

Supporting Literature on SNOO Smart Sleeper

SNOO Smart Sleeper is a responsive bassinet that calms fussy infants and improves sleep using womb-like sensations and safe swaddling that secures babies in a supine position.

Peer-Reviewed Journal Articles

Gluck S, Lillis TA, Aroor K, Laine CM, Karp H. (2026). Longitudinal Infant Sleep Monitoring Using a Sensor-Enabled Responsive Bassinet: A Population-Scale Feasibility Study. *Sensors*. 2026; 26(13):3990. <https://doi.org/10.3390/s26133990>

Rubio-Chavez A, Koelliker EL, Askew EA, et al. (2026). Pragmatic Parental Support to Mitigate Burnout Among Pregnant and Postpartum Trainees: A Randomized Clinical Trial. *JAMA*. Published online May 13, 2026. [doi:10.1001/jama.2026.5663](https://doi.org/10.1001/jama.2026.5663)

Pariser-Schmidt, M., Luo, S., & Chwa, J. (2025). Improving Neonatal Abstinence Syndrome Outcomes and Nurse Experiences: Integrating Responsive Bassinets with Eat, Sleep, Console. *Advances in Neonatal Care*, April 2025; DOI: 10.1097/ANC.0000000000001266.

Gellasch, P., Torraca, M., & Okun, M. (2024). Sleep and Mood Among Women with Histories of Depression When They Used a Responsive Infant Bassinet During the COVID-19 Pandemic. *JOGNN*. 2024; 53(4):406–415. [doi:10.1016/j.jogn.2024.02.006](https://doi.org/10.1016/j.jogn.2024.02.006).

Quin, N., Tikotzky, L., Atsbury, L., Spina, M. A., Fisher, J., Stafford, L., Wiley, J., & Bei, B. (2024). Preventing postpartum insomnia: Findings from a three-arm randomised controlled trial of Cognitive Behavioural Therapy for Insomnia, a responsive bassinet, and sleep hygiene. *Sleep*, 2024; zsae106, [doi:10.1093/sleep/zsae106](https://doi.org/10.1093/sleep/zsae106).

Robinson, T.W., Stikes, R., Sorrell, J., Gater, A., Booth, A.T., Gardner, A., Greenwell, C., Businger, S., Low, R., & Petrie, R. (2024). Treatment for Neonatal Abstinence Syndrome using Nonpharmacological Interventions. *American Journal of Perinatology*. May 2024; doi.org/10.1055/s-0044-1786744.

Gellasch, P., Johnson, S., Walsh, T.A. (2023). The Experiences and Perceptions of Neonatal Clinicians When Using a Responsive Bassinet. *Advances in Neonatal Care*, 23(4): E88-E95, [doi:10.1097/ANC.0000000000001086](https://doi.org/10.1097/ANC.0000000000001086).

Gellasch, P., Walsh, T.A., & Geiger, S. (2023). A Descriptive Evaluation of Time Savings and Work Experience Among Neonatal Clinicians When Using a Responsive Bassinet. *Journal of Neonatal Nursing*, 29.5(2023): 781-785; [doi:10.1016/j.jnn.2023.03.001](https://doi.org/10.1016/j.jnn.2023.03.001).

Lysaught, S., Erickson, L., Marshall, J.A., & Feldman, K. (2023). SSSH: Responsive Soothing Bassinet Feasibility Study for Infants with Congenital Heart Disease After

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Cardiac Surgery. *Journal of Pediatric Nursing*. August 2023; doi:10.1016/j.pedn.2023.07.022.

Singh, J.K. & Menahem, S. (2023). The five "S's" and the "SNOO" Smart Sleeper-non-pharmacological interventions (NPI) to promote sleep and reduce crying of infants: a scoping review. *Translational Pediatrics*, 2023 Aug 30;12(8):1527-1539. doi:10.21037/tp-23-42.

