

Rasmus Kopp Hansen
Assistant Professor
Department of Health Science and Technology
The Faculty of Medicine
Respiratory and Critical Care
Type of address: Visiting address.
Selma Lagerløfs Vej 249
9260
Gistrup
Denmark
Email: rkopp@hst.aau.dk



Research profile

I am interested in integrative physiology, with special interest in the effects of physical activity (exercise) and inactivity (e.g., paralysis following spinal cord injury) on the cardiovascular and respiratory systems.

Research interests:

Respiratory muscle fatigue and respiratory muscle training

Cardiovascular function in health and disease

Experimental physiology

Autonomic cardiovascular control

Cardiopulmonary exercise testing (CPET).

Spinal cord injury, mechanical ventilation, respiratory disease

Qualifications

Health and Exercise Science, Ph.D., PHYSICAL ACTIVITY BARRIERS IN WHEELCHAIR USERS, AND CARDIOMETABOLIC HEALTH EFFECTS OF UPPER-BODY ROWING EXERCISE IN INDIVIDUALS WITH SPINAL CORD INJURY

15 Nov 2018 → 16 Jun 2022

Award Date: 16 Jun 2022

Sports Science, MSc, EFFECT OF INTENSE EXERCISE HYPERPNEA ON CEREBRAL BLOOD FLOW AND OXYGENATION

2015 → 2017

Award Date: 27 Jun 2017

Sports Science, BSc, Investigation of the acute effects of low intensity physical activity on post-prandial blood glucose levels in healthy, non-obese, inactive men and women

2010 → 2013

Employment

Assistant Professor

Assistant Professor

Department of Health Science and Technology

The Faculty of Medicine

Gistrup, Denmark

1 Apr 2024 → 31 Dec 4712

Assistant Professor

Assistant Professor

The Faculty of Medicine

Gistrup, Denmark

1 Apr 2024 → 31 Dec 4712

Assistant Professor

Assistant Professor

Respiratory and Critical Care

The Faculty of Medicine
Gistrup, Denmark
1 Apr 2024 → 31 Dec 4712

Medlemskab

The Scandinavian Physiological Society
Sweden
1 Jan 2022 → present

Medlemskab

Danish Cardiovascular Academy
Denmark
1 Jan 2021 → present

Research outputs

Effects of 12 weeks of upper-body rowing exercise on autonomic cardiovascular control and vascular structure in spinal cord-injured humans

Hansen, R. K., Bering, R., Graff, C., Volianitis, S., Laessoe, U., Samani, A. & Larsen, R. G., Feb 2026, In: *Experimental Physiology*. 111, 2, p. 375-389 15 p.

Effects of Exercise Training on Autonomic Cardiovascular Control in Individuals with Spinal Cord Injury: A Systematic Review

Hansen, R. K., Williamson, S. D., Larsen, R. G. & Ravn, S. L., Feb 2026, In: *Journal of Applied Physiology*. 140, 2, p. 351-375 25 p.

The effect of respiratory metaboreflex on cerebral haemodynamics during exercise

Hansen, R. K., Secher, N. H., Schelske, M. W. & Volianitis, S., 3 Nov 2025, (E-pub ahead of print) In: *Experimental Physiology*.

Effects of Exercise Training on Orthostatic Intolerance and Heart Rate Variability in Individuals with Spinal Cord Injury: A Systematic Review

Hansen, R. K., Williamson, S. D., Larsen, R. G. & Ravn, S. L., Oct 2025.

Impact of upper-body ergometer rowing exercise on aerobic fitness and cardiometabolic disease risk in individuals with spinal cord injury: A 6-month follow-up study

Hansen, R. K., Laessoe, U., Samani, A., Møllgaard, M., Rasmussen, R. W., Handberg, A. & Larsen, R. G., Nov 2024, In: *The journal of spinal cord medicine*. 47, 6, p. 996-1006 11 p.

Moving together - benefits of an online dance program on physical and mental health for older women: an exploratory mixed-method study

Hansen, R. K., Jochum, E., Egholm, D., Villumsen, M. & Hirata, R. P., 2 May 2024, In: *BMC Geriatrics*. 24, 1, 392.

Carotid and brachial artery changes after 12 weeks of upper-body rowing exercise in spinal cord-injured humans

Hansen, R. K., Bering, R., Samani, A. & Larsen, R. G., 2024, *Physiology in Focus 2024 : Abstracts*. p. 272-273

Moving together-benefits of a 12-week online dance training intervention on static and dynamic postural stability and gait speed in older women: an exploratory pre-post study

Hansen, R. K., Jochum, E., Egholm, D., Villumsen, M. & Hirata, R. P., 2024, In: *Frontiers in Sports and Active Living*. 6, 1384387.

