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## Publikationer

### **Optimizing recovery strategies for winter athletes: insights for Milano-Cortina 2026 Olympic Games**

Edholm, P., Ørtenblad, N., Holmberg, H. C. & Sperlich, B., 21. aug. 2024, (E-pub ahead of print) I: Sport Sciences for Health.

### **Need to revise classification of physical activity intensity in older adults? The use of estimated METs, measured METs and VO2Reserve**

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### **Accuracy of a continuous glucose monitoring system applied before, during, and after an intense leg-squat session with low- and high-carbohydrate availability in young adults without diabetes**

Matzka, M., Ørtenblad, N., Lenk, M. & Sperlich, B., 22. jul. 2024, (E-pub ahead of print) I: European Journal of Applied Physiology.

### **Correction: Substrate utilization and durability during prolonged intermittent exercise in elite road cyclists**

Ørtenblad, N., Zachariassen, M., Nielsen, J. & Gejl, K. D., jul. 2024, I: European Journal of Applied Physiology. 124, 7, s. 2207-2208

### **Substrate utilization and durability during prolonged intermittent exercise in elite road cyclists**

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### **Piperine enhances contractile force in slow- and fast-twitch muscle**

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### **Differential utilisation of subcellular skeletal muscle glycogen pools: a comparative analysis between 1 and 15 min of maximal exercise**

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### **High-intensity interval training combining rowing and cycling improves but does not restore beta-cell function in type 2 diabetes**

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### **A century of exercise physiology: effects of muscle contraction and exercise on skeletal muscle Na<sup>+</sup>,K<sup>+</sup>-ATPase, Na<sup>+</sup> and K<sup>+</sup> ions, and on plasma K<sup>+</sup> concentration—historical developments: effects of muscle contraction and exercise on skeletal muscle Na<sup>+</sup>,K<sup>+</sup>-ATPase, Na<sup>+</sup> and K<sup>+</sup> ions, and on plasma K<sup>+</sup> concentration—historical developments**

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**Skeletal muscle mitochondria demonstrate similar respiration per cristae surface area independent of training status and sex in healthy humans**

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**No Net-Utilization of Intramuscular Lipid Droplets during Repeated High-Intensity Intermittent Exercise**

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**High-throughput proteomics uncovers exercise training and type 2 diabetes-induced changes in human white adipose tissue**

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**Skeletal muscle HSP70 expression is not associated with glycogen availability during recovery in elite endurance athletes**

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**High-volume strength training decreases mitochondrial respiratory capacity in skeletal muscle of young well-trained rowers**

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**The Role of Muscle Glycogen Content and Localization in High-Intensity Exercise Performance: A Placebo-Controlled Trial**

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**Fibre type and localisation-specific muscle glycogen utilisation during repeated high-intensity intermittent exercise**

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**Skeletal muscle sarcoplasmic reticulum Ca<sup>2+</sup> uptake preferentially use glycogenolytic derived ATP**

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**The inhibitory effects of two distinct inhibitors on glycogen phosphorylase activity and contractile function in chemically skinned single fibers**

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**Calcium Fluxes in Work-Related Muscle Disorder: Implications from a Rat Model**

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### **Antioxidant status and lipid peroxidation after short-term maximal exercise in trained and untrained humans**

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## **Aktiviteter**

### **Can aerobic exercise elicit neuroprotective effects in multiple sclerosis?**

Langeskov-Christensen, M. (Foredragsholder), Hvid, L. G. (Andet), Nygaard, M. K. E. (Andet), Jensen, H. (Andet), Nielsen, H. H. (Andet), Petersen, T. (Andet), Ørtenblad, N. (Andet), Stenager, E. (Andet), Eskildsen, S. F. (Andet) & Dalgas, U. (Andet)  
21. jun. 2019