Quin, N., Tikotzky, L., Stafford, L., Fisher, J., & Bei, B. (2022). Preventing Postpartum Insomnia by Targeting Maternal Versus Infant Sleep: A Protocol for a Randomized Controlled Trial (The Study for Mother- Infant Sleep "SMILE"). *Sleep Advances*, 3(1), doi:10.1093/sleepadvances/zpab020.

Ponder, K. L., Egesdal, C., Kuller, J., & Joe, P. (2021). Project Console: A Quality Improvement Initiative for Neonatal Abstinence Syndrome in a Children's Hospital Level IV Neonatal Intensive Care Unit. *BMJ Open Quality*, May 2021;10(2): e001079. doi:10.1136/bmjopen-2020-001079.

Möller, E., De Vente, W., & Rodenburg, R. (2019). Infant Crying and the Calming Response: Parental Versus Mechanical Soothing Using Swaddling, Sound, And Movement. *PLoS ONE*, 14(4): e0214548. doi:10.1371/journal.pone.0214548.

Conference Abstracts and Presentations

Iurcotta, T., Gentzler, E., Hammond, J., Isler, J., & Sahni, R. (2024, May 2-6). Sleep State Differences in Cerebral and Arterial Oxygenation and Cardiac Activity in Preterm Infants [Conference Poster Abstract]. PAS 2024, Toronto, Canada. Retrieved July 3, 2024, from <https://2024.pas-meeting.org/fsPopup.asp?PosterID=647487&mode=posterInfo>.

Iurcotta, T., Hammond, J., Isler, J., & Sahni, R. (2024, May 2-6). The Effects of a Multimodal Environmental Modulation on Sleep Stage Distribution in Preterm Infants: A Randomized Controlled Trial [Conference Poster Abstract]. PAS 2024, Toronto, Canada. Retrieved July 3, 2024, from <https://2024.pasmeeting.org/fsPopup.asp?PosterID=647448&mode=posterInfo>.

Teague, M. (2024, April). "SNOO: A Quality Improvement Project" [Conference poster]. AWHONN, Ft. Collins, CO.

Pariser-Schmidt, M. (2024, March 24-25). Project August: Impact of a Responsive Bassinet and Eat, Sleep, Console on Neonatal Intensive Care Unit Admissions for Neonatal Abstinence Syndrome [Poster]. New England Association of Neonatal Nurses Conference, Newport, RI, United States.

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Luo, S. & Pariser-Schmidt, M. (2023, June 26-27). NICU Nurse Experiences and Perceived Time Savings Using SNOO in the Care of Infants with Neonatal Abstinence Syndrome [Conference Poster]. Texas HHS & UT Health NAS Symposium, San Antonio, TX, United States.

Quin, N., Tikotzky, L., Astbury, L., Stafford, L., Fisher, J., Wiley, J., & Bei, B. (2022). 0474 Three-arm Randomised Controlled Trial of Cognitive Behavioural Therapy for Insomnia, a Responsive Bassinet, and Sleep Hygiene for Preventing Postpartum Insomnia: Preliminary Findings on Maternal Insomnia and Sleep Outcomes [Abstract]. *SLEEP*, June 2022, 45(S1): A210, [doi:10.1093/sleep/zsac079.471](https://doi.org/10.1093/sleep/zsac079.471).

Gellasch, P. (2022, September 14-17). New Technologies to Support Nurses During the Pandemic: Can a Responsive Bassinet Reduce Nursing Burden and Improve Clinician Experience? [Conference Poster]. National Association of Neonatal Nurses Conference, Las Vegas, NV, United States.

Karp, H. (2022, June 5) Evaluation of a Womb-like Sensory Intervention to Improve Infant Sleep [Conference Poster]. AASM SLEEP Conference 2022, Charlotte, NC.

