

Niels Ørtenblad  
Institut for Idræt og Biomekanik  
Muskelfysiologi og Biomekanik  
**Postadresse:**  
Campusvej 55  
5230  
Odense M  
Danmark  
**E-mail:** nortenblad@health.sdu.dk  
**Telefon:** 65503433  
**Mobil:** 60113433



## Publikationer

### **Glycogen supercompensation is due to increased number, not size, of glycogen particles in human skeletal muscle**

Jensen, R., Ørtenblad, N., Stausholm, M-L. H., Skjærbæk, M. C., Nykvist Larsen, D., Hansen, M., Holmberg, H-C., Plomgaard, P. & Nielsen, J., maj 2021, I: *Experimental Physiology*. 106, 5, s. 1272-1284

### **Muscle Glycogen Metabolism and High-Intensity Exercise Performance: A Narrative Review**

Vigh-Larsen, J. F., Ørtenblad, N., Spriet, L. L., Overgaard, K. & Mohr, M., 26. apr. 2021, (E-pub ahead of print) I: *Sports Medicine*.

### **$\beta_2$ -Adrenergic agonist salbutamol augments hypertrophy in MHCIIa fibers and sprint mean power output but not muscle force during 11 weeks of resistance training in young men**

Jessen, S., Reitelseder, S., Kalsen, A., Kreiberg, M., Onslev, J., Gad, A., Ørtenblad, N., Backer, V., Holm, L., Bangsbo, J. & Hostrup, M., 11. mar. 2021, I: *Journal of Applied Physiology*. 130, 3, s. 617-626

### **Myocardial subcellular glycogen distribution and sarcoplasmic reticulum $Ca^{2+}$ handling: effects of ischaemia, reperfusion and ischaemic preconditioning**

Nielsen, J., Johnsen, J., Pryds, K., Ørtenblad, N. & Bøtker, H. E., mar. 2021, I: *Journal of Muscle Research and Cell Motility*. 42, 1, s. 17-31

### **Pharmacological but not physiological GDF15 suppresses feeding and the motivation to exercise**

Klein, A. B., Nicolaisen, T. S., Ørtenblad, N., Gejl, K. D., Jensen, R., Fritzen, A. M., Larsen, E. L., Karstoft, K., Poulsen, H. E., Morville, T., Sahl, R. E., Helge, J. W., Lund, J., Falk, S., Lyngbæk, M., Ellingsgaard, H., Pedersen, B. K., Lu, W., Finan, B., Jørgensen, S. B. & 5 flere, Seeley, R. J., Kleinert, M., Kiens, B., Richter, E. A. & Clemmensen, C., 15. feb. 2021, I: *Nature Communications*. 12, 9 s., 1041.

### **Subcellular localization- and fibre type-dependent utilization of muscle glycogen during heavy resistance exercise in elite power and Olympic weightlifters**

Hokken, R., Laugesen, S., Aagaard, P., Suetta, C., Frandsen, U., Ørtenblad, N. & Nielsen, J., feb. 2021, I: *Acta Physiologica*. 231, 2, e13561.

### **Transdermal Estrogen Therapy Improves Gains in Skeletal Muscle Mass After 12 Weeks of Resistance Training in Early Postmenopausal Women**

Dam, T. V., Dalgaard, L. B., Ringgaard, S., Johansen, F. T., Bisgaard Bengtsen, M., Mose, M., Lauritsen, K. M., Ørtenblad, N., Gravholt, C. H. & Hansen, M., 18. jan. 2021, I: *Frontiers in Physiology*. 11, 14 s., 596130.

### **Molecular markers of skeletal muscle hypertrophy following 10 wk of resistance training in oral contraceptive users and nonusers**

Oxfeldt, M., Dalgaard, L. B., Jørgensen, E. B., Johansen, F. T., Dalgaard, E. B., Ørtenblad, N. & Hansen, M., 5. dec. 2020, I: *Journal of Applied Physiology*. 129, 6, s. 1355-1364

### **Effect of long-term testosterone therapy on molecular regulators of skeletal muscle mass and fibre-type distribution in aging men with subnormal testosterone**

Kruse, R., Petersson, S. J., Christensen, L. L., Kristensen, J. M., Sabaratnam, R., Ørtenblad, N., Andersen, M. & Højlund, K., nov. 2020, I: *Metabolism: Clinical and Experimental*. 112, 154347.

**Heterogeneity in subcellular muscle glycogen utilisation during exercise impacts endurance capacity in men**

Jensen, R., Ørtenblad, N., Stausholm, M-L. H., Skjaerbaek, M. C., Larsen, D. N., Hansen, M., Holmberg, H-C., Plomgaard, P. & Nielsen, J., 1. okt. 2020, I: The Journal of Physiology. 598, 19, s. 4271-4292

**Supplement with whey protein hydrolysate in contrast to carbohydrate supports mitochondrial adaptations in trained runners**

Hansen, M., Oxfeldt, M., Larsen, A. E., Thomsen, L. S., Rokkedal-Lausch, T., Christensen, B., Rittig, N., De Paoli, F. V., Bangsbo, J., Ørtenblad, N. & Madsen, K., 7. sep. 2020, I: Journal of the International Society of Sports Nutrition. 17, 13 s., 46.

**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.

**Comment on: "changes in skeletal muscle glycogen content in professional soccer players before and after a match by a noninvasive muscledsound@ technology. a cross sectional pilot study nutrients 2020, 12(4), 971"**

Ørtenblad, N., Nielsen, J., Gejl, K. D., Routledge, H. E., Morton, J. P., Close, G. L., Niemann, D. C., Bone, J. L. & Burke, L. M., 13. jul. 2020, I: Nutrients. 12, 7, 2 s., 2070.

**Effects of Acute Exercise and Training on the Sarcoplasmic Reticulum Ca<sup>2+</sup> Release and Uptake Rates in Highly Trained Endurance Athletes**

Gejl, K. D., Andersson, E. P., Nielsen, J., Holmberg, H-C. & Ørtenblad, N., 7. jul. 2020, I: Frontiers in Physiology. 11, 11 s., 810.

**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

**Skeletal muscle lipid droplets are resynthesized before being coated with perilipin proteins following prolonged exercise in elite male triathletes**

Jevons, E. F. P., Gejl, K. D., Strauss, J. A., Ørtenblad, N. & Shepherd, S. O., 1. mar. 2020, I: American Journal of Physiology: Endocrinology and Metabolism. 318, 3, s. E357-E370

**Inhibition of glycogenolysis prolongs action potential repriming period and impairs muscle function in rat skeletal muscle**

Jensen, R., Nielsen, J. & Ørtenblad, N., feb. 2020, I: The Journal of Physiology. 598, 4, s. 789-803

**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 (Print). 227, S721

**Skeletal muscle sarcoplasmic reticulum Ca<sup>2+</sup> 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.

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

Jensen, R., Nielsen, J., Kristiansen, M. R. & Ortenblad, N., nov. 2019, I: Acta Physiologica. 227, S721, s. 74 1 s.

**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.

**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.

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

Hadrévi, J., Barbe, M. F., Ørtenblad, N., Frandsen, U., Boyle, E., Lazar, S., Sjøgaard, G. & Søgaard, K., 30. sep. 2019, I: BioMed Research International. 2019, 14 s., 5040818.

**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

**Acute Carbohydrate Restriction During Recovery From Prolonged Exercise Enhances Intramuscular Triglyceride Resynthesis**

Shepherd, S., Jevons, E., Strauss, J., Gejl, K. D., Jensen, K., Hvid, L. G., Frandsen, U., Sahlin, K. & Ørtenblad, N., 30. maj 2019.

**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.

**Calcium Fluxes in Work-Related Muscle Disorder**

Hadrévi, J., Barbe, M. F., Ørtenblad, N., Frandsen, U., Boyle, E., Lazar, S., Sjøgaard, G. & Søgaard, K., 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**

Jensen, R., Kristiansen, M. 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**

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

**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., 2019.

**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., Skjærbæk, M. C., Nykvist Larsen, D., Plomgaard, P., Ørtenblad, N. & Nielsen, J., 2019.

**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., Skjærbæk, M. C., Nykvist Larsen, D., Plomgaard, P., Ørtenblad, N. & Nielsen, J., 2019.

**High-intensity interval, but not endurance training induces muscle fiber type-specific subsarcolemmal lipid droplet size reduction in type 2 diabetic patients**

Koh, H-C. E., Ørtenblad, N., Winding, K. M., Hellsten, Y., Mortensen, S. P. & Nielsen, J., 7. nov. 2018, I: American Journal of Physiology: Endocrinology and Metabolism. 315, 5, s. E872-E884

**Changes in metabolism but not myocellular signaling by training with CHO-restriction in endurance athletes**

Gejl, K. D., Vissing, K., Hansen, M., Thams, L., Rokkedal-Lausch, T., Plomgaard, P., Meinild Lundby, A. K., Nybo, L., Jensen, K., Holmberg, H. C. & Ørtenblad, N., 1. sep. 2018, I: *Physiological Reports*. 6, 17, e13847.

**The muscle fiber profiles, mitochondrial content, and enzyme activities of the exceptionally well-trained arm and leg muscles of elite cross-country skiers**

Ørtenblad, N., Nielsen, J., Boushel, R., Söderlund, K., Saltin, B. & Holmberg, H. C., 2. aug. 2018, I: *Frontiers in Physiology*. 9, August, 11 s., 1031.

**Restricting carbohydrate during recovery from prolonged exercise does not effect intramuscular triglyceride resynthesis**

Jevons, E., Gejl, K. D., Hvid, L. G., Frandsen, U., Jensen, K., Sahlin, K., Strauss, J., Ørtenblad, N. & Shepherd, S., 4. jul. 2018.

**Plasticity in central neural drive with short-term disuse and recovery - effects on muscle strength and influence of aging**

Hvid, L. G., Aagaard, P., Ørtenblad, N., Kjaer, M. & Suetta, C., jun. 2018, I: *Experimental Gerontology*. 106, s. 145-153

**Mitochondrial increase in volume density with exercise training: More, larger or better?**

Ørtenblad, N., jan. 2018, I: *Acta Physiologica*. 222, 1, e12976.

**ACUTE AND CHRONIC EFFECTS OF ENDURANCE TRAINING ON SR CA<sup>2+</sup> HANDLING IN HIGHLY-TRAINED ENDURANCE ATHLETES**

Gejl, K. D., Holmberg, H-C. & Ørtenblad, N., 2018.