### **Can aerobic exercise elicit neuroprotective effects in multiple sclerosis?**

Christensen, M. L. (Underviser), Hvid, L. G. (Underviser), Nygaard, M. K. E. (Underviser), Jensen, H. B. (Underviser), Nielsen, H. H. (Underviser), Petersen, T. (Underviser), Ørtenblad, N. (Underviser), Stenager, E. (Underviser), Eskildsen, S. F. (Underviser) & Dalgas, U. (Underviser)  
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### **Can aerobic exercise elicit neuroprotective effects in multiple sclerosis?**

Langeskov-Christensen, M. (Foredragsholder), Hvid, L. G. (Andet), Nygaard, M. K. E. (Andet), Jensen, H. (Andet), Nielsen, H. H. (Andet), Petersen, T. (Andet), Ørtenblad, N. (Andet), Stenager, E. (Andet), Eskildsen, S. F. (Andet) & Dalgas, U. (Andet)  
5. mar. 2019

### **Repeated sprint exercise affects contractile apparatus and force production of isolated human muscle fibres.**

Ørtenblad, N. (Foredragsholder)  
13. sep. 2014

### **Role of glycogen in skeletal muscle Ca<sup>2+</sup> regulation.**

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23. aug. 2014

### **Cykeltræning - tips og tricks fra forskerverdenen**

Ørtenblad, N. (Foredragsholder)  
22. jan. 2013

### **European Journal of Applied Physiology (Tidsskrift)**

Ørtenblad, N. (Peer reviewer)  
13. jul. 2012 → 30. jul. 2012

### **Role of Glycogen in Muscle Function**

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**Americam College of Sports Medicine**

Ørtenblad, N. (Arrangør)

1. jun. 2012

**Role of Glycogen in Skeletal Muscle Function**

Ørtenblad, N. (Foredragsholder)

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**Americam College of Sports Medicine**

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29. maj 2012 → 2. jun. 2012

**Fatigue with Prolonged Exercise: Tretthetsmekanismer och uthållighet**

Ørtenblad, N. (Foredragsholder)

28. apr. 2012

**Carbohydrate and Performance: Kolhydrater och prestation**

Ørtenblad, N. (Foredragsholder)

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**Role of Muscle Glycogen for Sport Performance**

Ørtenblad, N. (Foredragsholder)

15. mar. 2012

**Cykling; præstation og træning**

Ørtenblad, N. (Foredragsholder)

16. feb. 2012

**Exercise Physiology**

Ørtenblad, N. (Deltager)

19. jan. 2012 → 21. jan. 2012

**Exercise Physiology**

Ørtenblad, N. (Deltager)

19. jan. 2012 → 21. jan. 2012

**Technology and Biomechanics in Sport, Ramundberget**

Ørtenblad, N. (Deltager)

17. jan. 2012 → 19. jan. 2012

**Muscle and Nerve (Tidsskrift)**

Ørtenblad, N. (Peer reviewer)

2. jan. 2012 → 12. feb. 2012

**Censor: censor på speciale**

Ørtenblad, N. (Censor)

19. dec. 2011

**Frontiers in Physiology (Tidsskrift)**

Ørtenblad, N. (Peer reviewer)

15. dec. 2011 → 12. feb. 2012

**GLYCOGEN RESYSNTHESIS RATE FOLLOWING CROSS COUNTRY SKIING IS CLOSELY CORRELATED TO SKELETAL MUSCLE CONTENT**

Ørtenblad, N. (Foredragsholder)  
1. dec. 2011

**Journal of Physiology (Tidsskrift)**

Ørtenblad, N. (Peer reviewer)  
10. nov. 2011 → 25. nov. 2011

**Skeletal muscle fatigue: role of glycogen availability and subcellular localization within fibre types**

Ørtenblad, N. (Foredragsholder)  
10. nov. 2011

**Mid Sweden University**

Ørtenblad, N. (Gæsteforsker)  
6. nov. 2011 → 11. nov. 2011

**Københavns Universitet (Ekstern organisation)**

Ørtenblad, N. (Medlem)  
1. nov. 2011 → 30. nov. 2011

**Muscle Metabolism and E-C Coupling**

Ørtenblad, N. (Underviser)  
3. jun. 2011

**Seminar: Role of Muscle Glycogen on Skeletal Muscle Function**

Ørtenblad, N. (Foredragsholder)  
1. jun. 2011

**Inviteret foredrag: Role of Structure on the Skeletal Muscle Function**

Ørtenblad, N. (Foredragsholder)  
7. apr. 2011

**What I am talking about, When Im talking about Glycogen: The role of glycogen localization on skeletal muscle E-C coupling**

