

Research projects utilizing our EMG and other Noraxon biomechanical measurement devices

1)

The Effects of Bicycle Frame Geometry on Muscle Activation and Power During a Wingate

Mark D. Ricard, Patrick Hills-Meyer, Michael G. Miller, and Timothy J. Michael.

A Noraxon Myosystem 2000 was used to characterize muscle activation as effected by bicycle.

Published in the *Journal of Sports and Medicine*.

2)

The Influence in Airforce Soldiers Through Wearing Certain Types of Army-Issue Footwear on Muscle Activity in the Lower Extremities

Schulze C, Lindner T, Schulz K, Finze S, Kundt G, Mittelmeier W, Bader R.

A Noraxon Telemetry 2400T EMG system was used to characterize muscle activity as influenced by shoe type.

Published in the *Open Orthopaedics Journal*.

3)

The dependence on posture of temporalis and masseter bioelectrical muscle activity

Renata Kielnar, Anna Mika, Lukasz Oleksy, Pawel Jureczko, Anna Marchewka.

The Telemetry G2 system was used to determine if masticatory system dysfunction was posture dependent.

Published in the *Journal Medical Rehabilitation*.

4) Terrain and Direction Classification of Locomotion Transitions Using Neuromuscular and Mechanical Input

Joshi D, Hahn ME.

This study utilized the Telemetry DTS and tri-axial accelerometers to characterize the difference between direction and terrain patterns to identify locomotive conditions.

Published by the *Biomedical Engineering Society*.

5)

Electromyographic Analysis of the Supraspinatus and Deltoid Muscles During 3

Common Rehabilitation Exercises

Michael M Reinold, DPT, PT, ATC, CSCS, Leonard C Macrina, MSPT, CSCS, Kevin E Wilk, DPT, PT, Glenn S Fleisig, PhD, Shouchen Dun, MS, Steven W Barrentine, MS, Michael T Ellerbusch, MD, and James R Andrews, MD.

The MyoSystem 2000 system was used to characterize muscle activation for various rehabilitation exercises.

Published in the *Journal of Athletic Training*.

6)

Relationship Between Counter Movement Jump Performance and Extraversion Level

David James Cornell

This master's thesis analyzed jump mechanics using a Telemyo 2400 G2 and Inline 2D Goniometer.

Published in the University of Wisconsin Milwaukee's 2012 *Theses and Dissertations and* .

7)

Surface Electromyography Assessment of Muscle Activation Patterns While Sitting Down in Young Healthy Women and Patients with Ankylosing Spondylitis.

Amr Mohamed Zaki Zaatar, Jaroslav Opavský, Petr Uhlíř.

The MyoSystem 1400A was used to characterize bilateral muscle contraction of the tibialis anterior, medial head of the gastrocnemius, gluteus maximus, and erectors spinae while subjects were sitting.

Published in the *Acta Gymnica* .

8)

Electromyography analysis of single-leg closed chain exercises: Implications for rehabilitation after anterior cruciate ligament reconstruction.

Shen-Kai Chen, Ming-tung Wu, Chun-Hao Huang, Jia-Hroung Wu, Lan-Yuen Guo, Wen-Lan Wu.

Thigh muscle activity was characterized in conjunction with knee flexion to analyze the effect of the squatting movement on ACL reconstruction rehabilitation. Published in the *Journal of Athletic Training*.

9)

Can lower limb muscles be retrained to decrease the risk of ACL injury?

Elizabeth Jane Cowling

This multi-faceted graduate thesis tested the efficacy of an EMG biofeedback retraining

programming to alter hamstring muscle recruitment.
Published in the *University of Wollongong Thesis Collection*.

10)

Muscle pre-activity of anterior cruciate ligament-deficient and reconstructed females during functional activities.

Demont RG, Lephart SM, Giraldo JL, Swanik CB, Fu FH.

EMG activity from the thigh (VMO, VL, and lateral hamstring) and leg (MG and LG) were measured during downward walking, running, hopping, and landing from a step.

Published in the *Journal of Athletic training*.

11

Preferential Quadriceps Activation in Female Athletes With Incremental Increases in Landing Intensity

Ford KR, Myer GD, Schmitt LC, Uhl TL, Hewett TE.

Using a **Noraxon** Telemetry 2400, **Eagle Cameras** Motion Capture System, and **AMTI** force platform, this study determined the relationship between hamstrings and quadriceps activation during plyometric activities.

Published in the *Journal of Applied Biomechanics*.

12)

Electromyographic evaluation of the sound and involved side during gait of spastic hemiplegic children with cerebral palsy.

Patikas D, Wolf S, Döderlein L.

Gait characterization using **Noraxon** EMG devices and a **Vicon** motion analysis system.

Published in the *European Journal of Neurology*

13)

High intensity running results in an impaired neuromuscular response in ACL reconstructed individuals

Patras K, Ziogas G, Ristanis S, Tsepis E, Stergiou N, Georgoulis AD.

Neuromuscular evaluations using the **Noraxon** Telemetry 2400T, a **Biodex** isokinetic dynamometer and a **MEDmetric** knee arthrometer of patients with anterior cruciate ligament reconstruction.

Published in the *Journal of Knee Surgery, Sports Traumatology, and Arthroscopy*.

14)

An Electromyography Analysis and Motion Analysis of the range of movement within a MRI scan

The **Telemyo 2400 G2** system was used in conjunction with the **Qualysis ProReflex** camera system to characterize patient movement in a confined space similar to an MRI scanner.

Poster presented at the ORS 2012 Annual meeting.

15)

Tai Chi training reduced coupling between respiration and postural control

Matthew L. Holmes, Brad Manor, Wan-hsin Hsieh, Kun Hu, Lewis A. Lipsitz, Li Li.

Used a respiratory monitor and measure COP an respiratory dynamics.

Published in the Journal *Neuroscience Letters*.

16)

Strength Increase after Whole-Body Vibration Compared with Resistance Training

Delecluse C, Roelants M, Verschueren S.

Noraxon Myosystem 2000 was used in conjunction with Monitran Accelerometers to compare whole body vibration to resistance training.

Published in *Medicine in Sports and Exercise Science*.

17)

Electromyographic analysis of the triceps surae muscle complex during achilles tendon rehabilitation program exercises

Mullaney M, Tyler TF, McHugh M, Orishimo K, Kremenec I, Caggiano J, Ramsey A.

An 8-channel Telemyo system was used in conjunction with a Biodex dynamometer were used to characterize muscle activation during suggested rehabilitation exercises.

Published in *Sports Health*.

18)

Alternative methods of normalising EMG during running

Albertus-Kajee Y, Tucker R, Derman W, Lamberts RP, Lambert MI.

Raw, third party EMG data was evaluated using the MyoResearch software suite and a Biodex Dynamometer 3 to develop new methods for EMG normalization.

Published in the *Journal of Electromyography and Kinesiology*.

19)

Kinetic and Kinematic Differences Between Squats Performed with and without Elastic Bands

Israetel MA, McBride JM, Nuzzo JL, Skinner JW, Dayne AM.

The Telemetry 900 system was used in conjunction with custom-designed Lab-View programs and pressure plates to compare squat dynamics.

Published in the *Journal of Strength and Conditioning Research*.

20)

Knee Joint Laxity and Neuromuscular Characteristics of Male and Female Soccer and Basketball Players

Rozzi SL, Lephart SM, Gear WS, Fu FH.

Athletes with ACL injuries were studied using a **Noraxon** Telemetry EMG System, **Biodex** Stability System, and **MEDmetric** Knee Arthrometer.

Published in the *American Journal of Sports Medicine*.

21)

The Analysis of Upper Limb Movement and EMG Activation During the Snatch Under Various Loading Conditions.

Shen-Kai Chen, Ming-Tung Wu, Chun-Hoa Huang, Jia-Hroung Wu, Lan-Yuen Guo, Wen-Lan Wu

A **Noraxon** EMG system was used in conjunction with a **Qualysis** Motion Capture System to characterize the kinematic and bioelectric phenomena during olympic exercise.

Published in the *Journal of Mechanics in Medicine and Biology* .

22)

Neuromuscular dynamic restraint in women with anterior cruciate ligament injuries.

Swanik CB, Lephart SM, Swanik KA, Stone DA, Fu FH.

The telemetry system was used to measure the neuromuscular characteristics of hamstring stiffness and flexibility in female subjects with ACL injuries.

Published in the *Journal Clinical Orthopaedics And Related Research*.

23)

Effects of tape and exercise on dynamic ankle inversion.

Mark D. Ricard, PhD, Stephen M. Sherwood, MS, ATC, CSCS, Shane S. Schulthies, PhD, PT, ATC, and Kenneth L. Knight, PhD, ATC.

2D electronic goniometers were used to measure plantar flexion and ankle inversion.

Published in the *Journal of Athletic Training*

24)

Biomechanical changes in gait following selective dorsal rhizotomy

Abel MF1, Damiano DL, Gilgannon M, Carmines D, Kang HG, Bennett BC, Laws ER Jr. Noraxon EMG was used to validate changes in walking gait of pediatric patients with cerebral palsy.

Published in the *Journal of Neurosurgery*

25)

Ankle and knee coupling in patients with spastic diplegia: Effects of gastrocnemius-soleus lengthening.

Baddar A, Granata K, Damiano DL, Carmines DV, Blanco JS, Abel MF. EMG was used in conjunction with joint kinetics and kinematics to characterize gait of patients with cerebral palsy.

Published in *The Journal of Bone and Joint Surgery*.

26)

Improvements in muscle symmetry in children with cerebral palsy after equine-assisted therapy (hippotherapy).

Benda W, McGibbon NH, Grant KL.

EMG was used to measure muscle activity of the trunk and upper legs during sitting, standing, and walking tasks before and after riding a horse and a saddling a normal barrel.

Published in the *Journal of Alternative and Complementary Medicine*.

27)

What does the Ashworth scale really measure and are instrumented measures more valid and precise?

Damiano DL, Quinlivan JM, Owen BF, Payne P, Nelson KC, Abel MF.

EMG was used to identify stretch responses in conjunction with clinical assessments, functional assessments, and isokinetic assessments of passive resistance torque.

Published in the *Journal of Developmental Medicine and Child Neurology*.

28)

Spasticity versus strength in cerebral palsy: relationships among involuntary resistance, voluntary torque, and motor function.

Damiano DL, Quinlivan J, Owen BF, Shaffrey M, Abel MF.

EMG was used to quantify voluntary torque and passive resistance across speeds in the hamstrings and quadriceps muscle groups.

Published in the *European Journal of Neurology*.

29)

Quantifying muscle activity in nonambulatory children with spastic cerebral palsy before and after selective dorsal rhizotomy

Perry JE, Davis BL, Luciano MG.

A **Noraxon** Telemetry 900 unit was used in conjunction with a **Motion Analysis Corp.** 6 camera system to define the percentage of the movement cycle for which the muscle was acting concentrically, eccentrically, isometrically or was considered inactive.

Published in the *Journal of Electromyography and Kinesiology*.

30)

Electromyographic evaluation of the sound and involved side during gait of spastic hemiplegic children with cerebral palsy

Patikas D, Wolf S, Döderlein L.

SEMG of the lower limbs of hemiplegic children with spastic cerebral palsy during gait was recorded.

Published in the *European Journal of Neurology*

31)

Repeated Botulinum Toxin A injections in the treatment of Spastic Equinus Foot

Metaxiotis D, Siebel A, Doederlein L.

EMG was used to substantiate the efficacy of injections in increasing calf muscle activation for children with Cerebral Palsy.

Published in the Journal *Clinical Orthopaedics and Related Research*.