**High intensity interval training, but not endurance training, in type 2 diabetic patients lowers subarcolemmal lipid droplet volumetric content by reducing droplet size in type 2 muscle fibers**

Koh, H-C., Nielsen, J., Winding, K., Ørtenblad, N. & Mortensen, S., 2018.

**Influence of muscle fibertype composition on contractile Rate of Force Development (RFD) in vivo**

Smedegaard, S., Madsen, T., Ørtenblad, N. & Aagaard, P., 2018.

**Reliability of maximal mitochondrial oxidative phosphorylation in permeabilized fibers from the *vastus lateralis* employing high-resolution respirometry**

Cardinale, D. A., Gejl, K. D., Ørtenblad, N., Ekblom, B., Blomstrand, E. & Larsen, F. J., 2018, I: *Physiological Reports*. 6, 4, 8 s., e13611.

**No Superior Adaptations to Carbohydrate Periodization in Elite Endurance Athletes**

Gejl, K. D., Thams, L. B., Hansen, M., Rokkedal-Lausch, T., Plomgaard, P., Nybo, L., Larsen, F. J., Cardinale, D. A., Jensen, K., Holmberg, H-C., Vissing, K. & Ørtenblad, N., dec. 2017, I: *Medicine and Science in Sports and Exercise*. 49, 12, s. 2486–2497

**Pronounced limb and fibre type differences in subcellular lipid droplet content and distribution in elite skiers before and after exhaustive exercise**

Koh, H-C. E., Nielsen, J., Saltin, B., Holmberg, H-C. & Ørtenblad, N., 1. sep. 2017, I: *Journal of Physiology*. 595, 17, s. 5781–5795

**Local depletion of glycogen with supra-maximal exercise in human skeletal muscle fibres**

Gejl, K. D., Ørtenblad, N., Andersson, E., Plomgaard, P., Holmberg, H-C. & Nielsen, J., 1. maj 2017, I: *The Journal of Physiology*. 595, 9, s. 2809–2821

**Plasticity in mitochondrial cristae density allows metabolic capacity modulation in human skeletal muscle**

Nielsen, J., Gejl, K. D., Hey-Mogensen, M., Holmberg, H-C., Suetta, C., Krstrup, P., Elemans, C. P. H. & Ørtenblad, N., 1. maj 2017, I: *The Journal of Physiology*. 595, 9, s. 2839–2847

**Reply from Joachim Nielsen, Kasper D. Gejl and Niels Ørtenblad**

Nielsen, J., Gejl, K. D. & Ørtenblad, N., 1. maj 2017, I: *Journal of Physiology*. 595, 9, s. 2987-2988

**Energy system contributions and determinants of performance in sprint cross-country skiing**

Andersson, E., Björklund, G., Holmberg, H-C. & Ørtenblad, N., 1. apr. 2017, I: *Scandinavian Journal of Medicine & Science in Sports*. 27, 4, s. 385-398

**SPARC Interacts with Actin in Skeletal Muscle in Vitro and in Vivo**

Jørgensen, L. H., Jepsen, P. L., Boysen, A., Barner Dalgaard, L., Hvid, L. G., Ørtenblad, N., Ravn, D., Sellathurai, J., Møller-Jensen, J., Lochmüller, H. & Schrøder, H. D., 1. feb. 2017, I: *The American Journal of Pathology*. 187, 2, s. 457-474

**Myosin content of single muscle fibers following short-term disuse and active recovery in young and old healthy men**

Hvid, L. G., Brocca, L., Ørtenblad, N., Suetta, C., Aagaard, P., Kjær, M., Bottinelli, R. & Pellegrino, M. A., jan. 2017, I: *Experimental Gerontology*. 87, Pt A, s. 100-107

**Fundamental constraints in synchronous muscle limit superfast motor control in vertebrates**

Mead, A. F., Osinalde, N., Ørtenblad, N., Nielsen, J., Brewer, J., Vellema, M., Adam, I., Scharff, C., Song, Y., Frandsen, U., Blagoev, B., Kratchmarova, I. & Elemans, C. P., 2017, I: *eLife*. 6, 20 s., e29425.

**Gross efficiency predicts a 6-min double-poling ergometer performance in recreational cross-country skiers**

Ørtenblad, N. & Jensen, K., 2017, I: *Sports Engineering*. 20, 4, s. 329-333

**Post-exercise recovery of contractile function and endurance in humans and mice is accelerated by heating and slowed by cooling skeletal muscle**

Cheng, A. J., Willis, S. J., Zinner, C., Chaillou, T., Ivarsson, N., Ørtenblad, N., Lanner, J. T., Holmberg, H-C. & Westerblad, H., 2017, I: *Journal of Physiology*. 595, 24, s. 7413-7426

**Metabolic Responses and Pacing Strategies during Successive Sprint Skiing Time Trials**

Andersson, E., Holmberg, H-C., Ørtenblad, N. & Björklund, G., dec. 2016, I: *Medicine and Science in Sports and Exercise*. 48, 12, s. 2544-2554

**No Muscle Is an Island: Integrative Perspectives on Muscle Fatigue**

Kent, J. A., Ørtenblad, N., Hogan, M. C., Poole, D. C. & Musch, T. I., nov. 2016, I: *Medicine and Science in Sports and Exercise*. 48, 11, s. 2281-2293

**The Physiological Mechanisms of Performance Enhancement with Sprint Interval Training Differ between the Upper and Lower Extremities in Humans**

Zinner, C., Morales-Alamo, D., Ørtenblad, N., Larsen, F. J., Schiffer, T. A., Willis, S. J., Gelabert-Rebato, M., Perez-Valera, M., Boushel, R., Calbet, J. A. L. & Holmberg, H-C., 30. sep. 2016, I: *Frontiers in Physiology*. 7, 18 s., 426.

**Repeated high-intensity exercise modulates Ca(2+) sensitivity of human skeletal muscle fibers**

Gejl, K. D., Hvid, L. G., Willis, S. J., Andersson, E., Holmberg, H-C., Jensen, R., Frandsen, U., Hansen, J., Plomgaard, P. & Ørtenblad, N., maj 2016, I: *Scandinavian Journal of Medicine & Science in Sports*. 26, 5, s. 488-497

**Skeletal muscle fiber characteristics and oxidative capacity in hemiparetic stroke survivors**

Severinsen, K., Dalgas, U., Overgaard, K., Pedersen, A. R., Ørtenblad, N., Lund, C., Jakobsen, J. K. & Andersen, H., maj 2016, I: *Muscle & Nerve*. 53, 5, s. 748-754

**High-intensity sprint training inhibits mitochondrial respiration through aconitase inactivation**

Larsen, F. J., Schiffer, T. A., Ørtenblad, N., Zinner, C., Morales-Alamo, D., Willis, S. J., Calbet, J. A., Holmberg, H-C. & Boushel, R., jan. 2016, I: *The FASEB Journal*. 30, 1, s. 417-427

**Sarcoplasmic reticulum Ca<sup>2+</sup> uptake rate and endogenous content in MHC I and MHC II fibres of human skeletal muscle following prolonged exercise in highly trained**

Ørtenblad, N. & Nielsen, J. S., 2016.

**Muscle glycogen and cell function - Location, location, location**

Ørtenblad, N. & Nielsen, J., dec. 2015, I: *Scandinavian Journal of Medicine & Science in Sports*. 25 , Suppl 4, s. 34-40

**Mechanisms underlying enhancements in muscle force and power output during maximal cycle ergometer exercise induced by chronic  $\beta_2$ -adrenergic stimulation in men**

Hostrup, M., Kalsen, A., Onslev, J., Jessen, S., Haase, C., Habib, S., Ørtenblad, N., Backer, V. & Bangsbo, J., 1. sep. 2015, I: *Journal of Applied Physiology*. 119, 5, s. 475-486

**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

**Carbohydrate restricted recovery from long term endurance exercise does not affect gene responses involved in mitochondrial biogenesis in highly trained athletes**

Jensen, L., Gejl, K. D., Ørtenblad, N., Nielsen, J. L., Bech, R. D., Nygaard, T., Sahlin, K. & Frandsen, U., 12. feb. 2015, I: *Physiological Reports*. 3, 2, 13 s., e12184.

**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.

**Role of glycogen in skeletal muscle SR Ca<sub>v</sub> regulation**

Ørtenblad, N., 2015.

**Repeated spring exercise impairs force of isolated single human muscle fibres**

Ørtenblad, N., Hvid, L. G., Jensen, R., andersson, E., Willis, S., Holmberg, H-C. & Gejl, K. D., 15. dec. 2014, *Science and Skiing VI*. Müller, E., Kröll, J., Lindinger, S., Pfusterschmied, J. & Stöggl, T. (red.). Meyer & Meyer Sport, s. 446-452

**$\beta_2$ -Adrenergic stimulation enhances Ca<sup>2+</sup> release and contractile properties of skeletal muscles, and counteracts exercise-induced reductions in Na<sup>+</sup>-K<sup>+</sup>-ATPase V<sub>max</sub> in trained men**

Hostrup, M., Kalsen, A., Ørtenblad, N., Juel, C., Mørch, K., Rzeppa, S., Karlsson, S., Backer, V. & Bangsbo, J., 15. dec. 2014, I: *Journal of Physiology*. 592, 24, s. 5445-5459

**McArdle Disease: A Unique Study Model in Sports Medicine**

Santalla, A., Nogales-Gadea, G., Ørtenblad, N., Brull, A., de Luna, N., Pinós, T. & Lucia, A., 16. jul. 2014, I: *Sports Medicine*. 44, 11, s. 1531-1544

**Subcellular distribution of glycogen and decreased tetanic Ca<sup>2+</sup> in fatigued single intact mouse muscle fibres**

Nielsen, J., Cheng, A. J., Ørtenblad, N. & Westerblad, H., 1. maj 2014, I: *Journal of Physiology*. 592, 9, s. 2003-2012

**A PGC-1 $\alpha$ - and muscle fibre type-related decrease in markers of mitochondrial oxidative metabolism in skeletal muscle of humans with inherited insulin resistance**

Kristensen, J. M., Skov, V., Petersson, S. J., Ørtenblad, N., Wojtaszewski, J. F. P., Beck-Nielsen, H. & Højlund, K., maj 2014, I: *Diabetologia*. 57, 5, s. 1006-1015 10 s.