Ørtenblad, N. (Foredragsholder)  
28. mar. 2011

**The Scientific Research Process**

Ørtenblad, N. (Foredragsholder)  
16. mar. 2011

**Censor**

Ørtenblad, N. (Censor)  
1. mar. 2011 → 1. apr. 2011

**La Trobe University**

Ørtenblad, N. (Gæsteforsker)  
1. mar. 2011 → 15. jul. 2011

**Advanced Exercise Physiology**

Ørtenblad, N. (Andet)  
11. feb. 2011 → 1. apr. 2011

**Australian Catholic University**  
Ørtenblad, N. (Gæsteforsker)  
28. jan. 2011 → 28. feb. 2011

**Aarhus Universitet (Ekstern organisation)**  
Ørtenblad, N. (Medlem)  
15. jan. 2011 → 31. jan. 2011

**Journal of Physiology (Tidsskrift)**  
Ørtenblad, N. (Peer reviewer)  
10. jan. 2011 → 15. sep. 2011

**American Journal of Physical Medicine & Rehabilitation (Tidsskrift)**  
Ørtenblad, N. (Peer reviewer)  
5. jan. 2011 → 19. jan. 2011

**Københavns Universitet (Ekstern organisation)**  
Ørtenblad, N. (Medlem)  
4. nov. 2010 → 3. dec. 2010

**National Research Foundation of South Africa (Ekstern organisation)**  
Ørtenblad, N. (Medlem)  
1. okt. 2010 → 1. nov. 2010

**Censor: Menneskets præstationsevne og træthedudvikling**  
Ørtenblad, N. (Censor)  
28. jun. 2010 → 19. jul. 2010

**Skeletal muscle glycogen and muscle function**  
Ørtenblad, N. (Foredragsholder)  
5. jun. 2010

**Homage to August Krogh : Celebrating the 90th anniversary of his Nobel prize in physiology and medicine**  
Ørtenblad, N. (Deltager)  
1. jun. 2010 → 4. jun. 2010

**Københavns Universitet (Ekstern organisation)**  
Ørtenblad, N. (Medlem)  
1. jun. 2010 → 5. jul. 2010

**Ministerium (Ekstern organisation)**  
Ørtenblad, N. (Medlem)  
15. maj 2010 → 15. jun. 2010

**Anaerob Træning: Censor ved kurset Anaerob Træning, Institut for Idræt, KU**  
Ørtenblad, N. (Censor)  
28. apr. 2010 → ...

**Syddansk Universitet (Ekstern organisation)**  
Ørtenblad, N. (Medlem)  
21. apr. 2010

**Glycogen-protein association in human skeletal muscle; effects of exercise: Opponent på PhD- afhandling af Cand Scient**  
**Jace Drain**  
Ørtenblad, N. (Andet)

1. mar. 2010 → 30. apr. 2010

#### **Mid Sweden University**

Ørtenblad, N. (Gæsteforsker)  
19. jan. 2010 → 21. apr. 2010

#### **Muskelfysiologi- og biomekanik seminar : Seminar med deltagere fra Fysiologisk Institut, AU og Institut for Idræt, AU, samt Forskningsen for Muskelfysiologi og Biomekanik, Institut for idræt og Biomekanik, SDU**

Ørtenblad, N. (Arrangør)  
11. jan. 2010 → ...

