

ORAL SESSION 15: [17th July, 10:15 am – 11: 15 am](#)

Sports Training & Coaching

Chairperson: Prof. Dr. Tae Won Jun, Seoul National University, Korea
Venue : Dewan Wau

Nallella	Srinivas	Effect Of Pranayama Exercises On Cardio Vascular Endurance Of Basket Ball Players
Suhana	Aiman	Repeated Sprint Ability, Aerobic Fitness, Lactate And Lactate Dehydrogenase Response Following Sprint Training
Chen	Y.R	The Healthy Benefits of Programmed Accommodating Circuit Exercise in Sedentary Adults
Zainie	Aboo Bakkar	Effect Of Plyometric Training On The Lower Extremities Of State Silat Athletes
Chang	Wei-Gang	Effect of different cycling resistance on vastus medialis oblique and vastus lateralis
Wee	Eng Hoe	Effects of specially designed exercise programme on the agility, power and strength of primary school children

ORAL SESSION 16: [17th July, 10:15 am – 11: 15 am](#)

Sports Nutrition

Chairperson: Dr. Y. Venkata Ramana, National Institute of Nutrition, INDIA.
Venue : Dewan Congkak

Ayu Suzailiana	Muhamad	Effects of Eurycoma longifolia Jack Supplementation on Recreational Athletes' Endurance Running Performance and Physiological Responses in the Heat.
Sarina	Md. Yusof	Effects of strength Training and Tongkat Ali (Eurycoma Longifolia) supplementation on strength and muscle size in middle-aged women
Wu	Ching-Lin	The influence of short-term glycemic index diet and exercise on postprandial lipid profile
Geetanjali	K Kelkar	Effect of Antioxidant Supplementation on Haematological Status, Oxidative Stress and Aerobic Capacity of Amateur Indian Boxers
Mohd Rahimi	Che Jusoh	Effects Of Soy Protein Supplementation On High Intensity Cycling Performance In Hot And Humid Environment
Somayeh Sadat	Tavafzadeh	Effects of combined jumping exercise and honey supplementation on bone properties in young female rats

Source : <http://www.apissc2009.org/Oral%20sessions-070709.pdf>

Effects of strength training and Tongkat Ali (*Eurycoma Longifolia*) supplementation on physical functions and muscle size in middle-aged women

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Background: Aging is associated with decline in muscle strength. Loss in physical function leads to disability. Tongkat Ali (*Eurycoma longifolia*) is known for its aphrodisiac property. Tongkat Ali supplementation may enhance the effects of strength training in middle-aged women.

Objectives: To evaluate the effect of strength training and Tongkat Ali supplementation on physical functions and muscle size in middle-aged women.

Method: A double blind randomized control study was conducted on a sample of 31 middle-aged women (aged 45 – 59 years) who were screened and randomized to treatment (n=17) and control groups (n=14). Treatment group consumed 100 mg eurycoma longifolia extract. Both groups followed 12 weeks of 60% of 1RM strength training (twice weekly). Subjects were encouraged to maintain their physical activities and usual diet over the course of the study. Measurements were conducted at baseline and after 12 weeks. Physical functions were measured by muscular strength (bench press, leg press, and handgrip) power (vertical jump), balance, flexibility and endurance (push up). Muscle size represented by rectus femoris cross sectional area measured by ultrasound.

Results: Significant improvements were observed in bench press (67% and 58%, $p < 0.05$), leg press (33% and 27%, $p < 0.05$), upper body power (21% and 25%), balance (effect size of 0.39 vs 0.31) following strength training in both groups; Greater gains in handgrip strength (effect size of 0.71 vs 0.43, $p < 0.05$), flexibility (28.56 ± 6.45 to 31.91 ± 7.70 , $p < 0.05$, effect size of 0.60) cm, muscular endurance (effect size of 0.64 vs 0.35, $p < 0.05$) and rectus femoris cross-sectional area (effect size of 0.59 vs 0.31, $p < 0.05$) were observed. There was no significant change in leg power.

Conclusion: In conclusion, strength training counteracted the age-related decline in physical functions. Tongkat Ali supplementation enhanced handgrip strength, flexibility, muscular endurance and muscle size gain in middle-aged women during a strength training program.

LAMPIRAN H

SIJIL DAN ABSTRAK PEMBENTANGAN DI 4th APCESS & 8th ISSC



Joint Conference: 4th Asia-Pacific Conference on Exercise and Sports Science & 8th International Sports Science Conference

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Background: Aging is associated with decline in muscle strength. Loss in physical function leads to disability. Tongkat Ali (*Eurycoma longifolia*) is known for its aphrodisiac property. Tongkat Ali supplementation may enhance the effects of strength training in middle-aged women. **Objectives:** To evaluate the effect of strength training and Tongkat Ali supplementation on strength and muscle size in middle-aged women. **Method:** A double blind randomized control study was conducted on a sample of 31 middle-aged women (aged 45 – 59 years) who were screened and randomized to treatment (n=17) and control groups (n=14). Treatment group consumed 100 mg eurycoma longifolia extract. Both groups followed 12 weeks of 60% of 1RM strength training (twice weekly). Subjects were encouraged to maintain their physical activities and usual diet over the course of the study. Measurements were conducted at baseline and after 12 weeks. Muscle strength was measured by chest press, leg press and handgrip. Muscle size represented by rectus femoris cross sectional area measured by ultrasound. **Results:** Significant improvements were observed in bench press (67% and 58%, $p < 0.05$) and leg press (33% and 27%, $p < 0.05$) following strength training in both groups; Greater gains in handgrip strength (effect size of 0.71 vs 0.43, $p < 0.05$) and rectus femoris cross-sectional area (effect size of 0.59 vs 0.31, $p < 0.05$) were observed. **Conclusion:** In conclusion, strength training counteracted the age-related decline in muscle strength. Tongkat Ali supplementation enhanced handgrip strength and muscle size gain in middle-aged women during a strength training program.