**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., apr. 2014, I: *Experimental Gerontology*. 52, s. 1-8 8 s.

**Muscle Glycogen Content Modifies SR Ca<sup>2+</sup> Release Rate in Elite Endurance Athletes**

Gejl, K. D., Hvid, L. G., Frandsen, U., Jensen, K., Sahlin, K. & Ortenblad, N., mar. 2014, I: *Medicine and Science in Sports and Exercise*. 46 , 3, s. 496–505

**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

**Contractile apparatus uses glycogen from specific subcellular locations: Evidence of cytosolic compartmentalization between glycogen metabolism and energy consumption in skeletal muscle**

Nielsen, J., Christensen, P. & Ørtenblad, N., 2014.

**Contractile apparatus uses glycogen from specific subcellular locations: Evidence of cytosolic compartmentalization between glycogen metabolism and energy consumption in skeletal muscle**

Nielsen, J., Christensen, P. & Ørtenblad, N., 2014.

**Effect of whey protein hydrolysate on adaptation to endurance training in well-trained runners**

Søndergaard Thomsen, L., Ørtenblad, N. & Hansen, M., 2014, *Book of Abstracts: 19th Annual Congress of the European College of Sport Science*. de Haan, A., de Ruiter, C. J. & Tsolakidis, E. (red.). European College of Sport Science, s. 334  
1 s.

**Energy system contribution and determinants of performance in classical sprint cross-country skiing**

Andersson, E., Willis, S. J., Holmberg, H-C. & Ørtenblad, N., 2014, *Book of Abstracts: 19th Annual Congress of the European College of Sport Science*. de Haan, A., de Ruiter, C. J. & Tsolaskidis, E. (red.). European College of Sport Science, s. 420-421

**Glycolytically derived ATP is essential for muscle fiber excitability and Na,K-ATPase activity in the transverse tubular system of skeletal muscle fibers**

Jensen, R., Nielsen, J. & Ørtenblad, N., 2014.

**Glycolytically derived ATP is essential for muscle fiber excitability and Na,K-ATPase activity in the transverse tubular system of skeletal muscle fibers**

Jensen, R., Nielsen, J. & Ørtenblad, N., 2014.

**Na,K-ATPases of rat soleus muscles require energy from the breakdown of glycogen**

Nielsen, J. & Ørtenblad, N., 2014.

**Na,K-ATPases of rat soleus muscles require energy from the breakdown of glycogen**

Nielsen, J. & Ørtenblad, N., 2014.

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

Ørtenblad, N., Hvid, L. G., Jensen, R., Holmberg, H-C., Gejl, K. D., Willis, S. & andersson, E., 2014. 1 s.

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

Ørtenblad, N., 2014. 1 s.

**Muscle glycogen stores and fatigue**

Ørtenblad, N., Westerblad, H. & Nielsen, J., sep. 2013, I: *Journal of Physiology*. 591, 18, s. 4405-4413

**Transient impairments in single muscle fibre contractile function after prolonged cycling in elite endurance athletes**

Hvid, L. G., Gejl, K. D., Bech, R. D., Nygaard, T., Jensen, K., Frandsen, U. & Ørtenblad, N., jul. 2013, I: *Acta Physiologica (Print)*. 208, 3, s. 265-273

**Differences In The Mitochondrial Content Of Different Fibre Types In The Leg And Arm Muscles Of Elite Cross-Country Skiers**

Ørtenblad, N., Holmberg, H-C., Schrøder, H. D., Saltin, B. & Nielsen, J., jun. 2013.

**The Intramyocellular Lipid Content In The Arms Of Elite Cross Country Skiers Is Lower Than In Their Legs**

Nielsen, J., Holmberg, H-C., Schrøder, H. D., Saltin, B. & Ørtenblad, N., jun. 2013.

**The Intramyocellular Lipid Content In The Arms Of Elite Cross Country Skiers Is Lower Than In Their Legs**

Nielsen, J., Holmberg, H-C., Schrøder, H. D., Saltin, B. & Ørtenblad, N., jun. 2013.

**Four days of muscle disuse impairs single fiber contractile function in young and old healthy men**

Hvid, L. G., Suetta, C. A., Aagaard, P., Kjaer, M., Frandsen, U. & Ortenblad, N., feb. 2013, I: *Experimental Gerontology*. 48, 2, s. 154–161

**Physiological aspects of the subcellular localization of glycogen in skeletal muscle**

Nielsen, J. & Ørtenblad, N., feb. 2013, I: *Applied Physiology, Nutrition and Metabolism*. 38, 2, s. 91-99

**Both short intense and prolonged moderate in vitro stimulation reduce the mRNA expression of calcium-regulatory proteins in rat skeletal muscle**

Mänttari, S., Ørtenblad, N., Madsen, K. & Pilegaard, H., jan. 2013, I: *Developments in Molecular and Cellular Biochemistry*. 373, 1-2, s. 171-178 8 s.

**Short-term disuse and subsequent recovery induce age-specific alterations in neuromuscular activation**

Hvid, L. G., Suetta, C., Ørtenblad, N., Kjær, M. & Aagaard, P., 2013, *Proceedings ECSS 18th Annual Meeting*. European College of Sports Science

**Glycogen Resynthesis Rate Following Cross Country Skiing is Closely Correlated to Skeletal Muscle Content**

Ørtenblad, N., Nielsen, J., Saltin, B. & Holmberg, H. C., 15. mar. 2012, *Science and Skiing V: Science and Skiing V*. Müller, E., Lindinger, S. & Stöggl, T. (red.). 1 udg. Maidenhead: Meyer & Meyer Sport, Bind 1. s. 549-556 8 s.

**Depolarisation dependent muscle fatigue in vivo following high intensity exercise**

Ørtenblad, N., 2012. 1 s.

**Effects of  $\beta$ 2-agonists on force during and following anoxia in rat extensor digitorum longus muscle**

Fredsted, A., Gissel, H., Ortenblad, N. & Clausen, T., 2012, I: *Journal of Applied Physiology*. 112, 12, s. 2057-2067 11 s.

**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, MA., 2012, I: *Journal of Muscle Research and Cell Motility*. 33, s. 245

**Pyruvate dehydrogenase and Glycogen synthase after exercise; effect of glucose intake**

Ørtenblad, N., 2012. 1 s.

**Skeletal muscle glycogen content and particle size of distinct subcellular localizations in the recovery period after a high-level soccer match**

Nielsen, J., Krstrup, P., Nybo, L., Gunnarsson, T. G. P., Madsen, K., Schrøder, H. D., Bangsbo, J. & Ørtenblad, N., 2012, I: *European Journal of Applied Physiology*. 112, 10, s. 3559-3567

**Subcellular localization-dependent skeletal muscle glycogen content in the recovery period after a high-level soccer match**

Nielsen, J., Krstrup, P., Nybo, L., Gunnarsson, T., Madsen, K., Schrøder, H. D., Bangsbo, J. & Ørtenblad, N., 2012.



**Subcellular localization-dependent skeletal muscle glycogen content in the recovery period after a high-level soccer match**  
Nielsen, J., Krstrup, P., Nybo, L., Gunnarsson, T., Madsen, K., Schrøder, H. D., Bangsbo, J. & Ørtenblad, N., 2012.

**Superfast muscles are devoid of glycogen particles in the intramyofibrillar space**  
Nielsen, J., Ørtenblad, N., Frandsen, U., Schrøder, H. D. & Elemans, C., 2012.

**Superfast muscles are devoid of glycogen particles in the intramyofibrillar space**  
Nielsen, J., Ørtenblad, N., Frandsen, U., Schrøder, H. D. & Elemans, C., 2012.

**Effects of ageing on single muscle fibre contractile function following short-term immobilisation**  
Hvid, L. G., Ørtenblad, N., Aagaard, P., Kjaer, M. & Suetta, C. A., 1. okt. 2011, I: *Journal of Physiology*. 589, 19, s. 4745-4757 13 s.

**Role of glycogen availability in sarcoplasmic reticulum Ca<sup>2+</sup> kinetics in human skeletal muscle**  
Ørtenblad, N., Nielsen, J., Saltin, B. & Holmberg, H-C., 1. feb. 2011, I: *Journal of Physiology*. 589, Pt 3, s. 711-25 15 s.

**Aging and short-term disuse alters human single myofiber passive and active force differently**  
Hvid, L. G., Ørtenblad, N., Aagaard, P., Kjær, M. & Suetta, C., 2011, I: *Medicine and Science in Sports and Exercise*. 43, s. S100-S101

**Human skeletal muscle glycogen utilization in exhaustive exercise: role of subcellular localization and fibre type**  
Nielsen, J., Holmberg, H-C., Schrøder, H. D., Saltin, B. & Ørtenblad, N., 2011, I: *Journal of Physiology*. 589, 11, s. 2871-2885 15 s.

**Maximal voluntary contraction force, SR function and glycogen resynthesis during the first 72 h after a high-level competitive soccer game**  
Krstrup, P., Ørtenblad, N., Nielsen, J., Nybo, L., Gunnarsson, T. G. P., Iaia, F. M., Madsen, K., Stephens, F., Greenhaff, P. & Bangsbo, J., 2011, I: *European Journal of Applied Physiology*. 111, 12, s. 2987-2995 9 s.

**Effects of aging on muscle mechanical function and muscle fiber morphology during short-term immobilization and subsequent retraining**  
Hvid, L., Aagaard, P., Justesen, L., Bayer, M. L., Andersen, J. L., Ørtenblad, N., Kjaer, M. & Suetta, C., 1. dec. 2010, I: *Journal of Applied Physiology*. 109, 6, s. 1628-34 7 s.

**Glycogen resynthesis rate following cross-country skiing is closely correlated to skeletal muscle glycogen content**  
Ørtenblad, N., Nielsen, J., Saltin, B. & Holmberg, H-C., dec. 2010. 1 s.

**Subcellular localization-dependent decrements in skeletal muscle glycogen and mitochondria content following short-term disuse in young and old men**  
Nielsen, J., Suetta, C., Hvid, L. G., Schrøder, H. D., Aagaard, P. & Ørtenblad, N., dec. 2010, I: *American Journal of Physiology: Endocrinology and Metabolism*. 299, 6, s. E1053-60 8 s.

**Short-term immobilization impairs human single muscle fibre contractility in young and old**  
Hvid, L. G., Suetta, C., Aagaard, P., Michael, K. & Ørtenblad, N., 15. nov. 2010, *Proc. 39th European Muscle Conference*. European Society for Muscle Research

**Exhaustive endurance exercise impairs specific force and Ca<sup>2+</sup> sensitivity of single human muscle fibers**  
Gejl, K. D., Hvid, L. G. & Ørtenblad, N., 29. okt. 2010.