#### **Journal of Physiology (Tidsskrift)**

Ørtenblad, N. (Redaktør)  
1. jan. 2010

#### **Importance of KATP channels for myocardial and skeletal muscle function**

Ørtenblad, N. (Foredragsholder)  
28. aug. 2009

#### **The lactate ion protects excitability and force in depolarized muscle fibres by inhibiting chloride conductance.**

Ørtenblad, N. (Foredragsholder)  
26. aug. 2009

### **Publikationer Abstracts**

#### **High-intensity interval training combining biking and rowing markedly improves insulin sensitivity, body composition and VO(2)max in obesity and type 2 diabetes**

Petersen, M. H., de Almeida, M. E., Wentorf, E. K., Ortenblad, N. & Hojlund, K., sep. 2020, I: Diabetologia. 63, Suppl. 1, s. S98-S99 195.

#### **Relationship Between Content Of Mitochondria And Z-disk Or Fiber Types**

Geng, G., Jensen, R., Liang, Y., Qiu, J., Niels, O. & Joachim, N., 1. jul. 2020, I: Medicine and Science in Sports and Exercise. 52, 7S, s. 921 1 s.

#### **The Associations Of Mitochondrial Content And Maximal Oxygen Uptake**

Liang, Y., Jensen, R., Geng, G., Qiu, J., Ortenblad, N. & Nielsen, J., 1. jul. 2020, I: Medicine and Science in Sports and Exercise. 52, 7S, s. 156-157

#### **Subcellular localization- and fibre type-dependent utilization of muscle glycogen during heavy resistance training in elite weight lifters**

Hokken, R., Laugesen, S., Aagaard, P., Suetta, C., Frandsen, U., Ørtenblad, N. & Nielsen, J., 16. nov. 2019, I: Acta Physiologica. 227, S721

#### **Skeletal muscle sarcoplasmic reticulum Ca2 uptake preferentially use glycogenolytic derived ATP**

Kristiansen, M. R., Jensen, R., Nielsen, J. & Ortenblad, N., nov. 2019, I: Acta Physiologica. 227, S721, s. 77 1 s., e13414.

#### **The inhibitory effects of two distinct inhibitors on glycogen phosphorylase activity and contractile function in chemically skinned single fibers**

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#### **The time-course of intramuscular lipid droplet utilization at different subcellular localizations and fiber types during endurance exercise in lean males**

Kristensen, D., Jensen, R., Plomgaard, P., Ørtenblad, N. & Nielsen, J., nov. 2019, I: Acta Physiologica. 227, S721, s. 14 1 s., e13414.

**The time-course of muscle glycogen utilization at different subcellular localizations and fiber types during endurance exercise in lean males**

Holleufer, M.-L., Jensen, R., Skjaerbaek, M., Nykvist Larsen, D., Plomgaard, P., Ørtenblad, N. & Nielsen, J., nov. 2019, I: Acta Physiologica. 227, S721, s. 13 1 s., e13414.

**Muscle Fibertype Composition Affects Contractile Rate of Force Development (RFD) in vivo**

Aagaard, P., Smedegaard, S., Madsen, T. & Ørtenblad, N., jun. 2019, I: Medicine and Science in Sports and Exercise. 51, 6, s. 3200

**Vascular endothelial growth factor in skeletal muscle following glycogen-depleting exercise in humans**

Jensen, L., Gejl, K. D., Ørtenblad, N. & Frandsen, U., 26. maj 2015, I: Medicine and Science in Sports and Exercise. 47, Suppl. 5, s. 448-449

**Effects of aging on changes in postural balance with short-term disuse and active reloading**

Aagaard, P., Nielsen, J. H., Hvid, L. G., Frandsen, U., Ørtenblad, N., Kjær, M. & Suetta, C., 2015, I: Medicine and Science in Sports and Exercise. 47, 1. Supplement 5S, s. 25 1 s., 155.