32)

Muscle responses to seated perturbations for typically developing infants and those at risk for motor delays

Washington K, Shumway-Cook A, Price R, Ciol M, Kartin D.

A **Noraxon** Myosystem 1200 system was used in conjunction with a **Qualysis** motion capture system to measure muscle response in infant patients.

Published in the journal *Developmental Medicine & Child Neurology*.

33)

Clinically prescribed orthoses demonstrate an increase in velocity of gait in children with cerebral palsy: a retrospective study.

White H, Jenkins J, Neace WP, Tylkowski C, Walker J.

Both EMG and Kinematic data were acquired using a **Noraxon** telemetry EMG system

and **Motion Analysis Corp.** motion capture system.
Published in the Journal *Developmental Medicine & Child Neurology*.

34)

Motor control assessment for Rhizotomy in cerebral palsy

Wong AM, Chen CL, Hong WH, Tang FT, Lui TN, Chou SW.

EMG was used to assess motor control along side clinical ambulatory capability.

Published in the *American Journal of Physical Medicine & Rehabilitation*.

35)

Effect of balance training on muscle activity used in recovery of stability in children with cerebral palsy: a pilot study

Woollacott M, Shumway-Cook A, Hutchinson S, Ciol M, Price R, Kartin D.

Surface electromyography was used to characterize changes in neuromuscular responses pretraining, immediately posttraining, and 1 month posttraining.

Published in the journal *Developmental Medicine & Child Neurology*.

36)

Stomatognathic and electromyographic evaluation of patients with unilateral mandibular condyle fractures

Raustia, Aune ; Silvennoinen, Urpo ; Oikarinen, Kyösti ; Virtanen, Kauko K. ; Altonen, Mikko.

Dentists used EMG to characterize jaw muscle activity.

Published in the *Publications of Institute of Dentistry, University of Oulu, Finland*.

37)

Postural perturbation and muscular response following sudden release during symmetric squat and stoop lifting

Chow DH, Cheng IY, Holmes AD, Evans JH.

A **Noraxon** Telemetry EMG system was used in conjunction with an **RECEMG** system, **force plate**, and a **Bruel and Kjaer** accelerometer to measure body dynamics while lifting boxes.

Published in the journal *Ergonomics*.

38)

Human muscular and postural responses in unstable load lifting

Lee YH, Lee TH.

Human body dynamics in load lifting were measured using a **Noraxon** Myosystem 1200 and **Takei Scientific Instruments** force platform and 2D motion capture system.
Published in the Journal *Spine*.

39)

Multidimensional Signal Analysis as a means of better understanding factors associated with repetitive use in violin performance

GB Shan, Peter Visentin, Arlan N Shultz.

Human body dynamics in violin performance were quantified using a **Noraxon** Telemyo 900 System and a **Vicon** 9 camera motion capture system.

Published in the journal *Medical Problems of Performing Artists*.

40)

EMG characterization of embouchure muscle activity: Reliability and application to Embouchure Dystonia

Peter W. Iltis, Michael W. Givens.

A Myosystem 1200 was used to characterize the electrophysiological characteristics of embouchure muscles during french horn playing.

Published in the journal *Medical Problems of Performing Artists*.

41)

Rectus femoris: Its role in normal gait

Annaswamy TM, Giddings CJ, Della Croce U, Kerrigan DC.

Finewire EMG characterization of the hamstring at four walking speeds.

Published in the journal *Archives of Physical Medicine and Rehabilitation*.

42)

Biomechanical characteristics of adults walking in shallow water and on land

Barela AM, Stolf SF, Duarte M.

A **Noraxon** Telemyo 900 was used in conjunction with **AMTI** force plates and an **Ariel Dynamics** marker system to characterize walking patterns of adults in different environments.

Published in the *Journal of Electromyography and Kinesiology*.

43)

The effect of backward treadmill walking on lower extremity kinetics

Scott Billing.

This thesis used EMG to characterize leg muscle activity on a treadmill.

Presented at the Orthopedic Research Presentation for the *Journal of Orthopaedic & Sports Physical Therapy*.

44)

Gait characteristics in primary lateral sclerosis.

L. Doederlein, R. Berghof, A. Siebel, A. Pappas.

EMG was used to characterize muscles in abnormal gait.

Published in the journal *Gait and Posture*.

45)

Lower body positive pressure after knee surgery: decreased extremity load with preservation of gait mechanics

Eastlack, R; Groppo, E; Cutuk, A; Noh, H; Langemack, A; Quigley, E; Steinbach, G; Hargens, A; Pedowitz, R.

EMG was used to assess lower extremity rehabilitation post knee surgery.

Poster presented at the *47th Annual Meeting of Orthopedic Research Society*.

46)

Effects of limb-length discrepancy on gait economy and lower-extremity muscle activity in older adults

Gurney B, Mermier C, Robergs R, Gibson A, Rivero D.

Electromyography was used to measure muscle activity of the right and left quadriceps femoris, plantar flexors, gluteus maximus, and gluteus medius.

Published in *The Journal of Bone and Joint Surgery (American)*.

47)

An illustration of clinical gait laboratory use to improve rehabilitation management

Kerrigan DC, Glenn MB.

EMG and kinematic analysis tools were used to validate the gait lab as an effective adjunct to psychiatric care in rehabilitation.

Published in the *American Journal of Physical Medicine and Rehabilitation*.

48)

Electromyographic and kinematic analysis of graded treadmill walking and the

implications for knee rehabilitation

Gregory W. Lange, MS, Robert A. Hintermeister, PhD, Theodore Schlegel, MD, Charles J Dillman, PhD, Richard Steadman, MD.

The Myosoft software was used to measure EMG data alongside kinematic analysis.

Published in *The Journal of Orthopaedic and Sports Physical Therapy*.

49)

Is lower limb muscle synchrony during landing affected by gender? Implications for variations in ACL injury rates

Cowling EJ, Steele JR.

Raw EMG was recorded using a **Noraxon** Telemetry system and kinematic data was measured using a **Redlake Corporation** high speed camera and a **Kistler** Multichannel force platform.

Published in the *Journal of Electromyography and Kinesiology*

50)

Biomechanics of the knee during closed kinetic chain and open kinetic chain exercises

Escamilla RF, Fleisig GS, Zheng N, Barrentine SW, Wilk KE, Andrews JR.

Human body dynamics were measured using a **Noraxon** MyoSystem 2000, **AMTI** force plate, and **Motion Analysis Corp.** high-speed charged couple device (CCD) cameras.

Published in the journal *Medicine and Science in Sports & Exercise*

51)

Effects of technique variations on knee biomechanics during the squat and leg press

Escamilla RF, Fleisig GS, Zheng N, Lander JE, Barrentine SW, Andrews JR, Bergemann BW, Moorman CT.

Human body dynamics were measured using a **Noraxon** MyoSystem 2000, **AMTI** force plate, and **Motion Analysis Corp.** high-speed charged couple device (CCD) cameras.

Published in the journal *Medicine & Science in Sports & Exercise*.

52)

Electromyographical function analysis after arthroscopically treated ACL-injuries

Freiwald J, Jäger A, Starker M.

EMG was used to assess post-surgical muscle activity.

Published in the journal *EMG and Motion*.

53)

Clinical and functional results after the rehabilitation period in minimally-invasive unicondylar knee arthroplasty patients

Fuchs S, Rolaufts B, Plaumann T, Tibesku CO, Rosenbaum D.

Data was collected using a **Noraxon** Myosystem 2000, both **AMTI** and **Kistler** force plates, and a **Biometrics** electrogoniometer.

Published in the journal *Knee Surgery, Sports Traumatology, Arthroscopy*.

54)

The affects of ACL injury on lower extremity activation during closed kinetic chain exercise

Heller BM, Pincivero DM.

EMG activity was measured from the vastus medialis (VM), vastus lateralis (VL), medial hamstring (MH), lateral hamstring (LH), tibialis anterior (TA), and medial gastrocnemius (MG) muscles during slideboard performance.

Published in *The Journal of Sports Medicine and Physical Fitness*.

55)

Rotationplasty Type B IIIa According to Winkelmann

Hillmann A, Rosenbaum D, Gosheger G, Hoffmann C, Rödl R, Winkelmann W.

EMG was used to characterize muscle rehabilitation post rotationplasty.

Published in the journal *Clinical Orthopaedics and Related Research*.

56)

Comparison of tibiofemoral joint forces during open-kinetic-chain and closed-kinetic-chain exercises

Lutz GE, Palmitier RA, An KN, Chao EY.

Electromyographic activity of the quadriceps and hamstrings, as well as load and torque-cell data, were recorded.

Published in *The Journal of Bone and Joint Surgery*.

57)

A descriptive study examining surface electromyographic analysis of the closed chain isokinetic leg press in the sitting position

R Lance Marshall, David H Pate, Jeffrey L Mahoney, Brian E Vandiver.

Master's thesis, Department of Physical Therapy, North Georgia College.

58)

Effects of muscular fatigue on knee joint laxity and neuromuscular characteristics of male and female athletes

Susan L. Rozzi, PhD, ATC, Scott M. Lephart, PhD, ATC, and Freddie H. Fu, MD.

Noraxon's Telemyo 900 and Myoresearch software was used to measure and analyze raw EMG from a **Biodex** system in conjunction with **MEDmetric** arthrometer and Biodex stability system data.

Published in the *Journal of Athletic Training*.

59)

Knee joint laxity and neuromuscular characteristics of male and female soccer and basketball players

Rozzi SL, Lephart SM, Gear WS, Fu FH.

Noraxon's Telemyo 900 and Myoresearch software was used to measure and analyze raw EMG from a **Biodex** system in conjunction with **MEDmetric** arthrometer and Biodex stability system data.

Published in *The American Journal of Sports Medicine*.

60)

Assessment of neuromuscular response characteristics at the knee following a functional perturbation

Shultz SJ, Perrin DH, Adams JM, Arnold BL, Gansneder BM, Granata KP.

EMG recorded long latency reflex times of the medial and lateral quadriceps, hamstring, and gastrocnemius muscle.

Published in the *Journal of Electromyography and Kinesiology*.

61)

Reactive muscle firing of anterior cruciate ligament-injured females during functional activities

C. Buz Swanik, PhD, ATC, Scott M. Lephart, PhD, ATC, Jorge L. Giraldo, MD, Richard G. DeMont, MS, CAT(C), and Freddie H. Fu, MD.

EMG data were collected from the vastus medialis, vastus lateralis, medial hamstring, and lateral hamstring during downhill walking, level running, and hopping and landing from a jump.

Published in the *Journal of Athletic Training*.

62)

A comparison of tibiofemoral joint forces and electromyographic activity during open and closed kinetic chain exercises

Wilk KE, Escamilla RF, Fleisig GS, Barrentine SW, Andrews JR, Boyd ML.
A **Noraxon** Myosystem 2000 was used in conjunction with a **Motion Analysis** 3D kinematics system and **Advanced Mechanical Technologies** force platforms.
Published in *The American Journal of Sports Medicine*.

63)

Surface electromyography of the paravertebral muscles in patients with chronic low back pain

Kramer M, Ebert V, Kinzl L, Dehner C, Elbel M, Hartwig E.

EMG was used to characterize the electrophysiological signals of patients with lower back pain.

Published in the *Archives of Physical Medicine and Rehabilitation*.

64)

Waterproofing EMG Instrumentation

Benfield RD, Newton ER, Hortobágyi T.

An article comparing various options to waterproof EMG systems using out Telemyo 900 system.

Published in the journal *Biological Research for Nursing*.

65)

Between-days reliability of subjective and objective assessments of back extension muscle fatigue in subjects without lower-back pain.