**4 days of immobilization impairs human single muscle fibre contractility in young and old**  
Hvid, L. G., Suetta, C., Aagaard, P., Kjær, M. & Ørtenblad, N., 15. okt. 2010, *Proc. Nordic Conference 2010*. Syddansk Universitet, Institut for Idræt og Biomekanik

**Lactate per se improves the excitability of depolarised rat skeletal muscle by reducing the Cl<sup>-</sup> conductance**

de Paoli, F. V., Ørtenblad, N., Pedersen, T. H., Jørgensen, R. & Nielsen, O. B., okt. 2010, I: *Journal of Physiology*. 588, 23, s. 4785-4794

**Glycogen modulate EC coupling in elite triathletes, by affecting SR Ca<sup>2+</sup> release rate**

Ørtenblad, N., Gejl, K. D., Bech, R. D., Nygaard, T., Barner Dalgaard, L. & Frandsen, U., 14. sep. 2010.

**Exhaustive exercise affects contractile properties of single human muscle fibres**

Gejl, K. D., Ørtenblad, N. & Hvid, L. G., 13. sep. 2010.

**Increased subsarcolemmal lipids in type 2 diabetes. Effect of training on localization of lipids, mitochondria and glycogen in sedentary human skeletal muscle**

Nielsen, J., Mogensen, M., Vind, B. F., Sahlin, K., Højlund, K., Schrøder, H. D. & Ørtenblad, N., mar. 2010, I: *American Journal of Physiology: Endocrinology and Metabolism*. 298, 3, s. E706-E713 8 s.

**Human skeletal muscle intramyofibrillar glycogen is decreased after 14 days of immobilisation in young and old men**

Nielsen, J., Suetta, C., Hvid, L., Schrøder, H. D. & Ørtenblad, N., feb. 2010, I: *Japanese Journal of Physical Fitness and Sports Medicine*. 59, 1, s. 72

**Exhaustive endurance exercise impairs specific force and Ca<sup>2+</sup> sensitivity of single human muscle fibers**

Gejl, K., Hvid, L. G., Frandsen, U., Jensen, K. & Ørtenblad, N., 2010.

**Effects of ageing on human skeletal muscle after immobilisation and re-training**

Suetta, C., Hvid, L. G., Justesen, L., Christensen, U., Neergaard, K., Simonsen, L., Ørtenblad, N., Magnusson, S. P., Kjaer, M. & Aagaard, P., 6. aug. 2009, I: *Journal of Applied Physiology*. 107, 4, s. 1172-1180

**Distinct effects of subcellular glycogen localization on tetanic relaxation time and endurance in mechanically skinned rat skeletal muscle fibres**

Nielsen, J., Schrøder, H. D., Rix, C. G. & Ørtenblad, N., 15. jul. 2009, I: *Journal of Physiology*. 587, Pt 14, s. 3679-90 11 s.

**Glycolysis in contracting rat skeletal muscle is controlled by factors related to energy state**

Ørtenblad, N., Macdonald, W. A. & Sahlin, K., 1. jun. 2009, I: *Biochemical Journal*. 420, 2, s. 161-8 7 s.

**Changes in single fibre contractility with immobilization in old and young**

Hvid, L. G., Suetta, C., Aagaard, P., Kjær, M. & Ørtenblad, N., 2009, I: *Medicine and Science in Sports and Exercise*. 5, s. S97

**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**

Nielsen, J., Hey-Mogensen, M., Vind, B. F., Sahlin, K., Højlund, K., Schrøder, H. D. & Ørtenblad, N., 2009, *Muscles as molecular and metabolic machines. International Biochemistry of Exercise*, s. 53 1 s.

**Effects of aging on changes in muscle power and postural control after immobilization and re-training**

Aagaard, P., Hvid, L. G., Christensen, U., Justesen, L., Ørtenblad, N., Kjær, M. & Suetta, C., 2009, I: *Medicine and Science in Sports and Exercise*. 5, s. 19-20

**Human skeletal muscle intramyofibrillar glycogen is decreased after 14 days of immobilisation in young and old men**

Nielsen, J., Suetta, C., Hvid, L. G., Schrøder, H. D. & Ørtenblad, N., 2009, *Book of abstracts: 14th Annual Congress of the European College of Sport Science, Oslo/Norway, June 24-27, 2009. European College of Sports Science*, s. 297 1 s.

**Immobilization leads to impaired single muscle fibre contractility in old and young healthy individuals**

Hvid, L. G., Ørtenblad, N., Aagaard, P., Kjær, M. & Suetta, C., 2009, I: *Dansk Sportsmedicin*. 1, s. 29

**Muscle fatigue in elite cross country skiers; a link between sarcoplasmic reticulum function and glycogen availability?**

Ørtenblad, N., 2009. 1 s.

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

Ørtenblad, N., 2009, *Proceedings. MyoNaK*, s. 19 1 s.

**Changes in muscle mechanical function with 2 weeks of limb immobilization in young and old healthy men**

Hvid, L. G., Suetta, C., Christensen, U., Justesen, L., Ørtenblad, N., Kjær, M. & Aagaard, P., 2008, *Proceedings 13th Annual Congress European College of Sports Science*. European College of Sports Science, s. 143-144

**Depletion and resynthesis of glycogen in arm and leg muscles after a classical 15-K cross-country ski race**

Holmberg, H-C., Bonne, T. & Ørtenblad, N., 2008, *Book of abstracts of the 13th Annual Congress of the European College of Sports Science*. European College of Sports Science

**Glycogen has a structural role in maintaining normal EC coupling in elite cross country skiers, by modulating SR Ca<sup>2+</sup> release rate**

Ørtenblad, N., Nielsen, J., Saltin, B. & Holmberg, H-C., 2008.

**Metabolic modulation of skeletal muscle Ca<sup>2+</sup> handling and excitability**

Ørtenblad, N., 2008, I: *Acta Physiologica (Print Edition)*. 193, 664, s. 72-73 1 s.

**Subcellular localization of muscle glycogen - fibre-to-fibre heterogeneity and effect of fasting**

Nielsen, J., Schrøder, H. D. & Ørtenblad, N., 2008.

**Reduced sarcoplasmic reticulum content of releasable Ca<sup>2+</sup> in rat soleus muscle fibres after eccentric contractions**

Nielsen, J. S., Sahlin, K. & Ørtenblad, N., 1. nov. 2007, I: *Acta Physiologica (Print Edition)*. 191, 3, s. 217-228 11 s.

**Energy conservation attenuates the loss of skeletal muscle excitability during intense contractions**

Macdonald, W. A., Ørtenblad, N. & Nielsen, O. B., 1. mar. 2007, I: *American Journal of Physiology: Endocrinology and Metabolism*. 292, 3, s. E771-E778

**Effects of 2 weeks of immobilization on strength and neuromuscular activation in young and old healthy men**

Hvid, L. G., Christensen, U., Justesen, L., Ørtenblad, N., Kjær, M., Aagaard, P. & Suetta, C., 2007, *Proc. 12th Annual Congr. Eur. College Sports Sci. (Eds. Kallio J, Komi PV et al), University of Jyväskylä*. s. 197

**Skeletal muscle glycogen localisation - fibre type dependency and interfibre heterogeneity**

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

**Eccentric contractions reduces whole muscle force and sarcoplasmic reticulum (SR) releasable Ca<sup>2+</sup> of mechanically skinned type I fibres**

Nielsen, J. S., Sahlin, K. & Ørtenblad, N., 2006.

**Fatigue resistance in mechanically skinned muscle fibres is correlated with glycogen content in the I-band**

Nielsen, J., Rix, C. G., Schrøder, H. D. & Ørtenblad, N., 2006.

**Metabolic modulation of muscle excitability**

Macdonald, W., Ørtenblad, N. & Bækgaard Nielsen, O., 2006.

**Muscle glycogen localisation and content modulates force time characteristics in mechanically skinned skeletal muscle fibres**

Ørtenblad, N., Nielsen, J., Schrøder, H. D. & Rix, C. G., 2006.

**Reduced insulin-mediated citrate synthase activity in cultured skeletal muscle cells from patients with type 2 diabetes: Evidence for an intrinsic oxidative enzyme defect**

Ørtenblad, N., Mogensen, M., Petersen, I., Højlund, K., Levin, K., Sahlin, K., Beck-Nielsen, H. & Gaster, M., 30. jun. 2005, I: BBA General Subjects. 1741, 1-2, s. 206-14 8 s.

**Reduced insulinmediated citrate synthase activity in cultured skeletal muscle cells from patients with type 2 diabetes: Evidence for an intrinsic oxidative enzyme defect**

Ørtenblad, N., Mogensen, M., Petersen, I., Højlund, K., Levin, K., Sahlin, K. & Ukendt, M. F., 2005, I: BBA General Subjects. 1741, s. 206-214

**Excitability of the T-tubular system in rat skeletal muscle: roles of K<sup>+</sup> and Na<sup>+</sup> gradients and Na<sup>+</sup>-K<sup>+</sup> pump activity**

Nielsen, O. B., Ørtenblad, N., Lamb, G. D. & Stephenson, D. G., 2004, I: Journal of Physiology. 557, Pt 1, s. 133-46 14 s.

**The exciting mitochondrion**

Stephenson, G. D. & Ørtenblad, N., 2004, I: Physiol News. 54, 14-15, s. 181-182

**A novel signalling pathway originating in mitochondria modulates rat skeletal muscle membrane excitability**

Ørtenblad, N. & Stephenson, D. G., 2003, I: Journal of Physiology. 548, Pt 1, s. 139-45 7 s.

**Phospholipase A2 and Reactive Oxygen Species are important mediators of taurine release from myotubes**

Ørtenblad, N., Oksbjerg, N., Nielsen, J. H. & Lambert, I. H., 2003, I: American Journal of Physiology: Cell Physiology. 284, s. C1362-73

**Reactive oxygen species are important mediators of taurine release from skeletal muscle cells**

Ørtenblad, N., Young, J. F., Oksbjerg, N., Nielsen, J. & Lambert, I. H., 2003, I: American Journal of Physiology: Cell Physiology. 284, 6, s. C1362-73

**Cellular model for induction of drip loss in meat**

Lambert, I. H., Nielsen, J. H., Andersen, H. J. & Ørtenblad, N., 2001, I: Journal of Agricultural and Food Chemistry. 49, 10, s. 4876-83 8 s.

