

Canadian Association of Occupational Therapists  
**Product Recognition Program**

**EmbraceAIRPlus**



Available online at [www.caot.ca/prp](http://www.caot.ca/prp)





Report last updated April, 2018

### Disclaimers

The information compiled in this report was designed for informational purposes and to communicate the final conclusions of a documented review process. The decision to award a seal of recognition **does not supersede or replace other codes, requirements or regulations** set by authoritative organizations of a specific jurisdiction. CAOT encourages health professionals to act in a responsible manner and according to best practices for the recommendation, assessment, installation and maintenance of this product. It is critical to **follow the recommendations set by the manufacturer and/or distributor** of this product and, when relevant, engage domain expert for training, use, installation, maintenance and repair.

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**Specific questions** related to this product(s) (including usage, availability, pricing, etc.) should be addressed directly to the manufacturer and/or distributor. Please visit the company website: <https://www.embraceair.com>. Concerns or questions related to the content of this report should be addressed to Julie Lapointe, Director of Knowledge Translation Programs, at [jlapointe@caot.ca](mailto:jlapointe@caot.ca) or at 1(800) 434-2268 ext. 260.

The conclusions presented in the current report are derived from the best information available. In the case that new information becomes available and grants a modification to the conclusions, CAOT reserves the right to update and issue a new report of this product at any time.

### Acknowledgement

The generation of this report would not have been possible without the contribution of occupational therapists and members of the Canadian Association of Occupational Therapists (CAOT).





## Executive Summary

The EmbraceAIRPlus is a backrest that can be added to different types of seats to help achieve the proper spinal alignment. This product has several adjustment options to allow users to determine both the level of firmness and the exact location of the internal air cushion in order to adapt to changing needs. Reviewers were unanimous and recommended that the EmbraceAIRPlus be accepted for the CAOT Product Recognition Program. Information regarding the performance of the product as well as recommendations on its usage are provided in this report.



**EmbraceAIRPlus is recognized by CAOT.**



## Review report

### The purpose of this product

The EmbraceAIRPlus is a backrest that can be added to different types of seats to help achieve the proper spinal alignment. This product has several adjustment options to allow users to determine both the level of firmness and the exact location of the internal air cushion in order to adapt to changing needs. EmbraceAIRPlus can help prevent and reduce back pain for adolescents, adults and older adults who sit for any periods of time, who are at risk of back pain and/or who have sustained back injuries.

### Performance of the product (efficacy, usability, safety, reliability, durability)

- This device is lightweight and may be used at home, at the office and in a vehicle.
- This product has been found to be made of quality material and to hold the air well in its air chamber.
- It fits well on a variety of chairs, except on chairs with a smooth plastic backrest because it could slide out of place. In some instances however the product won't need to be strapped to the chair to perform as it can be placed in position behind the user and weight will hold it in place.
- According to reviewers, this product is effective to support an optimal spine alignment which is likely to reduce back pain for people who sit for extended periods of time and who need that type of support.
- Prior to the first usage, users must adjust the straps, the height of lumbar support and the amount of air in the air chamber so the backrest follows the natural curvature of the spine and is comfortable. The depth of the chair may also need adjustment to compensate for the presence of this back support. Once set up, no further adjustments are required unless the user desires a different firmness or moves the product to another location.
- The air pump is connected to the cushion by a hose approximately 30 cm (one foot) long, which makes it easy for the user to reach.
- Once installed, making adjustments to the EmbraceAIRPlus is straightforward with minimal steps.
- The side curves of this backrest may not fit well or be comfortable for users with a wider body.
- There are no safety issues related to this product according to reviewers.
- EmbraceAIRPlus is currently available in three colours (i.e. black, navy and burgundy) which is favorable for people who require additional support but who may be self-conscious about using this kind of product and would like a discrete option.
- Reviewers recommend ensuring EmbraceAIRPlus will fit the user's chair(s) before purchasing the product. In some instances, it may be more convenient for users to own more than one so it can be installed in strategic places such as the car and the office without the need to move it.
- Despite some adjustability in the height and the thickness of the backrest, this product is not intended to replace a custom molded seating system for those with more advanced seating needs.



## Important recommendations

Although EmbraceAIRPlus fits most types of chair, it can be difficult to fasten the product to the back of certain chairs such as those covered in plastic. Also, the side curves of this backrest may not fit well and be comfortable for users with a wider body.

Reviewers recommend ensuring EmbraceAIRPlus will fit the user's chair(s) and body type before purchasing the product. Information about policies for trials and returns can be obtained by contacting the company (see page 2 of this report).

## Economic considerations

This backrest is comparable in price to other back support products, however EmbraceAirPlus comes with more adjustable features than other products currently on the market. For some users, it may also eliminate or delay the need to purchase an ergonomic office chair.

## Scientific evidence

- The company has posted on their website several reports of research studies that have been conducted on their line of products: <https://www.embraceair.com/studies/mcgill-lumbairplus>
- The evidence that lumbar supports are effective for the prevention and treatment of back pain is inconclusive and more research is required to determine their effectiveness (van Duijvenbode, Jellema, van Poppel, & van Tulder, 2008; Ward & Coats, 2017). However, a study by Roelofs and colleagues (2007), showed that continued adherence to using a lumbar support is an important factor of success with these devices. Additionally, they found that the strongest predictors toward adherence to using a lumbar support were self-efficacy, social support, but most importantly, a positive attitude toward using the device (Roelofs et al., 2007).

## Review committee

Two occupational therapists reviewed this product. The first reviewer has 15 years of experience working in a variety of physical health settings and has used back support products with clients in hospital, home and work settings. The second is an active member of a professional ergonomic practice network and completes ergonomic assessments of homes and workplaces and provides back support recommendations, particularly for clients who have been injured in motor vehicle accidents.



## Final recommendation

EmbraceAIRPlus is an adjustable, lightweight, and portable backrest for mobile adolescents, adults and older adults who would benefit from lumbar support in a variety of environments, such as the office, the home and the car. An occupational therapist may particularly recommend the use of EmbraceAIRPlus for those who sit for prolonged periods of time, who are at risk of back pain or who have a history of back injuries and who would benefit from additional lumbar support to support the natural curvature of the spine and to reduce back pain. For occupational therapists doing ergonomic assessments and interventions, EmbraceAIRPlus is a relatively low-cost solution that offers more adjustability than other products in a similar price range. Reviewers were unanimous and recommended that EmbraceAIRPlus be accepted for the CAOT Product Recognition Program.

## References

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- van Duijvenbode, I. C., Jellema, P., van Poppel, M. N., & van Tulder, M. W. (2008). Lumbar supports for prevention and treatment of low back pain. *Cochrane Database Syst Rev*(2), Cd001823. doi:10.1002/14651858.CD001823.pub3
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