Asa Dederling, Mikaela Roos af Hjelmsäter, Britt Elfving, Karin Harms-Ringdahl, Gunnar Németh.

EMG was recorded bilaterally from the erector spinae muscles at levels L1 and L5.

Published in the *Journal of Electromyography and Kinesiology*.

66)

Reliability of EMG spectral parameters in repeated measurements of back muscle fatigue.

Elfving B, Németh G, Arvidsson I, Lamontagne M.

The reliability of the median frequency parameters was investigated for EMG-recording sites at L1 and L5 right and left on the erector spinae.

Published in the *Journal of Electromyography and Kinesiology*.

67)

Validation of the lift-off test and analysis of subscapularis activity during maximal internal rotation

Greis PE, Kuhn JE, Schultheis J, Hintermeister R, Hawkins R.

EMG was used to determine the muscle activity of the shoulder muscles during the lift-off test and during resisted internal rotation.

Published in the *The American Journal of Sports Medicine*.

68)

Technical considerations for electromyographic research on the shoulder

Kelly BT, Cooper LW, Kirkendall DT, Speer KP.

This study compared 2 methods of indwelling bipolar electrode insertion for EMG assessment of the shoulder.

Published in the journal *Clinical Orthopaedics and Related Research*.

69)

Optimal normalization tests for shoulder muscle activation: An electromyography study

Kelly BT, Kadrmaz WR, Kirkendall DT, Speer KP.

The purpose of this study was to identify the manual muscle testing positions that elicit maximal neural activation of three rotator cuff muscles (supraspinatus, infraspinatus, and subscapularis) and five shoulder synergists (pectoralis major, latissimus dorsi, and anterior, middle, and posterior deltoids).

Published in the *Journal of Orthopaedic Research*.

70)

Gender differences in head-neck segment dynamic stabilization during head acceleration

Tierney RT, Sitler MR, Swanik CB, Swanik KA, Higgins M, Torg J.

A **Noraxon** Telemetry system was used in conjunction with a **Peak Performance Technologies** motion analysis system, a **Entran Devices** force load cell, and a **Hoggan Health Industries** hand dynamometer.

Published in the journal *Medicine & Science in Sports & Exercise*.

71)

Electromyographic activity and posturing of the human neck during rollover tests

Yamaguchi, G., Carhart, M., Larson, R., Richards, D.

EMG activity patterns were assessed during various bending angles of the neck.
Presented at the 2005 SAE World Congress, Detroit, MI..

72)

Does using an ejector chair affect muscle activation patterns in rheumatoid arthritic patients? A preliminary investigation

Munro BJ, Steele JR.

This study examined knee and arm extensor muscle activation patterns displayed by elderly female rheumatoid arthritic patients rising from an instrumented Eser ejector chair under various conditions.

Published in the *Journal of Electromyography and Kinesiology*.

73)

Scapular Muscle Recruitment Pattern: Electromyographic Response of the Trapezius Muscle to Sudden Shoulder Movement Before and After a Fatiguing Exercise

Ann M. Cools, PT, Erik E. Witvrouw, PT, PhD, Geert A. De Clercq, MD, Lieven A. Danneels, PT, PhD, Tine M. Willems, PT, Dirk C. Cambier, PT, PhD, Michael L. Voight, PT, DHSc, ATC, OCS, SCS4

EMG was used to measure the muscle latency times of the 3 portions of the trapezius muscle to a sudden arm movement in normal shoulders and to determine if this recruitment pattern is altered as a result of fatigue.

Published in the *Journal of Orthopaedic & Sports Physical Therapy*

74)

Surface electromyographic analysis of exercises for the trapezius and serratus anterior muscles

Ekstrom RA, Donatelli RA, Soderberg GL.

This study identified high-intensity exercises that elicit the greatest level of EMG activity in the trapezius and serratus anterior muscles.

Published in the *Journal of Orthopaedic Sports Physical Therapy*.

75)

Reflexive muscle activation alterations in shoulders with anterior glenohumeral instability

Joseph B. Myers, PhD, ATC, Yan-Ying Ju, PhD, PT, ATC, Ji-Hye Hwang, MD, PhD, Patrick J. McMahon, MD, Mark W. Rodosky, MD, and Scott M. Lephart, PhD, ATC

EMG was used to measure reflexive muscle activation characteristics.

Published in *The American Journal of Sports Medicine*.

76)

Shoulder muscle reflex latencies under various levels of muscle contraction

Joseph B. Myers, PhD, ATC, Yan-Ying Ju, PhD, PT, ATC, Ji-Hye Hwang, MD, PhD, Patrick J. McMahon, MD, Mark W. Rodosky, MD, and Scott M. Lephart, PhD, ATC
EMG was used to assess shoulder muscle reflex latencies under various levels of muscle contraction.

Published in the journal *Clinical Orthopaedics and Related Research*.

77)

Effects of plyometric training on muscle-activation strategies and performance in female athletes

Nicole J. Chimera, Kathleen A. Swanik, C. Buz Swanik, and Stephen J. Straub.
EMG was used to assess preparatory and reactive activity of the vastus medialis and vastus lateralis, medial and lateral hamstrings, and hip abductors and adductors.

Published in the *Journal of Athletic Training*.

78)

Gender comparisons of dynamic restraint and motor skill in children

Hamstra-Wright KL, Swanik CB, Sitler MR, Swanik KA, Ferber R, Ridenour M, Huxel KC.
EMG was used to assess isometric hamstring and quadriceps muscle strength was assessed.

Published in the *Clinical Journal of Sport Medicine*.

79)

Muscle activity in slalom and giant slalom skiing

Hintermeister RA, O'Connor DD, Dillman CJ, Suplizio CL, Lange GW, Steadman JR.
Twelve muscles of the leg and trunk were monitored using surface electrodes and telemetry and related to phases of movement determined from video.

Published in the journal *Medicine and Science in Sports and Exercise*.

80)

Muscle pre- and coactivity during downward stepping is associated with leg stiffness in aging

Hortobágyi T, DeVita P.

A **Noraxon** Telemyo 900 system and Myosoft software was used in conjunction with

an **AMTI** force plate to assess leg stiffness.
Published in the *Journal of Electromyography and Kinesiology*.

81)

Favorable neuromuscular and cardiovascular responses to 7 days of exercise with an eccentric overload in elderly women

Hortobágyi T, DeVita P.

Subjects were tested for concentric and eccentric three-repetition maximum, maximal isokinetic eccentric and concentric and isometric force, and associated electromyographic activity of selected thigh muscles before and after 7 consecutive days of exercise training of the left knee extensors.

Published in *The Journal of Gerontology Series A: Biological Sciences and Medical Sciences*.

82)

Trunk muscle activation in open stance and square stance tennis forehands

Knudson D, Blackwell J.

EMG of the trunk muscles were compared between open and square stances.

Published in the *International Journal of Sports Medicine*.

83)

Foot placement modifies kinematics and kinetics during drop jumping

Kovács I, Tihanyi J, Devita P, Rácz L, Barrier J, Hortobágyi T.

A **Noraxon** Telemetry EMG system was used in conjunction with an **AMTI** force plate and a **NAC** high speed camera.

Published in the journal *Medicine & Science in Sports & Exercise*.

84)

Resistance training and head-neck segment dynamic stabilization in male and female collegiate soccer players

Mansell J, Tierney RT, Sittler MR, Swanik KA, Stearne D.

A **Noraxon** Telemetry system was used in conjunction with a **Peak Performance Technologies** motion analysis system, a **Entran Devices** force load cell, and a **Hoggan Health Industries** hand dynamometer.

Published in the *Journal of Athletic Training*.

85)

On-the-field Resistance-Tubing exercises for Throwers: An electromyographic analysis

Joseph B Myers, Maria R Pasquale, Kevin G Laudner, Timothy C Sell, James P Bradley, and Scott M Lephart.

EMG assessment was used to determine what muscles were being activated and what exercises are the most effective during rubber-tubing exercises.

Published in the *Journal of Athletic Training*.

86)

The role of selected extrinsic foot muscles during running

O'Connor KM, Hamill J.

A **Noraxon** Telemetry EMG system was used in conjunction with a **Qualysis** motion capture system and an **AMTI** force plate.

Published in the journal *Clinical Biomechanics*.

87)

Reproducibility of computer measurement of maximal isometric strength and electromyography in sedentary middle-aged women

Heinonen A, Sievänen H, Viitasalo J, Pasanen M, Oja P, Vuori I.

Recordings of maximal isometric strength and rate of force production during trunk extension and flexion, leg extension and dominant forearm flexion with simultaneous recordings of surface electromyography.

Published in the *European Journal of Applied Physiology*.

88)

An electromyographic analysis of sumo and conventional style deadlifts

Escamilla RF, Francisco AC, Kayes AV, Speer KP, Moorman CT.

A **Noraxon** Telemetry EMG system was used in conjunction with a **Motion Analysis Corporation** motion analysis system.

Published in the journal *Medicine & Science in Sports & Exercise*

89)

Integrated EMG study of the medial and lateral heads of the gastrocnemius during isometric plantar flexion with varying cuff weight load

Fiebert IM, Spielholz NI, Applegate EB, Carbone M, Gonzalez G, Gorack WM.

EMG was used to assess calf muscle activation under various loads.

Published in the *Journal of Back and Musculoskeletal Rehabilitation*.

90)

Comparison of EMG activity of medial and lateral hamstrings during isometric contractions at various cuff weight loads

Fiebert IM, Spielholz NI, Applegate EB, Fox C, Jaro J, Joel L, Raper L.

This study investigated whether the relative electrical activity of hamstring heads remained constant with respect to each other or changed during isometric contractions at five different resistance levels

Published in the journal *The Knee*.

91)

Effects of standard and eccentric overload strength training in young women

Hortobágyi T, Devita P, Money J, Barrier J.

EMG was used to assess percent increase in muscle activity after seven days of this training activity.

Published in the journal *Medicine and Science in Sports and Exercise*.

92)

Neuromuscular Evaluation of Trunk-Training Exercises

Peter Konrad, Klaus Schmitz, and Achim Denner.

EMG assessed the neuromuscular activation profiles of trunk muscles in commonly used gymnastic strength exercises

Published in the *Journal of Athletic Training*.

93)

The sit-up: complex kinematics and muscle activity in voluntary axial movement

Cordo PJ, Gurfinkel VS, Smith TC, Hodges PW, Verschueren SM, Brumagne S.

A **Noraxon** Telemetry EMG system was used in conjunction with a **BTS** motion analysis system.

Published in the *Journal of Electromyography and Kinesiology*.

94)

Effect of knee flexion angle on neuromuscular responses to whole-body vibration

Abercromby A, Amonette W, Paloski W, Hinman M.

EMG recordings were used to characterize the electrophysiological response based on knee flexion angle.

Presented by *University of Houston, National Space Biomedical Research Institute*

95)

Neuromuscular responses to two whole-body vibration modalities during dynamic squats

EMG recordings were used to characterize the electrophysiological response from the legs based on two different vibrational modalities.

Presented by *Wylie Laboratories*.

96)

Acute effects of whole-body vibration on muscle activity, strength, and power

Cormie P, Deane RS, Triplett NT, McBride JM.

The effects of WBV was assessed via integrated EMG.

Published in the *Journal of Strength & Conditioning Research*.

97)

Whole-Body-Vibration-Induced increase in leg muscle activity during different squat exercises

Roelants M, Verschueren SM, Delecluse C, Levin O, Stijnen V.

This study used EMG to analyze leg muscle activity during whole-body vibration training.

Published in the *Journal of Strength and Conditioning Research*.

