

Canadian Association of Occupational Therapists
Product Recognition Program

Signature Life Sleep Safe Home Bed Rail



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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 Signature Life Sleep Safe Home Bed Rail is a bed rail that assists with bed mobility (i.e. rolling on the side, sitting or moving up in the bed). This product also support sit-to-stand transfers from bed and may prevent falls from bed. Reviewers recommended that the Signature Life Sleep Safe Home Bed Rail be accepted for the CAOT Product Recognition Program. Information and recommendations regarding the performance of the product are provided in this report.



Signature Life Sleep Safe Home Bed Rail is recognized by CAOT.



Review report

The purpose of this product

The Signature Life Sleep Safe Home Bed Rail is a bed rail that assists with bed mobility (i.e. rolling on the side, sitting or moving up in the bed). This product also support sit-to-stand transfers from bed and may prevent falls from bed. When not in use, this bedrail can be fold out of the way, allowing caregivers unobstructed access to provide assistance.

The Signature Life Sleep Safe Home Bed Rail offers stability during sit-to-stand transfers from bed, and can be extended to three different lengths (26", 32" and 42") to prevent users from rolling out of bed. It can be used with mattresses between 12-18 inches thick and can support users up to 300 lbs. / 136 kg. It fits most standard and adjustable residential beds with the included "Safety Strap", and is adjustable by height and length to fit a wide variety of mattresses.

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

- The Signature Life Sleep Safe Home Bed Rail was found to be made of quality material. The bolt that holds the rail in the upright position is more solid than other bed rail models on the market.
- It is easy to adjust the length between the 3 length settings (26", 34" and 42"), facilitating the use of a longer rail when in bed and shorter bed rail when transferring. Users without adequate bilateral upper extremity use would require assistance to adjust the length of the bed rail.
- The product folds down out of the way to allow a caregiver to be closer to the user to assist with feeding, bathing, positioning or other activities of daily living. It may be hard for the user to lower the bed rail when in the bed as the rail is heavy and the lever is on the outside.
- To use this product, some space is required alongside the bed so that bedrail can be flipped down out of the way.
- The Signature Life Sleep Safe Home Bed Rail has a nice brown finish and comes with a storage pouch ideal to keep small belongings close by.
- Two people are required for installation because the mattress needs to be lifted to appropriately place the product, the product is heavy and also somewhat difficult to assemble. This product attaches to the bed with a "Safety Strap" to secure it to the bed frame. Assembly takes approximately 10-20 minutes. This product could be more difficult to install with different beds (e.g., beds without box spring or beds with a custom bed frame). It is also necessary to take the bolts out to adjust the height of the product from the base of the mattress, which reviewers found difficult. Specific and useful recommendations on where to install the bed rail and what height it should be set at are provided by the manufacturer.
- With any bed rail, there are potential risks of entrapment of limbs if there is a gap between the rail and the mattress. The Signature Life Sleep Safe Home Bed Rail has a few features to minimize this risk. The "Safety Strap" secured to the bedframe to keep it close to the mattress will reduces the risk of the bed rail sliding out. Fabric material also covers the gaps between the horizontal bars for part of the bed rail length (leaving the end uncovered for better grip for bed transfers). Reviewers appreciated that these risks are clearly outlined in the instruction manual and the product package.



- Regular monitoring is required once installed to ensure that there is no gap between mattress and rail, that the bolts are tight and that the straps are intact.
- A bed rail that extends may be considered a restraint in some provinces and/or situations. Reviewers recommend that users and professionals refer to their provincial safety norms related to the use and installation of this type of product. The Signature Life Sleep Safe Home Bed Rail can be moved down and out of the way by the user when in the bed. An occupational therapist or family member should ensure that the user is aware of how to move the rail out of the way and that they can physically do so or communicate to a caregiver if they want to get in and out of bed.

Important recommendations

Reviewers identified potential safety risks associated with the use of this product and recommend that users and professionals refer to their provincial safety norms related to this type of product.