Moving Together - benefits of an online dance program on physical and mental health for older adults: a mixed-method study

Hansen, R. K., Jochum, E., Egholm, D., Villumsen, M. & Hirata, R. P., 1 Nov 2023, Research Square Platform LLC, 31 p.

Moving together: Effect of a 12-week online dance training intervention on static and dynamic postural stability and gait speed in older adults. A pre-post intervention study

Hansen, R. K., Jochum, E., Egholm, D., Villumsen, M. & Hirata, R. P., 1 Nov 2023, medRxiv, 24 p.

Correction to: The authors respond to: sympathetic function as key player in VO2 max and brachial artery diameter (European Journal of Applied Physiology, (2023), 123, 7, (1597-1598), 10.1007/s00421-023-05218-z)

Hansen, R. K., Samani, A., Handberg, A., Møllgaard, M., Figlewski, K., Thijssen, D. H. J., Gliemann, L. & Larsen, R. G., Sept 2023, In: European Journal of Applied Physiology. 123, 9, 1 p., 2101.

The authors respond to: sympathetic function as key player in VO2 max and brachial artery diameter

Hansen, R. K., Samani, A., Handberg, A., Møllgaard, M., Figlewski, K., Thijssen, D. H. J., Gliemann, L. & Larsen, R. G., Jul 2023, In: European Journal of Applied Physiology. 123, 7, p. 1597-1598 2 p.

Rowing exercise increases cardiorespiratory fitness and brachial artery diameter but not traditional cardiometabolic risk factors in spinal cord-injured humans

Hansen, R. K., Samani, A., Laessoe, U., Handberg, A., Møllgaard, M., Figlewski, K., Thijssen, D. H. J., Gliemann, L. & Larsen, R. G., Jun 2023, In: European Journal of Applied Physiology. 123, 6, p. 1241-1255 15 p.

Sund i AAU SUND - men hvor sund?

Hansen, R. K., Larsen, R. G. & Franch, J., 12 Apr 2023

Upper-body Rowing Increases Cardiorespiratory Fitness But Not Flow-mediated Dilation In Individuals With Spinal Cord Injury

Hansen, R. K., Samani, A., Laessoe, U., Figlewski, K., Gliemann, L., Thijssen, D. H. J. & Larsen, R. G., 1 Sept 2022, In: Medicine and Science in Sports and Exercise. 54, Suppl. 9, p. 681

Romaskiner giver kørestolsbrugere bedre mulighed for træning

Hansen, R. K., 28 Jun 2022

Correction to: Wheelchair-modified ergometer rowing exercise in individuals with spinal cord injury: a feasibility, acceptability, and preliminary efficacy study (Spinal Cord Series and Cases, (2022), 8, 1, (48), 10.1038/s41394-022-00518-6)

Hansen, R. K., de Wit, J. L. J., Samani, A., Laessoe, U., Figlewski, K. & Larsen, R. G., 16 May 2022, In: Spinal Cord Series and Cases. 8, 1, 55.

Wheelchair-modified ergometer rowing exercise in individuals with spinal cord injury: a feasibility, acceptability, and preliminary efficacy study

Hansen, R. K., de Wit, J. L. J., Samani, A., Laessoe, U., Figlewski, K. & Larsen, R. G., 30 Apr 2022, In: Spinal Cord Series and Cases. 8, 1, 48.

Adaptive rowing exercise for people with spinal cord injury

Hansen, R. K., 2022, *Why research matters 2022: A collection of spinal cord research from around the world*. Spinal Research Institute, p. 8 1 p.

Effects of upper-body ergometer rowing exercise on aerobic fitness and cardiometabolic disease risk in individuals with spinal cord injury: a 6-months follow-up study

Hansen, R. K., Laessoe, U., Samani, A., Handberg, A. & Larsen, R. G., 2022, In: Acta Physiologica. 236, Suppl. 725, p. 234-235

Physical activity barriers in wheelchair users, and cardiometabolic health effects of upper-body rowing exercise in individuals with spinal cord injury

Hansen, R. K., 2022, Aalborg Universitetsforlag. 77 p.

Studie i træning: Romaskine

Hansen, R. K., 2022, In: RYK. 44, 3, p. 29

Sociodemographic characteristics associated with physical activity barrier perception among manual wheelchair users

Hansen, R. K., Samani, A., Laessoe, U., Larsen, R. G. & Cowan, R. E., Oct 2021, In: Disability and health journal. 14, 4, 101119.