98)

Effect of 6-month whole body vibration training on hip density, muscle strength, and postural control in postmenopausal women: a randomized controlled pilot study

Verschueren SM, Roelants M, Delecluse C, Swinnen S, Vanderschueren D, Boonen S.

EMG was used to assess the musculoskeletal effects of high-frequency loading by means of WBV in postmenopausal women.

Published in the *Journal of Bone and Mineral Research*.

99)

Relationship Between Gluteus Medius Muscle Activity, Pelvic Motion, and Metabolic Energy in Running

Evie N. Burnet, Ross A. Arena, Peter E. Pidcoe.

A Myosystem 1200 was used to characterize muscle activation of the gluteus maximus and related to VO₂ recovery and the kinetics of pelvic motion.

Published in the journal *The Engineering of Sport*.

100)

A novel myoelectric training device for upper limb prostheses

Ryan Clingman, Peter Pidcoe.

The Myosystem 1200 was used to as instrumentation to send raw EMG as a signal to control a small vehicle.

Published by the *IEEE*.

101)

sEMG-Based Identification of Hand Motion Commands using Wavelet Neural Network Combined with Discrete Wavelet Transform

Duan, F, Dai, L, Chang, W., Chen, Z.

A Telemyo DTS system was used to collect myoelectric signals from the hands and forearms to improve pattern recognition for the control of prosthesis.

Published in The Journal *IEEE Explore*.

102)

Effect of sex hormones on neuromuscular control patterns during landing

Gregory S. Dedrick, Phillip S. Sizer, Jennifer N. Merkle, Troy R. Hounshell, Jacalyn J. Robert-McComb, Steven F. Sawyer, Jean-Michel Brismée, C. Roger James.

Muscular activity based on sex hormone administration was measured with a Telemyo 900.

Published in the *Journal of Electromyography and Kinesiology*.

103)

Electromyographic Analysis of Core Trunk, Hip, and Thigh Muscles During 9 Rehabilitation Exercises

Richard A. Ekstrom, Robert A Donatelli, Kenji C. Carp.

The Myosystem 1200 was used to identify exercises that could be used for strength development and the exercises that would be more appropriate for endurance or stabilization training.

Published in the *Journal of Orthopedic and Sports Physical Therapy*.

104)

Influence of bench angle on upper extremity muscular activation during bench press exercise

Jakob D. Lauvera, Trent E. Cayota, Barry W. Scheuermann.

The Telemyo 900 was used to characterize and compare neuromuscular signals based on varying inclination of bench press.

Published in the *European Journal of Sports Science*.

105)

Increased duration of co-contraction of medial knee muscles is associated with greater progression of knee osteoarthritis

Paul W. Hodges, Wolbert van den Hoorn, Tim V. Wrigley, Rana S. Hinman, Kelly-Ann Bowles, Flavia Cicuttini, Yuanyuan Wang, Kim Bennell.

The Telemyo 900 was used to characterize the muscular activation of the knee muscles.
Published in the Journal *Manual Therapy*

106)

Do Three Different Passive Assessments of Quadriceps Spasticity Relate to the Functional Activity of Walking for Children Diagnosed with Cerebral Palsy?

Hank White, Tim L. Uhl, and Sam Augsburger.

A **Noraxon** Telemyo 900 system was used in conjunction with a **Motion Analysis Corp** Eagle camera system to measure EMG and kinematic data from children with Cerebral palsy.

Published in the *Neuroscience Journal*.

107)

Asymmetric pelvic bracing and altered kinematics in patients with posterior pelvic pain who present with postural muscle delay

Melanie D. Bussey, Stephan Milosavljevic.

A **Noraxon** Telemyo 900 system was used in conjunction with a **Vicon** motion analysis system and an **AMTI** to assess patient kinematics and muscle output.

Published in the journal *Clinical Biomechanics*.

108)

Interactive Effects of Body Position and Perceived Exertion During Spinning Exercises

A telemyo 900 system was used to measure muscle activity during Spinning.

Published in the *Journal Of Strength and Conditioning Research*.

109)

Determining key biomechanical performance parameters in novice female rowers using the Rosenberg and Pose techniques during a 1 km ergometer time trial

A telemyo 900 system was used to measure the muscle activation of rowers.

Published in the *International Journal of Performance Analysis in Sport*.

110)

Traditional posterior load carriage: effects of load mass and size on torso kinematics, kinetics, muscle activity and movement stability

A **Noraxon** Telemyo 900 system was used in conjunction with a **Vicon** motion analysis system and an **h/p/cosmos** treadmill assess to perform this ergonomics study.

Published in the journal *Ergonomics*.

111)

Multifunction Prosthesis Control Using Implanted MyoElectric Sensors (IMES)

Jack Schorsch, Huub Maas, Phil Troyk, Glemm Demichele, Douglas Kerns, Richard Weir. A Telemyo 2400T system was used as a comparative benchmark to assess the response characteristics of IMES.

Presented at the proceedings of the *2008 MyoElectric Controls/Powered Prosthetics Symposium*.

112)

Passive dorsiflexion stiffness is poorly correlated with passive dorsiflexion range of motion

A Telemyo 900 system was used to monitor leg muscle activation.

Published by the *Australian Institute for Innovative Materials*.

113)

The effect of gait speed and gender on perceived exertion, muscle activity, joint motion of lower extremity, ground reaction force and heart rate during normal walking

Min-Chi Chiu, Mao-Jiun Wang.

A **Noraxon** Telemyo 900 system was used in conjunction with a **Qualysis** motion capture system and **Kisler** force plate.

Published in the journal *Gait and Posture*.

114)

Differences in muscle coactivation during postural control between healthy older and young adults

Nagai, Koutatsu; Yamada, Minoru; Uemura, Kazuki; Yamada, Yosuke; Ichihashi, Noriaki; Tsuboyama, Tadao

A **Noraxon** Telemyo 2400 system was used to characterize muscle coactivation and gait

parameters were measured using the **Noraxon** inline foot switch sensors.
Published in the *Archives of Gerontology and Geriatrics*.

115)

Effects of Fatigue Induced by Prolonged Gait When Walking on the Elderly

A Telemyo 900 system was used to characterize muscle activity in geriatric patients.
Published in the journal *Human Movement*.

116)

Effects of standard and eccentric overload strength training in young women

T Hortobágyi, Paul DeVita, Jeff Money, Jason Barrier.
A Telemyo 900 system was used to measure thigh muscle activation.
Published in the journal *Medicine & Science in Sports & Exercise*.

117)

Old Adults Perform Activities of Daily Living Near Their Maximal Capabilities

A Telemyo 900 system was used to characterize muscle activity in geriatric subjects.
Published in the *Journals of Gerontology*.

118)

Altered hamstring-quadriciceps muscle balance in patients with knee osteoarthritis

A Telemyo 900 system was used to measure muscle activity of the legs.
Published in the journal *Clinical Biomechanics*.
<href="http://goo.gl/PBF1v1">Source

119)

Muscle pre- and coactivity during downward stepping are associated with leg stiffness in aging

A **Noraxon** Telemyo 900 was used in conjunction with an **AMTI** forceplate and **SONY** digital cameras to assess leg stiffness in older patients.
Published in the *Journal of Electromyography and Kinesiology*.

120)

Favorable Neuromuscular and Cardiovascular Responses to 7 Days of Exercise With an Eccentric Overload in Elderly Women

Tibor Hortobágyi, Paul DeVita.

A Telemetry 900 was used to measure muscle activation of eccentric contractions during resistive exercise.

Published in the *Journals of Gerontology*.

121)

Effects of aging on mechanical efficiency and muscle activation during level and uphill walking

Justus D. Ortega, Claire T. Farley.

A Noraxon EMG system was used to measure muscle activation with various walking conditions.

Published in the *Journal of Electromyography and Kinesiology*.

122)

Patterns of leg muscle recruitment vary between novice and highly trained cyclists

Andrew R. Chapman, Bill Vicenzino, Peter Blanch, Paul W. Hodges.

A Telemetry 900 was used to assess the variations in muscle activity of the tibialis anterior, tibialis posterior, peroneus longus, gastrocnemius lateralis, and soleus based on rider skill level.

Published in the *Journal of Electromyography and Kinesiology*.

123)

Acute effects of whole-body vibration on muscle activity, strength, and power

CORMIE, PRUE; DEANE, RUSSELL S.; TRIPLETT, N. TRAVIS; MCBRIDE, JEFFREY M.

A Telemetry 900 was used to measure the myoelectric signal after treatment and sham.

Published in the *The Journal of Strength & Conditioning Research*.

124)

The effects of taping on scapular kinematics and muscle performance in baseball players with shoulder impingement syndrome

Yin-Hsin Hsu, Wen-Yin Chen, Hsiu-Chen Lin, Wendy T.J. Wang, Yi-Fen Shih.

A **Noraxon** Telemetry 900 was used in conjunction with an **Polhemus** electromagnetic tracking system.

Published in the *Journal of Electromyography and Kinesiology*.

125)

Parachute Landing Fall Characteristics at Three Realistic Vertical Descent Velocities

Whitting, John W.; Steele, Julie R.; Jaffrey, Mark A.; Munro, Bridget J.
A telemyo 900 was used to assess muscular activation in free fall.
Published by the *Aerospace Medical Association*.

126)

Spontaneous Motor Rhythms of the Back and Legs in a Patient With a Complete Spinal Cord Transection

Sylvie Nadeau

A telemyo 900 was used to monitor gastrocnemius, medial hamstring, and anterior tibial muscles post surgery.

Published in the journal *Neurorehabilitation and neural repair*.

127)

A comparison of physical and psychological features of responders and non-responders to cervical facet blocks in chronic whiplash

Ashley Dean Smith, Gwendolen Jull, Geoff Schneider, Bevan Frizzell, Robert Allen Hooper and Michele Sterling.

A Telemyo 900 was used to measure the activity of superficial neck flexor muscles.

Published in the journal *BMC musculoskeletal disorders*.

128)

Previously identified patellar tendinopathy risk factors differ between elite and sub-elite volleyball players

I. Janssen, J. R. Steele¹, B. J. Munro¹ and N.A.T. Brown.

A Telemyo 2400 G2 system was used to assess neuromuscular activities of athletes of varying skill levels.

Published in the *Scandinavian Journal of Medicine & Science in Sports*.

129)

Altered knee joint neuromuscular control during landing from a jump in 10–15 year old children with Generalised Joint Hypermobility. A substudy of the CHAMPS-study Denmark

Tina Jungea, Niels Wedderkoppa, Jonas Bloch Thorlund, Karen Søggaard, Birgit Juul-Kristensen.

A Telemyo DTS and Mini Receiver were used to measure calf muscle activity.

Published in the *Journal of Electromyography and Kinesiology*.

130)

Trunk and Shoulder Kinematic and Kinetic and Electromyographic Adaptations to Slope Increase during Motorized Treadmill Propulsion among Manual Wheelchair Users with a Spinal Cord Injury

A **Noraxon** Telemetry 900 was used in conjunction with an **Optotrak** 3D motion capture system to characterize trunk and shoulder mechanics.

Published in the journal *BioMed Research International*.

131)

Electromyographic analysis of the rotator cuff in postoperative shoulder patients during passive rehabilitation exercises

Dany Gagnon, Annie-Claude Babineau, Audrey Champagne, Guillaume Desroches, and Rachid Aissaoui.

A Telemetry 2400T was used to characterize shoulder rehabilitation.

Published in the *Journal of Shoulder and Elbow Surgery*.

132)

A comparison of muscle activity in using touchscreen smartphone among young people with and without chronic neck–shoulder pain

Xie Y, Szeto GP, Dai J, Madeleine P.