Karp, H. (2022, March 11-16). Evaluation of a Womb-like Sensory Intervention to Improve Infant Sleep [Conference Poster Abstract]. 16th World Sleep Congress, Rome, Italy. *Sleep Medicine*, 2022;100(S1): S195.
<https://www.sciencedirect.com/science/article/pii/S1389945722007110>

Karp, H. & Balasubramanian, S. (2022, March 11-16). A Comparison of SIDS/SUID Behavioral Risk Among Users of a Responsive Bassinet [Conference Poster Abstract]. 16th World Sleep Congress, Rome, Italy. *Sleep Medicine*, 2022;100(S1): S191.
<https://www.sciencedirect.com/science/article/pii/S1389945722006992>

Lysaught, S., Erickson, L., Marshall, J.A., & Feldman, K. (2022). The Sssh's: Snoo Smart Sleeper Use in Post-Operative Infants with Congenital Heart Disease [Poster]. Research at Children's Mercy Month 2022, Kansas City, MO, United States.

Romano, D. & Katz, D. (2021, July 7-11). Case Study: Use of a Responsive Bassinet to Improve Sleep Outcomes Among New Parent Clinicians During COVID-19 [Conference Poster]. Postpartum Support International 34th Annual Conference, Virtual.

Okun, M., Feliciano, L., Karp, H., & Lindsay, K. (2021). 759 Sleep and Mental Health in New Mothers with a History of Depression: Preliminary Data from Late Pregnancy to 1-month Postpartum [Abstract]. *Sleep*, May 2021, 44(S2): A296, [doi:10.1093/sleep/zsab072.756](https://doi.org/10.1093/sleep/zsab072.756).

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Jensen, R. & Cochran, J. (2020, September 22-23). Grandparents Use of a Responsive Bassinette (SNOO) As in Home Care for an Infant with Neonatal Abstinence Syndrome: A Case Series [Conference Poster]. West Virginia Clinical & Translational Science Institute Conference, Morgantown, WV, United States.

Okun, M., Karp, H., & Balasubramanian, S. (2020). 0978 SNOO: A Wellness Device to Improve Infant Sleep [Abstract]. *SLEEP*, April 2020, 43(S1): A371-A372, [doi:10.1093/sleep/zsaa056.974](https://doi.org/10.1093/sleep/zsaa056.974).

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Supporting Literature on the 5 S's

The 5 S's (Swaddling, Side/stomach positioning, Shushing, Swinging, Sucking) is a framework of techniques to soothe babies and promote sleep by imitating womb-like sensations.

Lavner, J. A., Hohman, E. E., Beach, S. R. H., Stansfield, B. K., & Savage, J. S. (2023). Effects of a Responsive Parenting Intervention Among Black Families on Infant Sleep. *JAMA Network Open*, 6(3). doi:10.1001/jamanetworkopen.2023.6276.

Hohman, E. E., Savage, J. S., Marini, M. E., Anzman-Frasca, S., Buxton, O. M., Loken, E., & Paul, I. M. (2022). Effect of the INSIGHT Firstborn Parenting Intervention on Second-born Sleep. *Pediatrics*, July 2022;150(1): e2021055244. doi:10.1542/peds.2021-055244.

Botha, E., Helminen, M., Kaunonen, M., Lubbe, W., & Joronen, K. (2020). The Effects of an Infant Calming Intervention on Mothers' Parenting Self-Efficacy and Satisfaction During the Postpartum Period: A Randomized Controlled Trial. *Journal of Perinatal & Neonatal Nursing*, Oct/Dec 2020;34(4):300-310, doi:10.1097/JPN.0000000000000510.

Dönmez, Ö. & Bayik Temel, A. (2019). Effect of Soothing Techniques on Infants' Self-Regulation Behaviors (Sleeping, Crying, Feeding): A Randomized Controlled Study. *Japan Journal of Nursing Science*, Oct 2019;16(4):407-419. doi:10.1111/jjns.12250.

Anzman-Frasca, S., Paul, I. M., Moding, K. J., Savage, J. S., Hohman, E. E., & Birch, L. L. (2018). Effects of the INSIGHT Obesity Preventive Intervention on Reported and Observed Infant Temperament. *Journal of Developmental & Behavioral Pediatrics*, 2018 Dec;39(9):736- 743. doi:10.1097/DBP.0000000000000597.