Effekt af 12-ugers kørestolsmodificeret ro-træning

Hansen, R. K., Jun 2021, In: Parasport Viborg. 2, p. 5-9

Physical Activity Barriers in Danish Manual Wheelchair Users: A Cross-sectional Study

Hansen, R. K., Larsen, R. G., Laessoe, U., Samani, A. & Cowan, R. E., Apr 2021, In: Archives of Physical Medicine and Rehabilitation. 102, 4, p. 687-693

Effekt af træning på hjerte-/kredsløbsfunktion og metaboliske faktorer hos rygmarvsskadede kørestolsbrugere

Hansen, R. K., 2021, In: Aalborg Roklubs Medlemsblad. 80, 2, p. 18-19

Forskning i sundhed: Effekt af rotræning

Hansen, R. K., 2021, In: RYK. 43, 2, p. 34-35

Mange brugere af manuelle kørestole træner ikke

Hansen, R. K., 2021, In: Handicap - Nyt. 96, 2, p. 13-14

Effect of wheelchair-modified rowing exercise on cardiometabolic risk factors in spinal cord injured wheelchair users: protocol for a randomised controlled trial

Hansen, R. K., Samani, A., Laessoe, U., Handberg, A. & Larsen, R. G., 16 Oct 2020, In: BMJ Open. 10, 10, e040727.

CO2 supplementation dissociates cerebral oxygenation and middle cerebral artery blood velocity during maximal cycling

Hansen, R. K., Nielsen, P. S., Schelske, M. W., Secher, N. H. & Volianitis, S., Mar 2020, In: Scandinavian Journal of Medicine & Science in Sports. 30, 3, p. 399-407 9 p.

Perceived Barriers Of Physical Activity In Danish Manual Wheelchair Users

Hansen, R. K., Larsen, R. G., Læssøe, U., Samani, A. & E. Cowan, R., 2020, In: Medicine and Science in Sports and Exercise. 52, 7, suppl., p. 288-289

During maximal exercise frontal lobe oxygenation decreases despite elevation in middle cerebral artery flow velocity

Hansen, R. K., Nielsen, P., Schelske, M. W., Secher, N. & Volianitis, S., 2019, *Book of abstracts from 'Physiology 2019'*. p. 160 1 p. C058

Effects of resistance training frequency on short-term neuromuscular adaptations in untrained participants

Hansen, R. K., Jørgensen, R. R., Nielsen, P. S., Osuna-Florentz, P. & Kristiansen, M. V., 2017, In: Advances in Physical Education. 7, 4, p. 383-398 80143.

Breaking up prolonged sitting does not alter postprandial glycemia in young, normal-weight men and women

Hansen, R. K., Andersen, J. B., Vinther, A. S., Pielmeier, U. & Larsen, R. G., 2016, In: International Journal of Sports Medicine. 37, 14, p. 1097-1102

The short-term effects of high vs. low resistance training frequencies on neuromuscular adaptations in untrained subjects

Hansen, R. K., Osuna-Florentz, P., Nielsen, P. S., Jørgensen, R. R. & Kristiansen, M., 2016, *Program & Abstracts, 8th Annual Meeting of the Danish Society of Biomechanics, 7 October 2016, Hillerød, Denmark*. Koblauch, H. (ed.). Danish Society of Biomechanics, p. 15

Prizes

Spinal Research Institute's 2022 SCI Writing Prize

Hansen, R. K. (Recipient), 11 Oct 2022

Press/Media

Effekt af træning på hjerte-/kredsløbsfunktion og metaboliske faktorer hos rygmarvsskadede kørestolsbrugere

Hansen, R. K.

25/08/2020

1 Media contribution

Effekt af træning på hjerte- og kredsløbsfunktion

Hansen, R. K.

01/07/2020

1 Media contribution

Salsa er sundt: Online-dans gav målbar forbedring af ældres fysiske og mentale helbred

Hansen, R. K.

21/11/2023 → 27/11/2023

4 items of Media coverage

Salsa og moderne dans forbedrer ældres selvopfattede livskvalitet og kan potentielt mindske faldrisiko

Hansen, R. K.

24/11/2023

1 item of Media coverage

Salsa skal forebygge faldulykker hos ældre

Hansen, R. K.

08/01/2023 → 08/01/2023

10 items of Media coverage

Awards

Moving Together - Online Dance Intervention for mental and physical health in older adults

Pessoto Hirata, R. (PI), Hansen, R. K. (Project Coordinator), Jochum, E. (CoPI), Villumsen, M. (Project Participant) & Egholm, D. (Project Participant)

Tryg Foundation: DKK802.72

01/09/2022 → 31/08/2023

Projects

Moving Together - Online Dance Intervention for mental and physical health in older adults

Pessoto Hirata, R. (PI), Hansen, R. K. (Project Coordinator), Jochum, E. (CoPI), Villumsen, M. (Project Participant) & Egholm, D. (Project Participant)

Tryg Foundation

01/09/2022 → 31/08/2023