A Telemetry DTS was used to evaluate muscle activity of the cervical spine, upper trapezius, and lower trapezius.

Published in the journal *Ergonomics*.

133)

Modulation of Cervical Facet Joint Nociception and Pain Attenuates Physical and Psychological Features of Chronic Whiplash: A Prospective Study

Ashley Dean Smith, PT, Gwendolen Jull, PhD, Geoff M. Schneider, PhD, Bevan Frizzell, MD, Robert A. Hooper, MD, Michele Sterling, PhD.

A Telemetry 900 was used to measure the superficial neck flexor muscles.

Published in the journal *PM&R*.

134)

Identification of Sling Systems in High Economy and Low Economy Runners

Nicole Rendos

Several **Noraxon** systems, the Telemetry DTS, Telemetry 2400 G2 Mini Receiver, and Footswitch insoles, were used in conjunction with a **Kistler** forceplate and various metabolic activity measuring systems to assess runners.

Published in the *University of Miami Scholarly Repository* for electronic theses and dissertations.

135)

Evaluation of a Novel Myoelectric Training Device

Joshua Arenas.

A Myosystem 1200 was used to collect EMG data to control a robotic vehicle.

Published in the Virginia Commonwealth University's *VCU Scholars Compass* collection of theses and dissertations.

136)

Muscle activity and spinal loading in lifting symmetrical loads beside the body compared to in front of the body

Murali Subramaniam Seung Nam Min, Se Jin Park, Sangho Park.

A Noraxon EMG system was used to collect EMG data from the spine.

Published in the *Journal of Mechanical Science and Technology*.

137)

Reducing dynamic loads of a backpack during load carriage using an upper body load assistive device

Joon-Hyuk Park, Paul Stegall and Sunil K Agrawal.

A **Noraxon** Desktop DTS was used in conjunction with a **Bertec** instrumented force plate to assess load bearing on the upper body.

Published in the *Journal of Mechanisms and Robotics*.

138)

Effects of muscle activity and number of resistance exercise repetitions on perceived exertion in tonic and phasic muscle of young Korean adults

Ho Jung An, Wan Suk Choi, Jung Hyun Choi, Nyeon Jun Kim, Kyung Ok Min.

A TeleMyo 2400T was used to assess the difference in activity perceived and exerted between males and females.

Published in the *Journal of Physical Therapy Science*.

139)

Effects of muscle activity and number of resistance exercise repetitions on perceived exertion in tonic and phasic muscle of young Korean adults

Hyun-Ju Moon, MS, PT, Bong-Oh Goo, PhD, PT, Hae-Yeon Kwon, MS, PT.

A Noraxon DTS system was used to measure the effect of masticatory muscle activation on overall cervical flexor activation.

Published in the *Journal of Physical Therapy Science*.

140)

Vestibulo-spinal and vestibulo-ocular reflexes are modulated when standing with increased postural threat

Eduardo N Naranjo, Taylor W Cleworth, John H Allum, J. Timothy Inglis, Jane Lea, Brian D Westerberg, Mark Gregory Carpenter.

A TeleMyo 2400 system was used to measure activity of various muscle groups with and without audial cues.

Published in the *Journal of Neurophysiology*.

141)

sEMG-Based Identification of Hand Motion Commands using Wavelet Neural Network Combined with Discrete Wavelet Transform

Duan F, Dai L, Chang W.

A TeleMyo 2400 was used to classify hand movements for the purpose of robotic control.

Published in the Journal *Industrial Electronics, IEEE*.

142)

The Influence of Neck Posture and Helmet Configuration on Neck Muscle Demands

Jack P. Callaghan.

A **Noraxon** TeleMyo 2400 was used in conjunction with a **Vicon** motion analysis system to characterize kinetic and muscular activity with different helmet types.

Published for the *Research and Development Canada Toronto Research Centre*.

143)

The initial effects of a sustained glenohumeral postero-lateral glide during elevation on shoulder muscle activity: A repeated measures study on asymptomatic shoulders

Daniel Cury Ribeiro.

A Telemetry 2400 was used to measure shoulder muscle activity and dynamics.

Published in the *Manual Therapy Journal*.

144)

Descending neural drives to ankle muscles during gait and their relationships with

clinical functions in patients after stroke

Ryosuke Kitatani, Koji Ohata, Yumi Aga, Yuki Mashima, Yu Hashiguchi, Masanori Wakida, Ayaka Maeda, Shigehito Yamada.

A TeleMyo DTS system recorded both EMG and accelerometry data from stroke patients. Published in the journal *Clinical Neurophysiology*.

145)

Postural stability and the influence of concurrent muscle activation—beneficial effects of jaw and fist clenching

Steffen Ringhof, Daniel Hellmann, Thorsten Stein, Timo Leibold.

A **Noraxon** EMG system was used in conjunction with an **AMTI** force plate to monitor posture while subjects clenched jaw and fist.

Published in the journal *Gait and Posture*.

146)

Comparison of Antagonist Muscle Activity during Walking between Total Knee Replacement and Control Subjects using Unnormalized Electromyography

Hannah J. Lundberg, PhD, Idubijes L. Rojas, MS, Kharma C. Foucher, MD, PhDc, Markus A. Wimmer, PhD.

A **Noraxon** 2400 G2 EMG system was used in conjunction with a **Qualisys** motion capture system and a **Bertec** force plate to measure muscle activity and gait after total knee arthroplasty.

Published in the *Journal of Arthroplasty*.

147)

The effects of exercise type and elbow angle on vertical ground reaction force and muscle activity during a push-up plus exercise

A **Noraxon** Telemyo DTS system was used in conjunction with a **Bertec** force plate and **Simi Motion** motion analysis system to assess push-up dynamics.

Published in the journal *BMC Musculoskeletal Disorders*.

148)

The Effects of a Five-Week Exercise Intervention Using EMG Biofeedback on Scapular Stabilizer Muscle Activation and Scapular Kinematics

Samantha Gunderson.

A Desktop DTS system was used to record EMG signals and MyoResearch 3 was used to present subjects with biofeedback diagrams to enhance form of movements.

Published in the *WWU Masters Theses Collection*.

149)

Muscle responses to seated perturbations for typically developing infants and those at risk for motor delays

Washington, Kathleen; Shumway-Cook, Anne; Price, Robert; Ciol, Marcia; Kartin, Deborah.

A Myosystem 1200 was used to assess muscle activity in infants.

Published in the journal *Developmental Medicine and Child Neurology*.

150)

Variations in Repetition Duration and Repetition Numbers Influence Muscular Activation and Blood Lactate Response in Protocols Equalized by Time Under Tension

Lacerda, Lucas T.; Martins-Costa, Hugo C.; Diniz, Rodrigo C.R.; Lima, Fernando V.; Andrade, André G.P.; Tourino, Frank D.; Bembem, Michael G.; Chagas, Mauro H.

An electrogoniometer was used to measure 2D anatomical angles.

Published in the *Journal of Strength and Conditioning Research*.

151)

Importance of mind-muscle connection during progressive resistance training

Joaquin Calatayud, Jonas Vinstrup, Markus Due Jakobsen, Emil Sundstrup, Mikkel Brandt, Kenneth Jay, Juan Carlos Colado, Lars Louis Andersen.

A Telemyo DTS and 2D inclinometer were used to assess bench press form.

Published in the *European Journal of Applied Physiology*.

152)

Enhanced muscle activity during lumbar extension

Ho-Seong Lee.

exercise with pelvic stabilization

A Telemyo 2000 system was used to test the effect of pelvic stabilization on multifidus and iliocostalis lumborum muscle activity.

Published in the *Journal of Exercise Rehabilitation*.

153)

Bicycle Shoe Insoles and Their Effect on Lateral Knee Movement, Leg Muscle Activation Patterns, and Performance in Experienced Cyclists

Meyers, Amos Cole; Caldwell, Elise C; Hirsch, Jordan; Eltoukhy, Moataz; Jacobs, Kevin A.

A Telemyo DTS system was used to characterize leg muscle activation with different bicycle shoe insoles.

Published in the *University of Miami Theses Collection*.

154)

Evaluation of the effects of different treatments for the elbow joint using joint proprioception and surface electromyography

A Telemyo 2400 EMG system was used to measure the effect of different treatments to heal the elbow joint.

Published in the *Journal of Physical Therapy*.

155)

Discomfort and muscle activation during car egress in drivers with hemiplegia following stroke

Nam-hae Jung, Hwanhee Kim, Moonyoung Chang.

A Telemyo 2400 EMG system was used to measure muscle activation as related to comfort level.

Published in the *Journal of Physical Therapy*.

156)

Modifying the hip abduction angle during bridging exercise can facilitate gluteus maximus activity

Sun-Young Kang, Sung-Dae Choung, Hye-Seon Jeon.

A Telemyo DTS Belt Receiver was used to measure gluteus maximus activity with changing hip abduction angle.

Published in the *Journal Manual Therapy*.

157)

Impaired voluntary quadriceps force control following anterior cruciate ligament reconstruction: relationship with knee function

Luke Perraton, Ross Clark, Kay Crossley, Yong-Hao Pua, Tim Whitehead, Hayden Morris, Stacey Telianidis, Adam Bryant.

A Noraxon wireless EMG system was used to evaluate isometric contractions of the quadriceps after ACL reconstruction.

Published in the journal *Knee Surgery, Sports Traumatology, Arthroscopy*.

158)

Individual Responses to a Barefoot Running Program Insight Into Risk of Injury

Nicholas Tam, PhD, Ross Tucker, PhD, and Janie L. Astephen Wilson, PhD.

A **Noraxon** Telemyo 2400 was used to assess muscle activation during barefoot running

in conjunction with a **Vicon** motion analysis system and **AMTI** force plates.
Published in the *American Journal of Sports Medicine*.

159)

Development and validation of a three dimensional dynamic biomechanical lifting model for lower back evaluation for careful box placement

Damon Stamboliana, Moataz Eltoukhyb, Shihab Asfoura.

A **Noraxon** Telemetry DTS was used to validate predicted and recorded muscle activity for biomechanical modeling in conjunction with **Kisler** force plates and a **Vicon** motion capture system. Data was then shuttled into the **AnyBody** biomechanical modeling software suite.

Published in the *International Journal of Industrial Ergonomics*.

160)

The effect of crutches, an orthosis TheraTogs, and no walking aids on the recovery of gait in a patient with delayed healing post hip fracture: A case report

Clare Maguire MPTSc, Judith M. Sieben PhD, Heike Scheidhauer Dr.paed, Jacqueline Romkes PhD, Zorica Suica MSc & Robert A. de Bie MSc, RPT, PhD.

A Noraxon EMG system was used to characterize muscle activity as effected by orthosis.
Published in the journal *Physiotherapy Theory and Practice: An International Journal of Physiotherapy*.

161)

Ankle muscle coactivation during gait is decreased immediately after anterior weight shift practice in adults after stroke

Ryosuke Kitatani, Koji Ohata, Kaoru Sakuma, Yumi Aga, Natsuki Yamakame, Yu Hashiguchi, Shigehito Yamada.

A Telemetry DTS was used to assess muscle activity in adult stroke patients.

Published in the journal *Gait and Posture*.

162)

Learning from successes and failures of registration of patent applications based on physical ergonomics

Sungho Kim, Wonsup Lee, Baekhee Lee, Younggeun Choi, Jihyung Lee, Kihyo Jung, Heecheon You.

A **Noraxon** Telemetry 900 system was used in conjunction with a **Motion Analysis Corp.** camera based motion capture system in this ergonomics study.