**Enhanced sarcoplasmic reticulum Ca(2<sup>+</sup>) release following intermittent sprint training**

Ørtenblad, N., Lunde, P., Levin, K., Andersen, J. L. & Pedersen, P. K., jul. 2000, I: American Journal of Physiology: Regulatory, Integrative and Comparative Physiology. 279, 1, s. R152-60

**Impaired sarcoplasmic reticulum Ca(2<sup>+</sup>) release rate after fatiguing stimulation in rat skeletal muscle**

Ørtenblad, N., Sjøgaard, G. & Madsen, K., 2000, I: Journal of Applied Physiology. 89, 1, s. 210-217

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

Ortenblad, N., Madsen, K. & Djurhuus, M. S., apr. 1997, I: American Journal of Physiology - Regulatory Integrative and Comparative Physiology. 272, 4 Pt 2, s. R1258-R1263

**Xanthine oxidase in human skeletal muscle following eccentric exercise: a role in inflammation**

Hellsten, Y., Frandsen, U., Ørtenblad, N., Sjødin, B. & Richter, E. A., jan. 1997, I: Journal of Physiology. 498 ( Pt 1), s. 239-48 10 s.

## Publikationer

**Glycogen supercompensation is due to increased number, not size, of glycogen particles in human skeletal muscle**  
Jensen, R., Ørtenblad, N., Stausholm, M-L. H., Skjærbæk, M. C., Nykvist Larsen, D., Hansen, M., Holmberg, H-C., Plomgaard, P. & Nielsen, J., maj 2021, I: *Experimental Physiology*. 106, 5, s. 1272-1284

**Muscle Glycogen Metabolism and High-Intensity Exercise Performance: A Narrative Review**

Vigh-Larsen, J. F., Ørtenblad, N., Spriet, L. L., Overgaard, K. & Mohr, M., 26. apr. 2021, (E-pub ahead of print) I: *Sports Medicine*.

**$\beta_2$ -Adrenergic agonist salbutamol augments hypertrophy in MHCIIa fibers and sprint mean power output but not muscle force during 11 weeks of resistance training in young men**

Jessen, S., Reitelseder, S., Kalsen, A., Kreiberg, M., Onslev, J., Gad, A., Ørtenblad, N., Backer, V., Holm, L., Bangsbo, J. & Hostrup, M., 11. mar. 2021, I: *Journal of Applied Physiology*. 130, 3, s. 617-626

**Myocardial subcellular glycogen distribution and sarcoplasmic reticulum  $Ca^{2+}$  handling: effects of ischaemia, reperfusion and ischaemic preconditioning**

Nielsen, J., Johnsen, J., Pryds, K., Ørtenblad, N. & Bøtker, H. E., mar. 2021, I: *Journal of Muscle Research and Cell Motility*. 42, 1, s. 17-31

**Pharmacological but not physiological GDF15 suppresses feeding and the motivation to exercise**

Klein, A. B., Nicolaisen, T. S., Ørtenblad, N., Gejl, K. D., Jensen, R., Fritzen, A. M., Larsen, E. L., Karstoft, K., Poulsen, H. E., Morville, T., Sahl, R. E., Helge, J. W., Lund, J., Falk, S., Lyngbæk, M., Ellingsgaard, H., Pedersen, B. K., Lu, W., Finan, B., Jørgensen, S. B. & 5 flere, Seeley, R. J., Kleinert, M., Kiens, B., Richter, E. A. & Clemmensen, C., 15. feb. 2021, I: *Nature Communications*. 12, 9 s., 1041.

**Subcellular localization- and fibre type-dependent utilization of muscle glycogen during heavy resistance exercise in elite power and Olympic weightlifters**

Hokken, R., Laugesen, S., Aagaard, P., Suetta, C., Frandsen, U., Ørtenblad, N. & Nielsen, J., feb. 2021, I: *Acta Physiologica*. 231, 2, e13561.

**Transdermal Estrogen Therapy Improves Gains in Skeletal Muscle Mass After 12 Weeks of Resistance Training in Early Postmenopausal Women**

Dam, T. V., Dalgaard, L. B., Ringgaard, S., Johansen, F. T., Bisgaard Bengtsen, M., Mose, M., Lauritsen, K. M., Ørtenblad, N., Gravholt, C. H. & Hansen, M., 18. jan. 2021, I: *Frontiers in Physiology*. 11, 14 s., 596130.

**Molecular markers of skeletal muscle hypertrophy following 10 wk of resistance training in oral contraceptive users and nonusers**

Oxfeldt, M., Dalgaard, L. B., Jørgensen, E. B., Johansen, F. T., Dalgaard, E. B., Ørtenblad, N. & Hansen, M., 5. dec. 2020, I: *Journal of Applied Physiology*. 129, 6, s. 1355-1364

**Effect of long-term testosterone therapy on molecular regulators of skeletal muscle mass and fibre-type distribution in aging men with subnormal testosterone**

Kruse, R., Petersson, S. J., Christensen, L. L., Kristensen, J. M., Sabaratnam, R., Ørtenblad, N., Andersen, M. & Højlund, K., nov. 2020, I: *Metabolism: Clinical and Experimental*. 112, 154347.

**Heterogeneity in subcellular muscle glycogen utilisation during exercise impacts endurance capacity in men**

Jensen, R., Ørtenblad, N., Stausholm, M-L. H., Skjaerbaek, M. C., Larsen, D. N., Hansen, M., Holmberg, H-C., Plomgaard, P. & Nielsen, J., 1. okt. 2020, I: *The Journal of Physiology*. 598, 19, s. 4271-4292

**Supplement with whey protein hydrolysate in contrast to carbohydrate supports mitochondrial adaptations in trained runners**

Hansen, M., Oxfeldt, M., Larsen, A. E., Thomsen, L. S., Rokkedal-Lausch, T., Christensen, B., Rittig, N., De Paoli, F. V., Bangsbo, J., Ørtenblad, N. & Madsen, K., 7. sep. 2020, I: *Journal of the International Society of Sports Nutrition*. 17, 13 s., 46.

**Effects of Acute Exercise and Training on the Sarcoplasmic Reticulum  $Ca^{2+}$  Release and Uptake Rates in Highly Trained Endurance Athletes**

Gejl, K. D., Andersson, E. P., Nielsen, J., Holmberg, H-C. & Ørtenblad, N., 7. jul. 2020, I: *Frontiers in Physiology*. 11, 11 s., 810.

**Skeletal muscle lipid droplets are resynthesized before being coated with perilipin proteins following prolonged exercise in elite male triathletes**

Jevons, E. F. P., Gejl, K. D., Strauss, J. A., Ørtenblad, N. & Shepherd, S. O., 1. mar. 2020, I: *American Journal of Physiology: Endocrinology and Metabolism*. 318, 3, s. E357-E370

**Inhibition of glycogenolysis prolongs action potential repriming period and impairs muscle function in rat skeletal muscle**

Jensen, R., Nielsen, J. & Ørtenblad, N., feb. 2020, I: *The Journal of Physiology*. 598, 4, s. 789-803

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

Hadrevi, J., Barbe, M. F., Ørtenblad, N., Frandsen, U., Boyle, E., Lazar, S., Sjøgaard, G. & Sjøgaard, K., 30. sep. 2019, I: *BioMed Research International*. 2019, 14 s., 5040818.

**High-intensity interval, but not endurance training induces muscle fiber type-specific subsarcolemmal lipid droplet size reduction in type 2 diabetic patients**

Koh, H-C. E., Ørtenblad, N., Winding, K. M., Hellsten, Y., Mortensen, S. P. & Nielsen, J., 7. nov. 2018, I: *American Journal of Physiology: Endocrinology and Metabolism*. 315, 5, s. E872-E884

**Changes in metabolism but not myocellular signaling by training with CHO-restriction in endurance athletes**

Gejl, K. D., Vissing, K., Hansen, M., Thams, L., Rokkedal-Lausch, T., Plomgaard, P., Meinild Lundby, A. K., Nybo, L., Jensen, K., Holmberg, H. C. & Ørtenblad, N., 1. sep. 2018, I: *Physiological Reports*. 6, 17, e13847.

**The muscle fiber profiles, mitochondrial content, and enzyme activities of the exceptionally well-trained arm and leg muscles of elite cross-country skiers**

Ørtenblad, N., Nielsen, J., Boushel, R., Söderlund, K., Saltin, B. & Holmberg, H. C., 2. aug. 2018, I: *Frontiers in Physiology*. 9, August, 11 s., 1031.

**Plasticity in central neural drive with short-term disuse and recovery - effects on muscle strength and influence of aging**

Hvid, L. G., Aagaard, P., Ørtenblad, N., Kjaer, M. & Suetta, C., jun. 2018, I: *Experimental Gerontology*. 106, s. 145-153

**Reliability of maximal mitochondrial oxidative phosphorylation in permeabilized fibers from the *vastus lateralis* employing high-resolution respirometry**

Cardinale, D. A., Gejl, K. D., Ørtenblad, N., Ekblom, B., Blomstrand, E. & Larsen, F. J., 2018, I: *Physiological Reports*. 6, 4, 8 s., e13611.