Paul, I. M., Savage, J. S., Anzman-Frasca, S., Marini, M. E., Beiler, J. S., Hess, L. B., Loken, E., & Birch L. L. (2018). Effect of a Responsive Parenting Educational Intervention on Childhood Weight Outcomes at 3 Years of Age: The INSIGHT Randomized Clinical Trial. *JAMA*, 2018 Aug 7;320(5):461-468. doi:10.1001/jama.2018.9432.

Parga, J., Bhatt, R., Kesavan, K., Sim, M. S., Karp, H., Harper, R., & Zeltzer, L. (2017). A Prospective Observational Cohort Study of Exposure to Womb-Like Sounds to Stabilize Breathing and Cardiovascular Patterns in Preterm Neonates. *The Journal of Maternal-Fetal & Neonatal Medicine*, 31:17,2245-2251, doi:10.1080/14767058.2017.1339269.

Paul, I. M., Savage, J. S., Anzman-Frasca, S., Marini, M. E., Mindell, J., & Birch, L. L. (2016). INSIGHT Responsive Parenting Intervention and Infant Sleep. *Pediatrics*, Jul 2016;138(1): e20160762. doi:10.1542/peds.2016-0762.

Savage, J. S., Birch, L. L., Marini, M. E., Anzman-Frasca, S., & Paul, I. M. (2016). Effect of the INSIGHT Responsive Parenting Intervention on Rapid Infant Weight Gain and

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Overweight Status at Age 1 Year: A Randomized Clinical Trial. *JAMA Pediatrics*, 2016;170(8):742-749. [doi:10.1001/jamapediatrics.2016.0445](https://doi.org/10.1001/jamapediatrics.2016.0445).

Martiningsih, W. & Setijaningsih, T. (2015). The Effect of Physical Intervention 5's (Swaddling, Side-Stomach, Shushing, Swinging, Sucking) Toward Pain and The Duration of Crying in Infants with DPT Immunization. *Malaysian Journal of Nursing*, 7(1):38-42. <https://ejournal.lucp.net/index.php/mjn/article/view/519/487>.

Anzman-Frasca, S., Stifter, C. A., Paul, I. M., & Birch, L. L. (2014). Negative Temperament as a Moderator of Intervention Effects in Infancy: Testing a Differential Susceptibility Model. *Prev Sci*, 2014 15:643-653. [doi:10.1007/s11121-013-0408-4](https://doi.org/10.1007/s11121-013-0408-4).

Harrington, J. W., Logan, S., Harwell, C., Gardner, J., Swingle, J., McGuire, E., & Santos, R. (2012). Effective Analgesia Using Physical Interventions for Infant Immunizations. *Pediatrics*, May 2012;129(5):815-22. [doi:10.1542/peds.2011-1607](https://doi.org/10.1542/peds.2011-1607).

Paul, I. M., Savage, J. S., Anzman-Frasca, S., Beiler, J. S., Marini, M. E., Stokes, J. L., & Birch, L. L. (2010). Preventing Obesity During Infancy: A Pilot Study. *Obesity* (Silver Spring), 2011 Feb;19(2):353-61. [doi:10.1038/oby.2010.182](https://doi.org/10.1038/oby.2010.182).

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Supporting Literature on Infant Sleep

Gilchrist, A., Aylward, B. S., Laine, C. M., & Karp, H. (2025). Maturation of infant sleep during the first 6 months of life: a mini-scoping review. *Frontiers in neuroscience*, 19, 1581325. <https://doi.org/10.3389/fnins.2025.1581325>.

Walsh, K. (2025). Beyond counseling: bridging the gap to help parents follow infant sleep practices. *New Jersey Pediatrics*, 53(3), 14-17. [FinalNJPediatrics-Journal-Fall25 by Loriann Reinhardt - Flipsnack](#)

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