Published in the journal *Society of Korea, Daehan in'gan*.

163)

Influence of repetitive transcranial magnetic stimulation on tibialis anterior activity during walking in humans

Mélanie Rambour Alexandre Caux-Dedeystère, Hervé Devanne, Luc Defebvre, Philippe Derambure, Arnaud Delva.

A Noraxon wireless EMG system was used to record tibialis anterior muscle activity during walking.

Published in the journal *Neuroscience Letters*.

164)

Neck and shoulder muscle activity and posture among helicopter pilots and crew-members during military helicopter flight

Mike Murray, Britt Lange, Shadi Samir Chreiteh, Henrik Baare Olsen, Bo Riebeling Nørnberg, Eleanor Boylea, Karen Sjøgaard, Gisela Sjøgaard.

A noraxon EMG system was used to record neck and shoulder muscle activity as correlated with pain.

Published in the *Journal of Electromyography and Kinesiology*.

165)

A randomized control trial for the restoration of functional ability in patients post total knee arthroplasty: a comparison of eccentric versus concentric cycling ergometry

A Telemyo 2400 was used to measure muscle activation in post-surgical cyclists.

Published in the archives for Master's theses of *The University of Cape Town*.

166)

Scapular muscle activity in a variety of plyometric exercises.

Maenhout Annelies, Benzoor Maya, Werin Mia, Cools Ann.

A Telemyo DTS system was used to measure scapular muscle activity.

Published in the *Journal of Electromyography and Kinesiology*.

167)

Lower extremity muscles activity in standing and sitting position with use of sEMG in patients suffering from Charcot–Marie–Tooth syndrome

Natalia Maria Kuciel, Grzegorz Krzysztof Konieczny, Łukasz Oleksy, Zdzisława Wrzosek.

A Telemyo 900 system was used to measure rectus femoris, vastus lateralis obliquus, gluteus medius and semitendinosus muscles.

Published in the Journal *Neurologia i Neurochirurgia Polska*.

168)

Change in Trunk Muscle Activities with Prone Bridge Exercise in Patients with Chronic Low Back Pain

A Telemyo 2400 was used to measure trunk muscle activity.

Published in the *Journal of Physical Therapy Science*.

169)

Effects of Forward Head Posture on Forced Vital Capacity and Respiratory Muscles Activity

A Telemyo DTS was used to measure respiratory muscle activity.

Published in the *Journal of Physical Therapy Science*.

170)

Paralympic athletes with cerebral palsy display altered pacing strategies in distance-deceived shuttle running trials

P. Runciman, R. Tucker, S. Ferreira, Y. Albertus-Kajee, W. Derman.

A Telemyo 2400 system was used to measure five bilateral muscle groups and coordinated with heart and perceived exertion.

Published in the *Scandinavian Journal of Medicine and Science in Sports*.

171)

Effects of mouse slant and desktop position on muscular and postural stresses, subject preference and performance in women aged 18-40 years

Clarisse Gaudeza, François Caila.

A Noraxon EMG system was used in this ergonomics study of the hands.

Published in the journal *Ergonomics*.

172)

Effects of heavy strength training on performance determinants and performance in cycling and running

Olav Vikmoen.

A noraxon Telemyo 2400 was used to measure maximal isometric knee flexion.

Published in the dissertations of the *Norwegian School of Sports Science*.

173)

Six Weeks Habituation of Simulated Barefoot Running Induces Neuromuscular Adaptations and Changes in Foot Strike Patterns in Female Runners

Khowailed IA, Petrofsky J, Lohman E, Daher N.

The **MyoMuscle** and **MyoPressure** modules were used to evaluate the effects of barefoot running on gait patterns in female runners.

Published in the journal *Medical Science Monitor*.

174)

Exposure to a combination of heat and hyperoxia during cycling at submaximal intensity does not alter thermoregulatory responses

Zinner C, Krueger M, Reed JL, Kohl-Bareis M, Holmberg H-C, Sperlich B.

A Telemyo 2400 system was used to measure lower extremity muscle activation.

Published in the journal *Biology of Sport*.

175)

Effects of pedunculopontine nucleus area stimulation on gait disorders in Parkinson's disease

M. U. Ferraye, B. Debû, V. Fraix, L. Goetz, C. Ardouin, J. Yelnik, C. Henry-Lagrange, E. Seigneuret, B. Piallat, P. Krack, J.-F. Le Bas, A.-L. Benabid, S. Chabardès, P. Pollak.

A Telemyo 2400 system was used with footswitch-insoles and synchronized with MyoVideo recordings.

Published in the *Journal of Neurology*

176)

Lower Extremity Muscle Activity on the Obstacle Gait in Older Parkinson Diseases

Bee-Oh Lim, Mi-Young Kim.

A Noraxon EMG system was used to measure muscles involved with gait.

Published in the *Korean Journal of Sport Biomechanics*.

177)

Influence of repetitive transcranial magnetic stimulation on tibialis anterior activity during walking in humans

Mélanie Ramboura, Alexandre Caux-Dedeystèreb, Hervé Devannea, Luc Defebvrea, Philippe Deramburea, Arnaud Delvala.

A **Noraxon** wireless DTS system was used in conjunction with a **Vicon** motion analysis system to analyze gait analysis after modulation of tibialis anterior activity.

Published in the journal *Neuroscience Letters*.

178)

Perception of Muscular Effort During Dynamic Elbow Extension in Multiple Sclerosis

Mario Heller, Irene Retzl, Anita Kiselka, Andrea Greisberger.

A Noraxon EMG system was used to measure muscle activation of the triceps brachii with various elbow extensions.

Published in the *Archives of Physical Medicine and Rehabilitation*

179)

Neural substrates of levodopa-responsive gait disorders and freezing in advanced Parkinson's disease: A kinesthetic imagery approach

Audrey Mailliet, Stéphane Thobois, Valérie Fraix, Jérôme Redouté, Didier Le Bars, Franck Lavenne, Philippe Derost, Franck Durif, Bastiaan R. Bloem, Paul Krack, Pierre Pollak, and Bettina Debû.

A Telemyo 2400 was used to measure activity in the right gastrocnemius and tibialis anterior muscles in PD patients.

Published in the journal *Human Brain Mapping*.

180)

Expert Group Collaboration Tool for Collective Diagnosis of Parkinson Disease

Marek Kulbacki, Jerzy Paweł Nowacki, Andrzej W. Przybyszewski, Jakub Segen, Magdalena Lahor, Bartosz Jablonski, Marzena Wojciechowska.

A Noraxon EMG system was used to validate an objective measure system for diagnosing Parkinson's Disease based on gait analysis.

Published in the journal *Intelligent Information and Database Systems*.

181)

Effective Management of Upper Limb Parkinsonian Tremor by IncobotulinumtoxinA Injections Using Sensor-based Biomechanical Patterns

Fariborz Rahimi, Olivia Samotus, Jack Lee, and Mandar Jog.

A Noraxon Telemyo 2400 was used with 2D goniometers to measure kinematic factors of tremors after drug therapy.

Published in the journal *Tremor and Other Hyperkinetic Movements*.

182)

The effect of kinesio tape on neuromuscular activity of peroneus longus

Isabelle Juchler, Angela Blasimann, Heiner Baur, Lorenz Radlinger.

A noraxon EMG system and was used to assess muscle activity with changing kinesio tape after running on an h/p/cosmos treadmill.

Published in the journal *Physiotherapy Theory and Practice: An International Journal of Physiotherapy*.

183)

A single session of open kinetic chain movements emphasizing speed improves speed of movement and modifies postural control in stroke

Vicki L. Graya, Tanya D. Ivanovab, S. Jayne Garlandb.

A Telemyo DTS system was used to measure OKC exercises and arm raise tasks.

Published in the journal *Physiotherapy Theory and Practice: An International Journal of Physiotherapy*.

184)

Superficial and Deep Scapulothoracic Muscle EMG Activity During Different Types of Elevation Exercises in the Scapular Plane

B Castelein, B Cagnie, T Parlevliet, A Cools.

Both finewire and surface EMG was conducted simultaneously using the Telemyo 2400 System.

Published in the journal *Journal of Orthopaedic and Sports Medicine*.

185)

Muscle activity, time to fatigue, and maximum task duration at different levels of production standard time

Nurhayati Mohd Nur, Siti Zawiah Md Dawal, Mahidzal Dahari, Junedah Sanusi.

A Telemyo 2400 system was used to measure various neuromuscular parameters related to ergonomics.

Published in the *Journal of Physical Therapy Sciences*.

186)

How Young Girls Change Their Landing Technique Throughout the Adolescent Growth Spurt

CY Wild, BJ Munro, JR Steele.

A **Noraxon** Telemyo EMG system was used in conjunction with a **Kistler** force plate and a **Optotrak** motion analysis system to assess landing biomechanics.

Published in the *American Journal of Sports Medicine*.

187)

Comparison of EMG Activity of the Posterior Oblique Sling Muscles and Pelvic

Rotation During Prone Hip Extension With and Without Lower Trapezius Pre-Activation

In-cheol Jeon , Sung-min Ha , Ui-jae Hwang , Sung-hoon Jung , Hyun-sook Kim , Oh-yun Kwon.

A Telemyo EMG system was used to compare oblique sling and pelvis muscle activity. Published in the journal *Kyobo*.

188)

Comparison of the Activity and Proprioception of Trunk Muscles According to Different Types of Bridge Exercises in Subjects with and without Chronic Low Back Pain

Yong-Soo Kong, Yoon-Tae Hwang.

A Telemyo 2400 system was used to measure trunk muscles. Published in the *Journal of Korean Physical Therapy*.

189)

Characterization of Compensatory Stepping in People with Multiple Sclerosis

Daniel Peterson, Jessie M Huisinga, Rebecca Spain, Fay B. Horak.

A Noraxon EMG system and motion analysis device were used to characterize postural responses to forward and backward external perturbations in patients with MS. Published in the *Archives of Physical Medicine and Rehabilitation*.

190)

Surgeons' Static Posture and Movement Repetitions in Open and Laparoscopic Surgery

Grace P. Y. Szeto, Stephen W. K. Cheng, Jensen T. C. Poon, Albert C. W. Ting, Raymond C. C. Tsang, and Pei Ho.

The MyoSystem 1400A was used to record both EMG and shoulder kinematic data with multiple goniometers from robotic surgeons during real-time operations. Published in the *Journal of Surgical Research*.

191)

A comparison of surgeon's postural muscle activity during robotic-assisted and laparoscopic rectal surgery

Grace P. Y. Szeto, Jensen T. C. Poon, and Wai-Lun Law.

The MyoSystem 1400A was used to record EMG from robotic surgeons during real-time operations. Published in the *Journal of Robotic Surgery*.

192)

Assessment of fatigue, monitor placement, and surgical experience during simulated laparoscopic surgery

M.L. Uhrich, R.A. Underwood, J.W. Standeven, N.J. Soper, and J.R. Engsborg.

A Telemyo EMG system was used to collect EMG data from robotic surgeons during real-time operations.

Published in the journal *Surgical Endoscopy and Other Interventional Techniques*.

193)

Muscle Synergy of Collegiate Rowers During 6 Min Maximal Rowing on Fixed and Slides Ergometer

Shazlin Shaharudin and Sunil Agrawal.

A Telemyo Desktop DTS Receiver was used to measure 16 rowing specific muscles on the right side of the body.

Published in the *Journal of Medical and Bioengineering*.

194)

The effect of scapular posterior tilt exercise, pectoralis minor stretching, and shoulder brace on scapular alignment and muscles activity in subjects with round-shoulder posture

Lee JH, Cynn HS, Yoon TL, Ko CH, Choi WJ, Choi SA, and Choi BS.