**Aging impairs the recovery in mechanical muscle function following 4 days of disuse**

Hvid, L. G., Suetta, C., Nielsen, J. H., Jensen, M. M., Frandsen, U., Ørtenblad, N., Kjær, M. & Aagaard, P., 2014, I: Medicine and Science in Sports and Exercise. 46, Supplement, s. S453

**Myosin content in single muscle fibers from young and old men following disuse and recovery**

Hvid, L. G., Brocca, L., Ørtenblad, N., Suetta, C., Aagaard, P., Kjaer, M., Bottinelli, R. & Pellegrino, M., 2012, I: Journal of Muscle Research and Cell Motility. 33, s. 245

## Publikationer øvrigt

**Short-term lowering of carbohydrate intake reduces skeletal muscle glycogen and body weight, but has no effect on short-term exercise capacity or maximal power-output in recreational active men**

Schytz, C. T., Nielsen, J., Ørtenblad, N., Lundby, C., Birkholm, T., Plomgaard, P., Kolnes, K. J. & Gejl, K. D., 30. aug. 2023.

**Skeletal muscle HSP70 expression is not associated with glycogen availability during recovery in elite endurance athletes**

Gejl, K. D., Barner Dalgaard, L., Hvid, L. G. & Ørtenblad, N., 30. aug. 2023.

**Intramuscular triglyceride utilization and resynthesis: the effect of acute calorie restriction during recovery in elite male triathletes**

Jevons, E., Gejl, K. D., Ørtenblad, N., Strauss, J. & Shepherd, S., 7. maj 2019.

**Skeletal muscle sarcoplasmic reticulum Ca<sup>2+</sup> uptake preferentially use glycogenolytic derived ATP**

Kristiansen, M. R., Jensen, R., Nielsen, J. & Ørtenblad, N., 2019.

**The inhibitory effects of two distinct inhibitors on glycogen phosphorylase activity and contractile function in chemically skinned single fibers**

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**Changes in single muscle fibre specific force, maximal isometric quadriceps strength and muscle size after 2 weeks of immobilization in young and old men**  
Hvid, L. G., Ørtenblad, N., Aagaard, P., Kjær, M. & Suetta, C., 2009, *Proc. 14th Annual Congr. Eur. College Sports Sci.* European College of Sports Science, s. 298

**Effects of Aerobic Training on Intramyocellular Lipid and Glycogen Localization in Type 2 Diabetic Patients**  
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**Effects of 2 weeks of immobilization on strength and neuromuscular activation in young and old healthy men**  
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Nielsen, J., Schrøder, H. D. & Ørtenblad, N., 2007, *Proceedings. 12<sup>th</sup> Annual Congress of the European College of Sport Science*. European College of Sports Science, s. 172

## Teaching Portfolio

1. Formal educational education

•“Adjunkt pædagogikum”, SDU, 2004-05.

•Pedagogic and didactic course during Sport Science Studies, including “practical pedagogic course.”

2. Educational administration tasks

•Member of the Study board for the “Sports and Health” studies, IOB-SDU, January 2005 through end of 2009.

•Shorter periods head of studies.

- In the study board period we planned, organized and implemented a new curriculum for the bachelor level of the sports science program a number of times and curriculum for the master studies.

### 3.Experience with teaching, guidance and exam

- Teaching and being responsible for a number of courses within physiology and health, at “Sport and Health” and “Medicine” at SDU, and at La Trobe university, Melbourne.

- Supervisor for a number of successful and current PhD-students.

- Supervisor for Master, and bachelor students as well as post docs.

- Assigned as censor/examiner for “censor board for sports science”, the “censor board for biology” and the “censor board for health sciences” and function herein as censor at University of Copenhagen, Aarhus University and Aalborg University.

### 4.Methods, materials and tools

- Lectures, classes, practical exercises, case based education, laboratory courses and supervision.

### 5.Educational development and university pedagogical tasks

- I have been in the research board for the inter-university PhD-program for sport studies (AU, KU and SDU), PhD-program “Research Education Program for Sport (REPS)” with the board being the driving and administrative source for the PhD-course at REPS.

- I have been in the committee developing a introducing course for professions-bachelors starting at the master level at the Faculty of Health Science, SDU.