**No Superior Adaptations to Carbohydrate Periodization in Elite Endurance Athletes**

Gejl, K. D., Thams, L. B., Hansen, M., Rokkedal-Lausch, T., Plomgaard, P., Nybo, L., Larsen, F. J., Cardinale, D. A., Jensen, K., Holmberg, H-C., Vissing, K. & Ørtenblad, N., dec. 2017, I: *Medicine and Science in Sports and Exercise*. 49, 12, s. 2486-2497

**Pronounced limb and fibre type differences in subcellular lipid droplet content and distribution in elite skiers before and after exhaustive exercise**

Koh, H-C. E., Nielsen, J., Saltin, B., Holmberg, H-C. & Ørtenblad, N., 1. sep. 2017, I: *Journal of Physiology*. 595, 17, s. 5781-5795

**Local depletion of glycogen with supra-maximal exercise in human skeletal muscle fibres**

Gejl, K. D., Ørtenblad, N., Andersson, E., Plomgaard, P., Holmberg, H-C. & Nielsen, J., 1. maj 2017, I: *The Journal of Physiology*. 595, 9, s. 2809-2821

**Plasticity in mitochondrial cristae density allows metabolic capacity modulation in human skeletal muscle**

Nielsen, J., Gejl, K. D., Hey-Mogensen, M., Holmberg, H-C., Suetta, C., Krstrup, P., Elemans, C. P. H. & Ørtenblad, N., 1. maj 2017, I: *The Journal of Physiology*. 595, 9, s. 2839-2847

**Energy system contributions and determinants of performance in sprint cross-country skiing**

Andersson, E., Björklund, G., Holmberg, H-C. & Ørtenblad, N., 1. apr. 2017, I: *Scandinavian Journal of Medicine & Science in Sports*. 27, 4, s. 385–398

**SPARC Interacts with Actin in Skeletal Muscle in Vitro and in Vivo**

Jørgensen, L. H., Jepsen, P. L., Boysen, A., Barner Dalggaard, L., Hvid, L. G., Ørtenblad, N., Ravn, D., Sellathurai, J., Møller-Jensen, J., Lochmüller, H. & Schröder, H. D., 1. feb. 2017, I: *The American Journal of Pathology*. 187, 2, s. 457–474

**Myosin content of single muscle fibers following short-term disuse and active recovery in young and old healthy men**

Hvid, L. G., Brocca, L., Ørtenblad, N., Suetta, C., Aagaard, P., Kjær, M., Bottinelli, R. & Pellegrino, M. A., jan. 2017, I: *Experimental Gerontology*. 87, Pt A, s. 100-107

**Fundamental constraints in synchronous muscle limit superfast motor control in vertebrates**

Mead, A. F., Osinalde, N., Ørtenblad, N., Nielsen, J., Brewer, J., Vellema, M., Adam, I., Scharff, C., Song, Y., Frandsen, U., Blagoev, B., Kratchmarova, I. & Elemans, C. P., 2017, I: *eLife*. 6, 20 s., e29425.

**Gross efficiency predicts a 6-min double-poling ergometer performance in recreational cross-country skiers**

Ørtenblad, N. & Jensen, K., 2017, I: *Sports Engineering*. 20, 4, s. 329-333

**Post-exercise recovery of contractile function and endurance in humans and mice is accelerated by heating and slowed by cooling skeletal muscle**

Cheng, A. J., Willis, S. J., Zinner, C., Chaillou, T., Ivarsson, N., Ørtenblad, N., Lanner, J. T., Holmberg, H-C. & Westerblad, H., 2017, I: *Journal of Physiology*. 595, 24, s. 7413–7426

**Metabolic Responses and Pacing Strategies during Successive Sprint Skiing Time Trials**

Andersson, E., Holmberg, H-C., Ørtenblad, N. & Björklund, G., dec. 2016, I: *Medicine and Science in Sports and Exercise*. 48, 12, s. 2544–2554

**No Muscle Is an Island: Integrative Perspectives on Muscle Fatigue**

Kent, J. A., Ørtenblad, N., Hogan, M. C., Poole, D. C. & Musch, T. I., nov. 2016, I: *Medicine and Science in Sports and Exercise*. 48, 11, s. 2281-2293

**The Physiological Mechanisms of Performance Enhancement with Sprint Interval Training Differ between the Upper and Lower Extremities in Humans**

Zinner, C., Morales-Alamo, D., Ørtenblad, N., Larsen, F. J., Schiffer, T. A., Willis, S. J., Gelabert-Rebato, M., Perez-Valera, M., Boushel, R., Calbet, J. A. L. & Holmberg, H-C., 30. sep. 2016, I: *Frontiers in Physiology*. 7, 18 s., 426.

**Repeated high-intensity exercise modulates Ca(2+) sensitivity of human skeletal muscle fibers**

Gejl, K. D., Hvid, L. G., Willis, S. J., Andersson, E., Holmberg, H-C., Jensen, R., Frandsen, U., Hansen, J., Plomgaard, P. & Ørtenblad, N., maj 2016, I: *Scandinavian Journal of Medicine & Science in Sports*. 26, 5, s. 488–497

**Skeletal muscle fiber characteristics and oxidative capacity in hemiparetic stroke survivors**

Severinsen, K., Dalgas, U., Overgaard, K., Pedersen, A. R., Ørtenblad, N., Lund, C., Jakobsen, J. K. & Andersen, H., maj 2016, I: *Muscle & Nerve*. 53, 5, s. 748–754

**High-intensity sprint training inhibits mitochondrial respiration through aconitase inactivation**

Larsen, F. J., Schiffer, T. A., Ørtenblad, N., Zinner, C., Morales-Alamo, D., Willis, S. J., Calbet, J. A., Holmberg, H-C. & Boushel, R., jan. 2016, I: *The FASEB Journal*. 30, 1, s. 417-427

**Muscle glycogen and cell function - Location, location, location**

Ørtenblad, N. & Nielsen, J., dec. 2015, I: *Scandinavian Journal of Medicine & Science in Sports*. 25, Suppl 4, s. 34-40

**Mechanisms underlying enhancements in muscle force and power output during maximal cycle ergometer exercise induced by chronic  $\beta_2$ -adrenergic stimulation in men**

Hostrup, M., Kalsen, A., Onsløv, J., Jessen, S., Haase, C., Habib, S., Ørtenblad, N., Backer, V. & Bangsbo, J., 1. sep. 2015, I: *Journal of Applied Physiology*. 119, 5, s. 475-486

**Carbohydrate restricted recovery from long term endurance exercise does not affect gene responses involved in mitochondrial biogenesis in highly trained athletes**

Jensen, L., Gejl, K. D., Ørtenblad, N., Nielsen, J. L., Bech, R. D., Nygaard, T., Sahlin, K. & Frandsen, U., 12. feb. 2015, I: *Physiological Reports*. 3, 2, 13 s., e12184.

**$\beta_2$ -Adrenergic stimulation enhances  $\text{Ca}^{2+}$  release and contractile properties of skeletal muscles, and counteracts exercise-induced reductions in  $\text{Na}^+\text{-K}^+\text{-ATPase}$   $V_{\text{max}}$  in trained men**

Hostrup, M., Kalsen, A., Ørtenblad, N., Juel, C., Mørch, K., Rzeppa, S., Karlsson, S., Backer, V. & Bangsbo, J., 15. dec. 2014, I: *Journal of Physiology*. 592, 24, s. 5445-5459

**McArdle Disease: A Unique Study Model in Sports Medicine**

Santalla, A., Nogales-Gadea, G., Ørtenblad, N., Brull, A., de Luna, N., Pinós, T. & Lucia, A., 16. jul. 2014, I: *Sports Medicine*. 44, 11, s. 1531-1544

**Subcellular distribution of glycogen and decreased tetanic  $\text{Ca}^{2+}$  in fatigued single intact mouse muscle fibres**

Nielsen, J., Cheng, A. J., Ørtenblad, N. & Westerblad, H., 1. maj 2014, I: *Journal of Physiology*. 592, 9, s. 2003-2012

**A PGC-1 $\alpha$ - and muscle fibre type-related decrease in markers of mitochondrial oxidative metabolism in skeletal muscle of humans with inherited insulin resistance**

Kristensen, J. M., Skov, V., Petersson, S. J., Ørtenblad, N., Wojtaszewski, J. F. P., Beck-Nielsen, H. & Højlund, K., maj 2014, I: *Diabetologia*. 57, 5, s. 1006-1015 10 s.

**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., Kjaer, M. & Aagaard, P., apr. 2014, I: *Experimental Gerontology*. 52, s. 1-8 8 s.

**Muscle Glycogen Content Modifies SR  $\text{Ca}^{2+}$  Release Rate in Elite Endurance Athletes**

Gejl, K. D., Hvid, L. G., Frandsen, U., Jensen, K., Sahlin, K. & Ortenblad, N., mar. 2014, I: *Medicine and Science in Sports and Exercise*. 46, 3, s. 496-505

**Muscle glycogen stores and fatigue**

Ørtenblad, N., Westerblad, H. & Nielsen, J., sep. 2013, I: *Journal of Physiology*. 591, 18, s. 4405-4413

**Transient impairments in single muscle fibre contractile function after prolonged cycling in elite endurance athletes**

Hvid, L. G., Gejl, K. D., Bech, R. D., Nygaard, T., Jensen, K., Frandsen, U. & Ørtenblad, N., jul. 2013, I: *Acta Physiologica (Print)*. 208, 3, s. 265-273

**Four days of muscle disuse impairs single fiber contractile function in young and old healthy men**

Hvid, L. G., Suetta, C. A., Aagaard, P., Kjaer, M., Frandsen, U. & Ortenblad, N., feb. 2013, I: *Experimental Gerontology*. 48, 2, s. 154-161

**Physiological aspects of the subcellular localization of glycogen in skeletal muscle**

Nielsen, J. & Ørtenblad, N., feb. 2013, I: *Applied Physiology, Nutrition and Metabolism*. 38, 2, s. 91-99

**Both short intense and prolonged moderate in vitro stimulation reduce the mRNA expression of calcium-regulatory proteins in rat skeletal muscle**

Mänttari, S., Ørtenblad, N., Madsen, K. & Pilegaard, H., jan. 2013, I: *Developments in Molecular and Cellular Biochemistry*. 373, 1-2, s. 171-178 8 s.



**Effects of  $\beta$ 2-agonists on force during and following anoxia in rat extensor digitorum longus muscle**

Fredsted, A., Gissel, H., Ortenblad, N. & Clausen, T., 2012, I: Journal of Applied Physiology. 112, 12, s. 2057-2067 11 s.

**Skeletal muscle glycogen content and particle size of distinct subcellular localizations in the recovery period after a high-level soccer match**

Nielsen, J., Krstrup, P., Nybo, L., Gunnarsson, T. G. P., Madsen, K., Schrøder, H. D., Bangsbo, J. & Ørtenblad, N., 2012, I: European Journal of Applied Physiology. 112, 10, s. 3559-3567

**Effects of ageing on single muscle fibre contractile function following short-term immobilisation**

Hvid, L. G., Ørtenblad, N., Aagaard, P., Kjaer, M. & Suetta, C. A., 1. okt. 2011, I: Journal of Physiology. 589, 19, s. 4745-4757 13 s.

**Role of glycogen availability in sarcoplasmic reticulum Ca<sup>2+</sup> kinetics in human skeletal muscle**

Ørtenblad, N., Nielsen, J., Saltin, B. & Holmberg, H-C., 1. feb. 2011, I: Journal of Physiology. 589, Pt 3, s. 711-25 15 s.