A Telemyo DTS system was used to record shoulder EMG signals.

Published in the *Journal of Electromyography and Kinesiology*.

195)

Scapular muscle activity in a variety of plyometric exercises

Maenhout A, Benzoor M, Werin M, and Cools A.

A Telemyo DTS system was used to measure trapezius and scapula.

Published in the *Journal of Electromyography and Kinesiology*.

196)

Comparison of muscular activities in the abdomen and lower limbs while performing sit-up and leg-raise

K Kim and T Lee.

A Telemyo 2400T G2 was used to record EMG data from subjects performing calisthenic exercises.

Published in the *Journal of Physical Therapy Science*.

197)

Effect of craniocervical posture on abdominal muscle activities

JG Su, SJ Won, and H Gak.

A Telemyo 2400T was used to measure abdominal muscles.

Published in the *Journal of Physical Therapy Science*.

198)

Effect of the push-up exercise at different palmar width on muscle activities

YS Kim, DY Kim, and MS Ha.

Muscle activity of the shoulder and trunci were measured during push-up activity.

Published in the *Journal of Physical Therapy Science*.

199)

Pelvic floor muscle contraction and abdominal hollowing during walking can selectively activate local trunk stabilizing muscles

Lee, Ah Younga; Baek, Seung Oka; Cho, Yun Wooka; Lim, Tae Hongd; Jones, Rodneye; Ahn Sang Hoa.

A Telemyo2400T G2 was used to measure trunk, pelvic floor, and abdominal muscle activity.

Published in the *Journal of Back and Musculoskeletal Rehabilitation*.

200)

Brain mechanisms that underlie the effects of motivational audiovisual stimuli on psychophysiological responses during exercise

M Bigliassi, VB Silva, CI Karageorghis, and JM Bird.

A Telemyo 2400T was used to measure flexor carpi radialis muscles and correlated with EEG recordings.

Published in the journal *Physiology & Behavior*.

201)

TRUNK MUSCLES ACTIVATION DURING POLE WALKING VS. WALKING PERFORMED AT DIFFERENT SPEEDS AND GRADES

L Zoffoli, F Lucertini, A Federici, and M Ditroilo.

A Telemyo Desktop DTS was used to measure gait muscle activity.

Published in the journal *Gait and Posture*.

202)

Influence of different stool types on muscle activity and lumbar posture among dentists during a simulated dental screening task

Mieke A.A. De Bruynea, Benedikt Van Renterghem, Andrew Baird, Tanneke Palmans, Lieven Danneels, Mieke Dolphens.

A Myosystem 1400A was used to measure the activation of 7 muscles involved in sitting. Published in the journal *Applied Ergonomics*.

204)

Effect of higher muscle coactivation on standing postural response to perturbation in older adults

K Nagai, Y Okita, S Ogaya, T Tsuboyama.

A Telemetry 2400 system was used to measure postural muscle activation.

Published in the journal *Aging Clinical and Experimental Research*.

205)

Biomechanical analysis of the contact phase in drop jumps performed in water and on dry land

C Ruschel, E Dell'Antonio, and H de Brito Fontana.

A Telemetry 2400t G2 was used in conjunction with various biomechanical sensors to analyze jumping in wet and dry conditions.

Published in the *Brazilian Journal of Physical Therapy*.

206)

Muscle co-activation and its influence on running performance and risk of injury in elite Kenyan runners

A Telemetry 2400T G2 was used to measure muscle activation in runners.

Nicholas Tam, Jordan Santos-Concejero, Devon R. Coetzee, Timothy D. Noakes, and Ross Tucker.

Published in the *Journal of Sports Sciences*.

207)

Effect of Footwear Modifications on Oscillations at the Achilles Tendon during Running on a Treadmill and Over Ground: A Cross-Sectional Study

I Meinert, N Brown, and W Alt.

Two tri-axial accelerometers were used to perform power spectrum and frequency analysis during running.

Published in the journal *PloS one*.

208)

Scapulothoracic muscle activity during elevation exercises measured with surface and fine wire EMG: a comparative study between patients with subacromial impingement syndrome and healthy controls

B Castelein, B Cagnie, T Parlevliet, and A Cools.

A Telemyo 2400 G2 system was used to employ a combination with surface and intramuscular electrodes to assess patient scapulothoracic muscle activity.

Published in the journal *Manual Therapy*.

209)

Altered Multifidus Recruitment During Walking in Young Asymptomatic Individuals With a History of Low Back Pain

Jo Armour Smith and Kornelia Kulig.

A Telemyo DTS system was used to capture both EMG and footswitch data from patients with low back pain.

Published in the *Journal of Orthopaedic & Sports Physical Therapy*.

210)

In-shoe plantar pressure distribution and lower extremity muscle activity patterns of backward compared to forward running on a treadmill

Thorsten Sterzing, Clivia Frommhold, and Dieter Rosenbaum.

A Myosystem 1400A was used to correlate EMG data to plantar pressure data.

Published in the journal *Gait & Posture*.

211)

Comparison of gluteus maximus and hamstring electromyographic activity and lumbopelvic motion during three different prone hip extension exercises in healthy volunteers

I Jeon, U Hwang, S Jung, and O Kwon.

A Telemyo 2400 G2 system was used to assess lower extremity muscle activation in health adults.

Published in the journal *Physical Therapy in Sports*.

213)

Surface electromyography activity of the rectus abdominis, internal oblique, and external oblique muscles during forced expiration in healthy adults.

Kenichi Ito, Koji Nonaka, Shinya Ogaya, Atsushi Ogi, Chiaki Matsunaka, and Jun Horie.

A Telemyo 2400 system was used to measure respiratory muscle activity.

Published in the *Journal of Electromyography and Kinesiology*.

214)

The comparison of muscle activity according to various conditions during smartphone use in healthy adults

You Lim Kim, Jaehyun Yoo, Sinwoo Kang, Taerim Kim, Namyel Kim, Sojeong Hong, Wonjeong Hwang, and Suk Min Lee.

A Myosystem 1400A was used to measure muscle activity while using cellular devices. Published in the journal *Physical Therapy Rehabilitation Sciences*.

215)

Comparison of three different surface plank exercises on core muscle activity

Jin Lee, Kwanghyun Jeong, Hyuna Lee, Jaeyeon Shin, Jaelim Choi, Seungbeom Kang, and Byoung-Hee Lee.

Published in the journal *Physical Therapy Rehabilitation Sciences*.

216)

Analysis of vastus lateralis and vastus medialis oblique muscle activation during squat exercise with and without a variety of tools in normal adults

T Lee, S Park, S Yun, A Lee, Y Lee, and M Yong.

A Telemyo 2400 was used to measure oblique muscle activity. Published in the *Journal of Physical Therapy Science*.

217)

Shoulder Electromyography Measurements During Activities of Daily Living and Routine Rehabilitation Exercises

A. Burke Gurney, Christine Mermier, Michael LaPlante, Aditi Majumdar, Kathleen O'Neill, Todd Shewman, and James G. Gurney.

A Telemyo 2400 was used to employ both fine-wire and surface EMG to measure shoulder muscle activity.

Published in the *Journal of Orthopaedic & Sports Physical Therapy*.

220)

Hamstring Activity in the ACL Injured Patient: Injury Implications and Comparison With Quadriceps Activity

Rachel M. Frank, Hannah Lundberg, Markus A. Wimmer, Brian Forsythe, Bernard R. Bach Jr., Nikhil N. Verma, and Brian J. Cole.

A Telemetry 2400 was used to measure hamstring activity after ACL tear.
Published in the journal *Arthroscopy: The Journal of Arthroscopic and Related Surgery*.

221)

Strength and muscle activities during the toe-gripping action: comparison of ankle angle in the horizontal plane between the sitting upright and standing positions

M Soma, S Murata, Y Kai, H Nakae, and Y Satou.

A Telemetry 2400 G2 was used to measure lower extremity muscle activity.

Published in the *Journal of Physical Therapy Science*.

222)

Trunk exercises performed on an unstable surface improve trunk muscle activation, postural control, and gait speed in patients with stroke

KS Jung, HY Cho, and TS In.

A Telemetry 2400 G2 was used to measure trunk muscle activation in stroke patients.

Published in the *Journal of Physical Therapy Science*.

223)

Development of statistical models for predicting muscle and mental activities during repetitive precision tasks

HR Zadry, SZM Dawal, and Z Taha.

A Telemetry 2400 G2 was used to develop ergonomic statistical models.

Published in the *International Journal of Occupational Safety and Ergonomics*.

224)

The comparison of abdominal muscle activation on unstable surface according to the different trunk stability exercises

J Lee, D Kim, and T Kim.

A Telemetry DTS was used to measure abdominal muscle activity.

Published in the *Journal of Physical Therapy Science*.

225)

Sagittal plane lumbar loading when navigating an obstacle and carrying a load

Jeevaka B. Kiriella, Carolyn J. Perry, Kara M. Hawkins, Camille J. Shanahan, William H. Gage, and Anne E. Moore.

A Telemetry 2400 was used to measure lumbar muscle activity.

Published in the journal *Ergonomics*.

226)

Does pain relate with activation of quadriceps and hamstrings muscles during strengthening exercise in people with knee osteoarthritis?

Elora C. Brennehan, Alexander B. Kuntz, Emily G. Wiebenga, and Monica R. Maly.

A **Noraxon** Desktop DTS EMG system was used in conjunction with an **AMTI** force plate and an **Optotrak**

motion capture system to measure squat biomechanics.

Published in the journal *SpringerPlus*.

227)

The Effect of TheraCare Heat Wraps on Balance and Mobility in Seniors with Impaired Gait – A Cross Over Study

Jerrold Petrofsky, Michael Laymon, Iman Akef Khwailed, and Haneul Lee.

A **Noraxon** Desktop DTS EMG system was used in conjunction with a **SciFit** pressure instrumented treadmill and **Optitrak** high speed motion capture cameras to measure pathological gait of adult patients.

Published in the *Journal of Physiotherapy & Physical Rehabilitation*.

228)

Directed Functional Connectivity in Fronto-Centroparietal Circuit Correlates with Motor Adaptation in Gait Training

Vahab Youssofzadeh, Damiano Zanotto, KongFatt Wong-Lin, Sunil K. Agrawal, Senior Member, and Girijesh Prasad.

A Noraxon EMG system was used to collect EMG data from the right leg with and without exoskeletal assistance.

Published in the journal *IEEE Transactions on Neural Systems and Rehabilitation Engineering*.

229)

Relationship between neck acceleration and muscle activation in people with chronic neck pain: Implications for functional disability

Sharon M.H. Tsang, Grace P.Y. Szeto, and Raymond Y.W. Lee.

A Noraxon Telemyo EMG system was used to measure neck muscle activity.

Published in the journal *Clinical Biomechanics*.

230)

The Activity of Surface Electromyographic Signal of Selected Muscles during Classic Rehabilitation Exercise

Jinzhuang Xiao, Jinli Sun, Junmin Gao, Hongrui Wang, and Xincai Yang.

A Desktop DTS system was used to measure abdominal and lower extremity muscle activity.

Published in the journal *Rehabilitation Research and Practice*.

231)

Evaluation of pliers' grip spans in the maximum gripping task and sub-maximum cutting task

Dae-Min Kim & Yong-Ku Kong.

A Noraxon Telemyo 2400 system was used to measure electromyography of the hand and finger.

Published in the *International Journal of Occupational Safety and Ergonomics*.

