

Press release

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Basic information

Name: Tine Vrist Dam Email: tinedam@ph.au.dk Phone: 29638425

Department of: Public Health

Main supervisor: Associate Professor Mette Hansen

Title of dissertation: The anabolic effect of estrogen on skeletal muscle mass and performance

Date for defence: 17th of August at (time of day): 13.00 Place: Dalgas avenue 4, 8000 Aarhus C

Press release (Danish)

Den anabole effekt af østrogen på skeletmuskulatur og præstationsevne

For første gang er den isolerede effekt af transdermal østrogenbehandling og styrketræning på muskelvækst blevet undersøgt i en gruppe tidligt postmenopausale kvinder. Endvidere er effekten af hormonændringer i menstruationscyklus blevet undersøgt i forhold til fysisk og mental præstationsevne i en gruppe normalmenstruerende kvinder i et nyt ph.d.-projekt fra Aarhus Universitet, Health. Projektet er gennemført af Tine Vrist Dam, der forsvare det d. 17/08/2021.

Niveauerne af kvindelige kønshormoner fluktuerer i løbet af en kvindes liv, men også i løbet af hver enkel menstruationscyklus. Ændringerne i hormonniveauerne kan muligvis påvirke skeletmuskulaturens muskelmasse, styrke og fysisk præstationsevne. Disse ændringer kan være af betydning for postmenopausale kvinder som ønsker at bibeholde deres muskelmasse, eller for premenopausale kvinder som ønsker at præstere deres bedste i konkurrencer eller planlægge deres træning optimalt. Denne tese består af to studier. Studie I har undersøgt om østrogenterapi har en synergistisk effekt, sammenlignet med placebo, på muskelvækst efter 12 ugers styrketræning i 31 tidligt postmenopausale kvinder. Studie II, har undersøgt den mulige effekt af ændringerne i kvindelige kønshormoner i premenopausale kvinder, i forhold til fysisk præstationsevne og mentalt velvære.

Forsvaret af ph.d.-projektet er offentligt og finder sted den 17/08/2021 kl. 13.00 i Sektion for Idræts auditorium, Aarhus Universitet, Dalgas Avenue. Efterfølgende er alle deltagere inviteret til reception på samme adresse. Alle der måtte have interesse i at overvære forsvaret online, kan tilgå det via Zoom. I så fald skal man rette henvendelse til Tine Vrist Dam.

Yderligere oplysninger: Ph.d.-studerende Tine Vrist Dam, e-mail: tinedam@ph.au.dk, tlf. 29638425.

Bedømmelsesudvalg:

Formand:

Klinisk Professor Anelli Sandbæk, Steno Diabetes Center Aarhus, Denmark

Opponenter:

Professor Sarianna Sipilä

Fakultetet for Sport og sundhedsvidenskab, Jyväskylä Universitet, Finland

Professor Ylva Hellsten

Integrativ Fysiologi, Afdelingen for ernæring, bevægelse og sport, Københavns Universitet, Danmark

Press release (English)

The anabolic effect of estrogen on skeletal muscle mass and performance

For the first time the isolated effect of transdermal estrogen therapy and resistance training on muscle growth has been investigated in a group of early postmenopausal women. Furthermore the effect of hormonal changes during the menstrual cycle on physical performance and mental wellbeing has been investigated in a group of normal menstruating women, in a new project from Aarhus University, Helath. The project was carried out by Tine Vrist Dam, who is defending her dissertation on 17/08/2021.

The level of female sex hormones changes, not only through a woman's lifespan, but also fluctuates in every menstrual cycle. This change in hormones may possibly influence skeletal muscle mass, strength and physical performance. Changes that can be relevant for postmenopausal women with the aim of maintaining muscle mass, or for premenopausal women who wish to perform their very best in competitions or plan their training after their ability to perform. The current thesis consists of two studies. Study I it has been investigating if estrogen therapy had a synergistic effect, compared to placebo, on skeletal muscle mass hypertrophy after 12 weeks of resistance training, in 31 early postmenopausal women. In Study II, the possible effect of fluctuations in female sex hormones, in premenopausal women, on physical performance and mental wellbeing, will be investigated.

The defence is public and takes place on 17/08/2021 at 13.00 at Section for Sports Science, Aarhus University, Dalgas Avenue 4, Aarhus. Afterwards, all participants are invited for reception at the same address. For those, who may be interested, the defence can be accessed online via Zoom upon request to Tine Vrist Dam. For more information, please contact PhD student Tine Vrist Dam, email: tinedam@ph.au.dk, Phone +4529638425.

Assessment committee:

Chairman of the committee:

Clinical Professor Anelli Sandbæk, Steno Diabetes Center Aarhus, Denmark

Opponents:

Professor Sarianna Sipilä

Faculty of Sport and Health Sciences, University of Jyväskylä, Finland

Professor Ylva Hellsten

Integrative Physiology, Department of Nutrition, Exercise and Sports, University of Copenhagen, Denmark

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