**Human skeletal muscle glycogen utilization in exhaustive exercise: role of subcellular localization and fibre type**

Nielsen, J., Holmberg, H-C., Schrøder, H. D., Saltin, B. & Ørtenblad, N., 2011, I: Journal of Physiology. 589, 11, s. 2871-2885 15 s.

**Maximal voluntary contraction force, SR function and glycogen resynthesis during the first 72 h after a high-level competitive soccer game**

Krstrup, P., Ørtenblad, N., Nielsen, J., Nybo, L., Gunnarsson, T. G. P., Iaia, F. M., Madsen, K., Stephens, F., Greenhaff, P. & Bangsbo, J., 2011, I: European Journal of Applied Physiology. 111, 12, s. 2987-2995 9 s.

**Effects of aging on muscle mechanical function and muscle fiber morphology during short-term immobilization and subsequent retraining**

Hvid, L., Aagaard, P., Justesen, L., Bayer, M. L., Andersen, J. L., Ørtenblad, N., Kjaer, M. & Suetta, C., 1. dec. 2010, I: Journal of Applied Physiology. 109, 6, s. 1628-34 7 s.

**Subcellular localization-dependent decrements in skeletal muscle glycogen and mitochondria content following short-term disuse in young and old men**

Nielsen, J., Suetta, C., Hvid, L. G., Schrøder, H. D., Aagaard, P. & Ørtenblad, N., dec. 2010, I: American Journal of Physiology: Endocrinology and Metabolism. 299, 6, s. E1053-60 8 s.

**Lactate per se improves the excitability of depolarised rat skeletal muscle by reducing the Cl<sup>-</sup> conductance**

de Paoli, F. V., Ørtenblad, N., Pedersen, T. H., Jørgensen, R. & Nielsen, O. B., okt. 2010, I: Journal of Physiology. 588, 23, s. 4785-4794

**Increased subsarcolemmal lipids in type 2 diabetes. Effect of training on localization of lipids, mitochondria and glycogen in sedentary human skeletal muscle**

Nielsen, J., Mogensen, M., Vind, B. F., Sahlin, K., Højlund, K., Schrøder, H. D. & Ørtenblad, N., mar. 2010, I: American Journal of Physiology: Endocrinology and Metabolism. 298, 3, s. E706-E713 8 s.

**Effects of ageing on human skeletal muscle after immobilisation and re-training**

Suetta, C., Hvid, L. G., Justesen, L., Christensen, U., Neergaard, K., Simonsen, L., Ørtenblad, N., Magnusson, S. P., Kjaer, M. & Aagaard, P., 6. aug. 2009, I: Journal of Applied Physiology. 107, 4, s. 1172-1180

**Distinct effects of subcellular glycogen localization on tetanic relaxation time and endurance in mechanically skinned rat skeletal muscle fibres**

Nielsen, J., Schrøder, H. D., Rix, C. G. & Ørtenblad, N., 15. jul. 2009, I: Journal of Physiology. 587, Pt 14, s. 3679-90 11 s.

**Glycolysis in contracting rat skeletal muscle is controlled by factors related to energy state**

Ørtenblad, N., Macdonald, W. A. & Sahlin, K., 1. jun. 2009, I: Biochemical Journal. 420, 2, s. 161-8 7 s.

**Reduced sarcoplasmic reticulum content of releasable Ca<sup>2+</sup> in rat soleus muscle fibres after eccentric contractions**  
Nielsen, J. S., Sahlin, K. & Ørtenblad, N., 1. nov. 2007, I: Acta Physiologica (Print Edition). 191, 3, s. 217-228 11 s.

**Energy conservation attenuates the loss of skeletal muscle excitability during intense contractions**  
Macdonald, W. A., Ørtenblad, N. & Nielsen, O. B., 1. mar. 2007, I: American Journal of Physiology: Endocrinology and Metabolism. 292, 3, s. E771-E778

**Reduced insulin-mediated citrate synthase activity in cultured skeletal muscle cells from patients with type 2 diabetes: Evidence for an intrinsic oxidative enzyme defect**  
Ørtenblad, N., Mogensen, M., Petersen, I., Højlund, K., Levin, K., Sahlin, K., Beck-Nielsen, H. & Gaster, M., 30. jun. 2005, I: BBA General Subjects. 1741, 1-2, s. 206-14 8 s.

**Reduced insulinmediated citrate synthase activity in cultured skeletal muscle cells from patients with type 2 diabetes: Evidence for an intrinsic oxidative enzyme defect**  
Ørtenblad, N., Mogensen, M., Petersen, I., Højlund, K., Levin, K., Sahlin, K. & Ukendt, M. F., 2005, I: BBA General Subjects. 1741, s. 206-214

**Excitability of the T-tubular system in rat skeletal muscle: roles of K<sup>+</sup> and Na<sup>+</sup> gradients and Na<sup>+</sup>-K<sup>+</sup> pump activity**  
Nielsen, O. B., Ørtenblad, N., Lamb, G. D. & Stephenson, D. G., 2004, I: Journal of Physiology. 557, Pt 1, s. 133-46 14 s.

**The exciting mitochondrion**  
Stephenson, G. D. & Ørtenblad, N., 2004, I: Physiol News. 54, 14-15, s. 181-182

**A novel signalling pathway originating in mitochondria modulates rat skeletal muscle membrane excitability**  
Ørtenblad, N. & Stephenson, D. G., 2003, I: Journal of Physiology. 548, Pt 1, s. 139-45 7 s.

**Reactive oxygen species are important mediators of taurine release from skeletal muscle cells**  
Ørtenblad, N., Young, J. F., Oksbjerg, N., Nielsen, J. & Lambert, I. H., 2003, I: American Journal of Physiology: Cell Physiology. 284, 6, s. C1362-73

**Cellular model for induction of drip loss in meat**  
Lambert, I. H., Nielsen, J. H., Andersen, H. J. & Ørtenblad, N., 2001, I: Journal of Agricultural and Food Chemistry. 49, 10, s. 4876-83 8 s.

**Enhanced sarcoplasmic reticulum Ca(2+) release following intermittent sprint training**  
Ørtenblad, N., Lunde, P., Levin, K., Andersen, J. L. & Pedersen, P. K., jul. 2000, I: American Journal of Physiology: Regulatory, Integrative and Comparative Physiology. 279, 1, s. R152-60

**Impaired sarcoplasmic reticulum Ca(2+) release rate after fatiguing stimulation in rat skeletal muscle**  
Ørtenblad, N., Sjøgaard, G. & Madsen, K., 2000, I: Journal of Applied Physiology. 89, 1, s. 210-217

**Antioxidant status and lipid peroxidation after short-term maximal exercise in trained and untrained humans**  
Ortenblad, N., Madsen, K. & Djurhuus, M. S., apr. 1997, I: American Journal of Physiology - Regulatory Integrative and Comparative Physiology. 272, 4 Pt 2, s. R1258-R1263

**Xanthine oxidase in human skeletal muscle following eccentric exercise: a role in inflammation**  
Hellsten, Y., Frandsen, U., Ørtenblad, N., Sjødin, B. & Richter, E. A., jan. 1997, I: Journal of Physiology. 498 ( Pt 1), s. 239-48 10 s.

## **Aktiviteter**

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

Martin Langeskov Christensen (Underviser), Lars G. Hvid (Underviser), Mikkel Karl Emil Nygaard (Underviser), Henrik Boye Jensen (Underviser), H.H. Nielsen (Underviser), T. Petersen (Underviser), Niels Ørtenblad (Underviser), Egon Stenager (Underviser), Simon F Eskildsen (Underviser) & Ulrik Dalgas (Underviser)  
3. maj 2019

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

Niels Ørtenblad (Foredragsholder)  
13. sep. 2014

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

Niels Ørtenblad (Foredragsholder)  
23. aug. 2014

**Cykeltræning - tips og tricks fra forskerverdenen**

Niels Ørtenblad (Foredragsholder)  
22. jan. 2013

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

Niels Ørtenblad (Peer reviewer)  
13. jul. 2012 → 30. jul. 2012

**Role of Glycogen in Muscle Function**

Niels Ørtenblad (Foredragsholder)  
17. jun. 2012

**Americam College of Sports Medicine**

Niels Ørtenblad (Arrangør)  
1. jun. 2012

**Role of Glycogen in Skeletal Muscle Function**

Niels Ørtenblad (Foredragsholder)  
1. jun. 2012

**Americam College of Sports Medicine**

Niels Ørtenblad (Arrangør)  
29. maj 2012 → 2. jun. 2012

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

Niels Ørtenblad (Foredragsholder)  
28. apr. 2012

**Carbohydrate and Performance: Kolhydrater och prestation**

Niels Ørtenblad (Foredragsholder)  
27. apr. 2012

**Role of Muscle Glycogen for Sport Performance**

Niels Ørtenblad (Foredragsholder)  
15. mar. 2012

**Cykling; præstation og træning**

Niels Ørtenblad (Foredragsholder)  
16. feb. 2012

**Exercise Physiology**

Niels Ørtenblad (Deltager)

19. jan. 2012 → 21. jan. 2012

**Exercise Physiology**

Niels Ørtenblad (Deltager)

19. jan. 2012 → 21. jan. 2012

**Technology and Biomechanics in Sport, Ramundberget**

Niels Ørtenblad (Deltager)

17. jan. 2012 → 19. jan. 2012

**Muscle and Nerve (Tidsskrift)**

Niels Ørtenblad (Peer reviewer)

2. jan. 2012 → 12. feb. 2012

**Censor: censor på speciale**

Niels Ørtenblad (Censor)

19. dec. 2011

**Frontiers in Physiology (Tidsskrift)**

Niels Ørtenblad (Peer reviewer)

15. dec. 2011 → 12. feb. 2012

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

Niels Ørtenblad (Foredragsholder)

1. dec. 2011

**Peer reviewer (Tidsskrift)**

Niels Ørtenblad (Peer reviewer)

10. nov. 2011 → 25. nov. 2011

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

Niels Ørtenblad (Foredragsholder)

10. nov. 2011

**Mid Sweden University**

Niels Ørtenblad (Gæsteforsker)

6. nov. 2011 → 11. nov. 2011

**Københavns Universitet (Ekstern organisation)**

Niels Ørtenblad (Medlem)

1. nov. 2011 → 30. nov. 2011

**Muscle Metabolism and E-C Coupling**

Niels Ørtenblad (Underviser)