The following potential risks have been mentioned by reviewers:

- Entrapment of limbs - Due to the gap between horizontal bars, an arm or a leg could become entrapped and result in injury.
- Suffocation hazard - The fabric material cover could be a suffocation hazard for a user who is not mobile in bed.
- Fall hazard - As the Signature Life Sleep Safe Home Bed Rail is secured under the mattress, it does move slightly when a lot of pressure is applied. Users that rely entirely on this product during their transfers may be destabilized by this slight motion and may fall.
- Contact injuries - “Active sleepers” may make contact with the device, which could result in bruising or other injuries.

Users of the Signature Life Sleep Safe Home Bed Rail are encouraged to review the safety information provided by the manufacturer in the assembly instructions package to help minimize these risks. It is also recommended that users follow the monitoring schedule recommended by the manufacturer.

This product clearly outlines that there is a 300 lb. / 136 kg weight restriction. Therefore, the reviewers recommend that this product not be used with individuals close or above that weight.

Consumers and caregivers are invited to read the safety recommendations related to bed rails issued in 2017 by the U.S. Food & Drug Administration (FDA, 2017).



Economic considerations

One reviewer reported that this product was good value for money as it is both sturdy and adjustable. The other two reviewers reported that in their experience, this product was more expensive than other similar products.

Scientific evidence

- According to Healy, Oliver, Milne and Connelly (2008), the role of bed rails in falls prevention is controversial, with many believing that bed rails may be harmful and ineffective while others support their use. However, their review concluded that serious direct injury from the use of bed rails is related to use of outdated designs and incorrect assembly rather than the use of bed rails themselves, and bed rails do not appear to increase the risk of falls or injury from falls (Healy et al., 2008).
- A literature review completed by Moore, Ryan and Rhead (2015) indicated that patients with bed rails appear less likely to fall and less likely to be seriously injured if they do fall. The authors emphasize that the decision to use bed rails must be based on an accurate, detailed, comprehensive and individualistic assessment of an individual's care needs and preferences, which must always be determined collaboratively with the individual and/or significant others (Moore et al., 2015).
- To our knowledge there is no published research on the Signature Life Sleep Safe Home Bed Rail. A quick search in PubMed and Google Scholar yielded no result.

Review committee

The Signature Life Sleep Safe Home Bed Rail was reviewed by three occupational therapists with diverse backgrounds, expertise and experience. The first reviewer has been working at a rural health care organization for three years, providing client care in acute, outpatient, long-term care and community care settings. She frequently recommends bed transfer aids to increase clients' functional independence and bed mobility. The second reviewer is an occupational therapist who works in the community. She addresses bed mobility and sleep issues in clients who have sustained injuries or are experiencing chronic illness. She commonly recommends products that are used to aid in the safety, comfort and ease of sleeping and bed mobility. The third reviewer is a new graduate who works in a hospital on an acute medicine/surgery floor. In this role, she is responsible for recommending equipment at discharge and performing evaluations and training with various equipment with clients on the unit.

Final recommendation

The reviewers were unanimous in recommending that the Signature Life Sleep Safe Home Bed Rail be accepted for the CAOT Product Recognition Program. This product may be recommended by an occupational therapist for clients who are having difficulty with bed mobility or transfers due to weakness or decreased balance. It could also be recommended to clients who are living independently or with assistance at home, upon discharge from hospital or within a context of home safety assessment and recommendations.



References

- Healey, F., Oliver, D., Milne, A., & Connelly, J. B. (2008). The effect of bedrails on falls and injury: a systematic review of clinical studies. *Age and ageing*, 37(4), 368-378.
- Moore, K. Ryan, A. & Rhead, G. (2015). *A review of the literature on restraints and the use of bedrails*. Retrieved from http://uir.ulster.ac.uk/32105/2/Literature_Review_Report_on_Bed_Rails_July_2015__FINAL.pdf
- U.S. Food & Drug Administration (FDA). (2017). *Recommendations for Consumers and Caregivers about Bed Rails*. Retrieved from <https://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/HomeHealthandConsumer/ConsumerProducts/BedRailSafety/ucm362843.htm>