pain.
- Flat Feet or High Arches: Customization allows for orthotics that address specific arch issues
- Bunions and Misalignments: Individuals could benefit from orthotics that correct the foot's positioning and distribute pressure more evenly.
- Sports Injuries: Athletes could turn to orthotics to address sports-related injuries

and enhance performance by optimizing biomechanics.

- Diabetic Foot Conditions: Precision design allows for orthotics that accommodate the unique risks and needs associated with individuals with diabetes

We become increasingly excited regarding the long term prospects of 3D-printed orthotic technology and its advancement in the world of foot care, and we continue to monitor if the technology enables a much higher level of customization and precision than current traditional methods of orthotic manufacture. Watch this space!.

### *Conclusion*

If you struggle with foot conditions or discomfort, be sure to consult with a podiatrist soon. Custom-made orthotics may just be what you need! ♦

## B7 and Foot Health Benefits

Vitamin B7, is a water-soluble vitamin critical to several bodily functions. Its importance stretches beyond foot health to hair growth, nail growth, and many others.

B7 can be made available to the body's systems through dietary sources or supplements.

### *What is Biotin?*

Biotin operates as a bodily coenzyme responsible for speeding up the metabolism of core food classes such as proteins, fat, and carbohydrates.



B7 is highly significant for how the nervous system functions, and is also related to the health of the skin, feet, and other organs and systems. Furthermore, biotin is helpful in synthesizing fatty acids and amino acids.

### *Benefits of Biotin for Foot Health*

B7 is essential for foot health in many ways, including:

- **Promoting Skin Health:** B7 is essential to maintaining healthy skin. Since our feet are covered with skin, you can be sure biotin is important here, too. It aids in protecting against foot-related infections and diseases that have the skin as an entry point.
- **Supporting Nerve Function:** Because of the intricate network of nerves in our feet, having

enough B7 can assist in maintaining normal nerve function and lower the chance of neuropathy.

- **Fortifying Nails:** B7 is beneficial for the toenails and fingernails alike. To stop toenail infections and ingrowths, this vitamin strengthens the nail, lessens brittleness, and promotes growth.
- **Promoting Muscle Regeneration:** Many different muscles in the feet can become strained or injured. Foot injuries can heal more quickly thanks to biotin's role in muscle regeneration and repair.

## B7 and Foot Health Benefits

(Cont'd from previous page)

### *Sources of B7*

Now that you know how valuable B7 can be in maintaining foot health, here are some ways you can obtain this vitamin naturally in your diet, including:

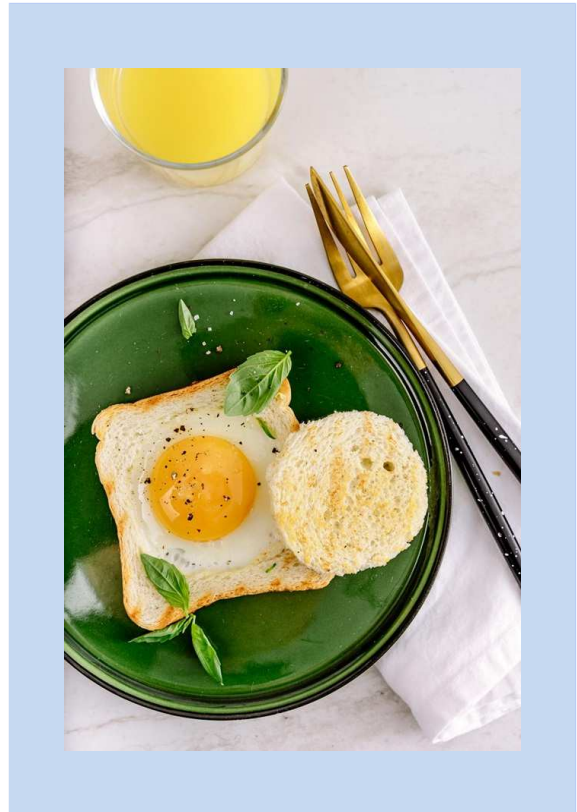
- Egg yolks
- Nuts and seeds
- Beef liver
- Avocado
- Cooked eggs
- Pork
- Roasted almonds
- ...and many more

B7 deficiency is rare, as it is readily available in many daily foods. Fortunately, the body recycles much of the biotin it has already used, keeping it in your body for a long time

In cases where people do not get enough B7 from their diets, they could take supplements instead. **However, we strongly recommend you consult a licensed healthcare practitioner before starting any supplement regimen.**

### *Recommended Daily Intake*

This is not straightforward, as some variables contribute to the recommended daily biotin intake. Age, sex, and pregnancy are key determinants, but adults should aim for at least 30 micrograms daily.



### *Conclusion*

This vitamin B7 is also known as “Biotin”. Biotin, is essential for the proper functioning of the human body and contributes to the overall health of the feet. Ensuring a sufficient daily intake of biotin, especially through diet, has many benefits for foot health. ♦



## The Footcare Centre

Suite 203,  
Stamford Medical Centre,  
4256 Portage Road,  
Niagara Falls ON,  
L2E 6A4

**Phone:**  
905-357-0214

**E-Mail:**  
[niagara@thefootcarecentre.ca](mailto:niagara@thefootcarecentre.ca)

**Web Site:**  
[www.thefootcarecentre.ca](http://www.thefootcarecentre.ca)

If you would like a copy of this newsletter emailed to you every month, then please let reception know and they will ensure that your email address is added to our distribution list.

*The Care,  
Professionalism and  
Time that your feet  
deserve.*



## Introducing Kaitlyn Morrish

Kaitlyn will be joining us in July from the Advanced Diploma of Chiropractic Program at The Michener Institute.

During her time at the Michener Institute, Kaitlyn has done multiple externship placements that have allowed her to gain valuable experience regarding a variety of different foot-related concerns and conditions.



Prior to The Michener Institution of Education, Kaitlyn completed her undergraduate degree at Wilfrid Laurier University in which she studied Kinesiology.

Kaitlyn's enthusiasm for creating patient-centered treatment plans will allow for positive patient outcomes.

Kaitlyn looks forward to meeting you and helping you with your foot-related concerns!

Like / Follow us.....



<http://www.facebook.com/footcarecentreniagara>



<https://twitter.com/footcareontario>

**Attribution:** All images are from Pexels/ Armin Rimoldi, This Is Engineering, Sora Shimazaki, Andrea Piacquadio, and Antoni Shkraba.