3. jun. 2011

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

Niels Ørtenblad (Foredragsholder)

1. jun. 2011

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

Niels Ørtenblad (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**

Niels Ørtenblad (Foredragsholder)  
28. mar. 2011

**The Scientific Research Process**

Niels Ørtenblad (Foredragsholder)  
16. mar. 2011

**Censor**

Niels Ørtenblad (Censor)  
1. mar. 2011 → 1. apr. 2011

**La Trobe University**

Niels Ørtenblad (Gæsteforsker)  
1. mar. 2011 → 15. jul. 2011

**Advanced Exercise Physiology**

Niels Ørtenblad (Andet)  
11. feb. 2011 → 1. apr. 2011

**Australian Catholic University**

Niels Ørtenblad (Gæsteforsker)  
28. jan. 2011 → 28. feb. 2011

**Aarhus Universitet (Ekstern organisation)**

Niels Ørtenblad (Medlem)  
15. jan. 2011 → 31. jan. 2011

**Peer reviewer (Tidsskrift)**

Niels Ørtenblad (Peer reviewer)  
10. jan. 2011 → 15. sep. 2011

**Reviewer (Tidsskrift)**

Niels Ørtenblad (Peer reviewer)  
5. jan. 2011 → 19. jan. 2011

**Københavns Universitet (Ekstern organisation)**

Niels Ørtenblad (Medlem)  
4. nov. 2010 → 3. dec. 2010

**Sydafrika (Ekstern organisation)**

Niels Ørtenblad (Medlem)  
1. okt. 2010 → 1. nov. 2010

**Censor: Menneskets præstationsevne og træthedsudvikling**

Niels Ørtenblad (Censor)  
28. jun. 2010 → 19. jul. 2010

**Skeletal muscle glycogen and muscle function**

Niels Ørtenblad (Foredragsholder)  
5. jun. 2010

**Homage to August Krogh : Celebrating the 90th anniversary of his Nobel prize in physiology and medicine**

Niels Ørtenblad (Deltager)

1. jun. 2010 → 4. jun. 2010

**Københavns Universitet (Ekstern organisation)**

Niels Ørtenblad (Medlem)

1. jun. 2010 → 5. jul. 2010

**Ministerium (Ekstern organisation)**

Niels Ørtenblad (Medlem)

15. maj 2010 → 15. jun. 2010

**Anaerob Træning: Censor ved kurset Anaerob Træning, Institut for Idræt, KU**

Niels Ørtenblad (Censor)

28. apr. 2010 → ...

**Syddansk Universitet (Ekstern organisation)**

Niels Ørtenblad (Medlem)

21. apr. 2010

**Glycogen-protein association in human skeletal muscle; effects of exercise: Opponent på PhD- afhandling af Cand Scient Jace Drain**

Niels Ørtenblad (Andet)

1. mar. 2010 → 30. apr. 2010

**Mid Sweden University**

Niels Ørtenblad (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**

Niels Ørtenblad (Arrangør)

11. jan. 2010 → ...

**Journal of Physiology (Tidsskrift)**

Niels Ørtenblad (Redaktør)

1. jan. 2010

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

Niels Ørtenblad (Foredragsholder)

28. aug. 2009

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

Niels Ørtenblad (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.

### **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 (Print)*. 227, S721

### **Skeletal muscle sarcoplasmic reticulum Ca<sup>2+</sup> 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.

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

Jensen, R., Nielsen, J., Kristiansen, M. R. & Ortenblad, N., nov. 2019, I: *Acta Physiologica*. 227, S721, s. 74 1 s.

### **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.

### **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.

### **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, MA., 2012, I: *Journal of Muscle Research and Cell Motility*. 33, s. 245

## **Publikationer øvrigt**

### **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**

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

**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., 2019.

**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., Skjærbæk, M. C., Nykvist Larsen, D., Plomgaard, P., Ørtenblad, N. & Nielsen, J., 2019.

**ACUTE AND CHRONIC EFFECTS OF ENDURANCE TRAINING ON SR CA<sup>2+</sup> HANDLING IN HIGHLY-TRAINED ENDURANCE ATHLETES**

Gejl, K. D., Holmberg, H-C. & Ørtenblad, N., 2018.

**Sarcoplasmic reticulum Ca<sup>2+</sup> uptake rate and endogenous content in MHC I and MHC II fibres of human skeletal muscle following prolonged exercise in highly trained**

Ørtenblad, N. & Nielsen, J. S., 2016.

**Contractile apparatus uses glycogen from specific subcellular locations: Evidence of cytosolic compartmentalization between glycogen metabolism and energy consumption in skeletal muscle**

Nielsen, J., Christensen, P. & Ørtenblad, N., 2014.

**Effect of whey protein hydrolysate on adaptation to endurance training in well-trained runners**

Søndergaard Thomsen, L., Ørtenblad, N. & Hansen, M., 2014, *Book of Abstracts: 19th Annual Congress of the European College of Sport Science*. de Haan, A., de Ruiter, C. J. & Tsolakidis, E. (red.). European College of Sport Science, s. 334-335.

**Energy system contribution and determinants of performance in classical sprint cross-country skiing**

Andersson, E., Willis, S. J., Holmberg, H-C. & Ørtenblad, N., 2014, *Book of Abstracts: 19th Annual Congress of the European College of Sport Science*. de Haan, A., de Ruiter, C. J. & Tsolaskidis, E. (red.). European College of Sport Science, s. 420-421.

**Glycolytically derived ATP is essential for muscle fiber excitability and Na,K-ATPase activity in the transverse tubular system of skeletal muscle fibers**

Jensen, R., Nielsen, J. & Ørtenblad, N., 2014.

**Na,K-ATPases of rat soleus muscles require energy from the breakdown of glycogen**

Nielsen, J. & Ørtenblad, N., 2014.

**The Intramyocellular Lipid Content In The Arms Of Elite Cross Country Skiers Is Lower Than In Their Legs**

Nielsen, J., Holmberg, H-C., Schrøder, H. D., Saltin, B. & Ørtenblad, N., jun. 2013.

**Short-term disuse and subsequent recovery induce age-specific alterations in neuromuscular activation**

Hvid, L. G., Suetta, C., Ørtenblad, N., Kjær, M. & Aagaard, P., 2013, *Proceedings ECSS 18th Annual Meeting*. European College of Sports Science.

**Glycogen Resynthesis Rate Following Cross Country Skiing is Closely Correlated to Skeletal Muscle Content**

Ørtenblad, N., Nielsen, J., Saltin, B. & Holmberg, H. C., 15. mar. 2012, *Science and Skiing V: Science and Skiing V*. Müller, E., Lindinger, S. & Stöggl, T. (red.). 1 udg. Maidenhead: Meyer & Meyer Sport, Bind 1. s. 549-556 8 s.



**Subcellular localization-dependent skeletal muscle glycogen content in the recovery period after a high-level soccer match**  
Nielsen, J., Krstrup, P., Nybo, L., Gunnarsson, T., Madsen, K., Schrøder, H. D., Bangsbo, J. & Ørtenblad, N., 2012.

**Superfast muscles are devoid of glycogen particles in the intramyofibrillar space**  
Nielsen, J., Ørtenblad, N., Frandsen, U., Schrøder, H. D. & Elemans, C., 2012.

**Short-term immobilization impairs human single muscle fibre contractility in young and old**  
Hvid, L. G., Suetta, C., Aagaard, P., Michael, K. & Ørtenblad, N., 15. nov. 2010, *Proc. 39th European Muscle Conference*. European Society for Muscle Research

**Glycogen modulate EC coupling in elite triathletes, by affecting SR Ca<sup>2+</sup> release rate**  
Ørtenblad, N., Gejl, K. D., Bech, R. D., Nygaard, T., Jensen, L. & Frandsen, U., 13. nov. 2010.

**Exhaustive endurance exercise impairs specific force and Ca<sup>2+</sup> sensitivity of single human muscle fibers**  
Gejl, K. D., Hvid, L. G. & Ørtenblad, N., 29. okt. 2010.

**4 days of immobilization impairs human single muscle fibre contractility in young and old**  
Hvid, L. G., Suetta, C., Aagaard, P., Kjær, M. & Ørtenblad, N., 15. okt. 2010, *Proc. Nordic Conference 2010*. Syddansk Universitet, Institut for Idræt og Biomekanik

**Exhaustive exercise affects contractile properties of single human muscle fibres**  
Gejl, K. D., Ørtenblad, N. & Hvid, L. G., 13. sep. 2010.

**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**  
Nielsen, J., Hey-Mogensen, M., Vind, B. F., Sahlin, K., Højlund, K., Schrøder, H. D. & Ørtenblad, N., 2009, *Muscles as molecular and metabolic machines*. International Biochemistry of Exercise, s. 53 1 s.

**Human skeletal muscle intramyofibrillar glycogen is decreased after 14 days of immobilisation in young and old men**  
Nielsen, J., Suetta, C., Hvid, L. G., Schrøder, H. D. & Ørtenblad, N., 2009, *Book of abstracts: 14th Annual Congress of the European College of Sport Science, Oslo/Norway, June 24-27, 2009*. European College of Sports Science, s. 297 1 s.

**The lactate ion protects excitability and force in depolarized muscle fibres by inhibiting chloride conductance**  
Ørtenblad, N., 2009, *Proceedings. MyoNaK*, s. 19 1 s.

**Changes in muscle mechanical function with 2 weeks of limb immobilization in young and old healthy men**  
Hvid, L. G., Suetta, C., Christensen, U., Justesen, L., Ørtenblad, N., Kjær, M. & Aagaard, P., 2008, *Proceedings 13th Annual Congress European College of Sports Science*. European College of Sports Science, s. 143-144

**Depletion and resynthesis of glycogen in arm and leg muscles after a classical 15-K cross-country ski race**  
Holmberg, H-C., Bonne, T. & Ørtenblad, N., 2008, *Book of abstracts of the 13th Annual Congress of the European College of Sports Science*. European College of Sports Science

**Effects of 2 weeks of immobilization on strength and neuromuscular activation in young and old healthy men**  
Hvid, L. G., Christensen, U., Justesen, L., Ørtenblad, N., Kjær, M., Aagaard, P. & Suetta, C., 2007, *Proc. 12th Annual Congr. Eur. College Sports Sci. (Eds. Kallio J, Komi PV et al), University of Jyväskylä*. s. 197

**Skeletal muscle glycogen localisation - fibre type dependency and interfibre heterogeneity**  
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.