232)

AN ELECTROMYOGRAPHIC ANALYSIS OF THE SHOULDER COMPLEX MUSCULATURE WHILE PERFORMING EXERCISES USING THE BODYBLADE® CLASSIC AND BODYBLADE® PRO

Rafael F. Escamilla, Kyle Yamashiro, Russell Dunning, Tony Mikla, Matthew Grover, Mike Kenniston, Jesse Loera, Travis Tanasse, and James R. Andrews.

A Telemyo 2400 system was used to measure upper extremity muscle activity.

Published in the *International Journal of Sports Physical Therapy*.

233)

COMPARISON OF TRUNK AND LOWER EXTREMITY MUSCLE ACTIVITY AMONG FOUR STATIONARY EQUIPMENT DEVICES: UPRIGHT BIKE, RECUMBENT BIKE, TREADMILL, AND ELLIPTIGO®

Lucinda Bouillon, Ryan Baker, Chris Gibson, Andrew Kearney, and Tommy Busemeyer.

A Myosystem 900 was used to measure upper and lower extremity muscle activity.

Published in the *International Journal of Sports Physical Therapy*.

234)

Effect of 3 Different Applications of Kinesio Taping Denko® on Electromyographic Activity: Inhibition or Facilitation of the Quadriceps of Males During Squat Exercise

Júlio C. Serrão, Bruno Mezêncio, João G. Claudino, Rafael Soncin, Pedro L. Sampaio Miyashiro, Eric P. Sousa, Eduardo Borges, Vinícius Zanetti, Igor Phillip, Luiz Mochizuki, and Alberto C. Amadio.

A Telemyo 2400T G2 was used to evaluate lower extremity muscle activity under three taping conditions.

Published in the *Journal of Sports Science and Medicine*.

235)

Effects of Suboccipital Release with Craniocervical Flexion Exercise on Craniocervical Alignment and Extrinsic Cervical Muscle Activity in Subjects with Forward Head Posture

Bo-Been Kim, Ji-Hyun Lee, Hyo-Jung Jeong, and Heon-Seock Cynn.

A Telemyo DTS was used to evaluate muscle activity during craniocervical flexion.

Published in the *Journal of Electromyography and Kinesiology*.

236)

The Ultrasound Investigation of the Medial Head of Gastrocnemius Muscle

Ewelina Świątek-Najwer, Urszula Czajkowska, and Ludomir J. Jankowski.

Noraxon mechanical goniometerers were used to determine the position of the ankle.

Published in the journal *Information Technologies in Medicine*.

237)

Skeletal muscle adaptation to immobilization and subsequent retraining in elderly men: No effect of anti-inflammatory medication

K. Dideriksena, A.P. Boesena, J.F. Kristiansena, S.P. Magnussona, P. Schjerlinga, L. Holma, and M. Kjaera.]

A Noraxon system was used to measure leg extension force.

Published in the Journal *Experimental Gerontology*.

238)

The Influence of a Bout of Exertion on Novice Barefoot Running Dynamics

Rami Hashish, Sachithra D. Samarawickrame, Lucinda Baker, and George J. Salem.

A Noraxon Telemyo DTS system was used to measure triceps surae muscle activation.

Published in the *Journal of Sports Science and Medicine*.

239)

The Effect of Taping Applied in the Direction of Underlying Muscle Fibres on the Activity of this Muscle

Martina Vrbova and Dagmar Pavlu.

A Noraxon EMG system was used to measure biceps brachii muscle activity.
Published in the *PARIPEX – Indian Journal of Research*.

240)

Does load uncertainty affect adaptation to catch training?

William P. Berg , Brian J. Richards, Aaron M. Hannigan, Kelsey L. Biller, and Michael R. Hughes.

A Noraxon Myosystem 1200 was used to arm muscle activity.
Published in the journal *Experimental Brain Research*.

241)

How Hinge Positioning in Cross-Country Ski Bindings Affect Exercise Efficiency, Cycle Characteristics and Muscle Coordination during Submaximal Roller Skiing

Conor M. Bolger, Øyvind Sandbakk, Gertjan Ettema, and Peter Federolf.

A Telemyo 900 was used to measure acceleration and EMG data from six lower limb muscles.

Published in the journal *PLOS one*.

242)

Shoulder muscle activity during the modified dynamic relocation test and side-lying shoulder external rotation: a cross-sectional study on asymptomatic individuals

Daniel Cury Ribeiroa, Jonathan Shemmell, Carrie Falling, and Gisela Solea.

A Telemyo 2400 G2 was used to characterize upper extremity muscle activity.
Published in the *Journal of Manual and Manipulative Therapy*.

243)

The cross on rings performed by an Olympic champion

Paulo CARRARA, Alberto Carlos AMADIO, Júlio Cerca SERRÃO, Gareth IRWIN , Luis MOCHIZUKI.

A Myosystem 1400 was used to measure nine muscles of the arm and trunk.
Published in the journal *SciELO Brazil*.

244)

Effect of 1-year regular Tai Chi on neuromuscular reaction in elderly women: a randomized controlled study

Wei Sun, Cui Zhang, Qipeng Song, Weiping Li, Yan Cong, Shuwan Chang, Dewei Mao,

and Youlian Hong.

A Telemyo 2400 was used to measure muscle activity in elderly women.

Published in the journal *Research in Sports Medicine: An International Journal*.

245)

Upper body muscle activation during low- versus high-load resistance exercise in the bench press

Brad Schoenfeld, Bret Contreras, Andrew D. Vigotsky, Dan Ogburn, Fabio Fontana, and Gul Tiryaki-Sonmez.

A Clinical DTS system was used to measure pectoral, triceps, and anterior deltoid muscle activation.

Published in the journal *IOS Press*.

246)

Comparison of Biomechanical Characteristics for the Skill Level in Cycle Pedaling

GH Lee, SS Kang, and JM So.

A Telemyo 2400T was used to measure muscle activity in cyclists.

Published in the *Korean Journal of Sports Biomechanics*.

247)

The Immediate Effects of External Kinesio-tape Wrapping for Inner Arch Support on the Lower Leg EMG for Gait in Stiletto Heels

K Yi.

A Noraxon EMG system was used to measure lower extremity muscle activity.

Published in the *Korean Journal of Sports Biomechanics*.

248)

Trunk-pelvis coordination during turning: A cross sectional study of young adults with and without a history of low back pain

JA Smith and K Kulig.

A Telemyo DTS system was used to identify gait patterns and trunk and pelvis muscle activation.

Published in the journal *Clinical Biomechanics*.

249)

Analysis of Muscle Activity Utilizing Bench Presses in the AnyBody Simulation Modelling System

Z Ji, H Wang, G Jiang, and L Li.

A Noraxon EMG system was used to validate the use of a biomechanical modeling system.

Published in the journal *Modeling and Simulation in Engineering*

250)

Knee Muscular Control during Jump Landing in Multidirections

Komsak Sinsurin, Roongtiwa Vachalathiti, Wattana Jalayondeja, and Weerawat Limroongreungrat.

A Noraxon Myosystem 1200 was used in conjunction with a **Vicon** motion capture system to characterize jump landings.

Published in the *Asian Journal of Sports*

251)

Comparison of EMG activity on abdominal muscles during plank exercise with unilateral and bilateral additional isometric hip adduction

SY Kim, MH Kang, ER Kim, IG Jung, EY Seo, and J Oh.

A Telemyo DTS system was used to measure abdominal muscle activity.

Published in the *Journal of Kinesiology*.

252)

Effect of Gait Imagery Tasks on Lower Limb Muscle Activity With Respect to Body Posture

Barbora Kolářová and Alois Krobot.

The Telemyo 2400 G2 was used to measure lower extremity muscle activity during gait.

Published in the journal *Perceptual and Motor Skills*.

253)

Contractile behavior of the medial gastrocnemius in children with bilateral spastic cerebral palsy during forward, uphill and backward-downhill gait

Matthias Hösl, Harald Böhm, Adamantios Arampatzis, Antonia Keymer, Leonhard Döderlein.

A Telemyo DTS was used to measure calf muscle activity.

Published in the journal *Clinical Biomechanics*.

254)

Scapular Kinematic is Altered after Electromyography Biofeedback Training

Jun G. San Juan, Samantha R. Gunderson, Kai Kane-Ronning, and David N. Suprak.
A **Noraxon** Telemetry Desktop DTS system was used to facilitate upper extremity biofeedback training and in conjunction with a **Polhemus** motion capture system to assess muscle activity.

Published in the *Journal of Biomechanics*.

255)

Scapular kinematic is altered after electromyography biofeedback training

Eun-kyung Koh, Kyue-nam Park, and Do-young Jung.

A Noraxon Telemetry DTS system was used to assess abdominal and gluteus maximus muscle activity.

Published in the journal *Physical Therapy in Sport*.

256)

Muscle co-contraction during gait in individuals with articular cartilage defects in the knee

Louise M. Thoma, Michael P. McNally, Ajit M. Chaudhari, David C. Flanigan, Thomas M. Best, Robert A. Siston, Laura C. Schmitt.

A Noraxon Telemetry DTS was used to measure muscle activation during gait.

Published in the journal *Gait and Posture*.

257)

Effect of Feedback Techniques for Lower Back Pain on Gluteus Maximus and Oblique Abdominal Muscle Activity and Angle of Pelvic Rotation during the Clam Exercise

Eun-kyung Koh, Kyue-nam Park, and Do-young Jung.

A Telemetry DTS system was used to measure abdominal and gluteus maximus muscle activation.

Published in the journal *Physical Therapy in Sport*.

258)

Ergonomic evaluation of standard and alternative pallet jack handles

Carisa Harris-Adamson, Alexis Mielke, Xu Xu, and Jia-Hua Lin.

A Telemetry 2400T was used to measure back and chest muscle activity during pulling.

Published in the *Journal of Industrial Ergonomics*.

259)

THE EFFECT OF RADIAL EXTRACORPOREAL SHOCK WAVE STIMULATION ON UPPER LIMB SPASTICITY IN CHRONIC STROKE PATIENTS: A SINGLE-BLIND, RANDOMIZED, PLACEBO-CONTROLLED STUDY

ROBERT DYMAREK, JAKUB TARADAJ, AND JOANNA ROSIN CZUK.

A Noraxon MyoSystem 1400L was used to measure upper extremity muscle activity.

Published by the journal *Ultrasound in Medicine and Biology*.

260)

Analysis of physical demands during bulk bag closing and sealing

Mahiyar F. Nasarwanji, Leanna M. Reardon, John R. Heberger, and Patrick G. Dempsey.

A Telemyo 2400 and MyoTrace 400 were used to measure EMG and hand dynamometer signals and for biofeedback assessment.

Published in the *Journal of Industrial Ergonomics*.

261)

Applying different mathematical variability methods to identify older fallers and non-fallers using gait variability data.Y

Marques NR, Hallal CZ, Spinoso DH, Morcelli MH, Crozara LF, and Gonçalves M.

A Noraxon DTS system was used to measure pressure signals from foot switch insoles.

Published by the journal *Aging Clinical and Experimental Research*.

262)

Pelvic floor muscle reflex activity during coughing – an exploratory and reliability study

Helena Luginbuehl, Jean-Pierre Baeyens, Annette Kuhn, Regula Christen, Bettina Oberli, Patric Eichelberger, and Lorenz Radlinger.

A Telemyo 2400 was used to measure EMG and perform 3D accelerometry.

Published in the *Annals of Physical and Rehabilitation Medicine*.

263)

INVESTIGATION INTO THE BARBELL BACKSQUAT COMPARING WEIGHTLIFTING SHOES TO BAREFOOT CONDITIONS

Alex W. Pilkinton — Undergraduate Honors Thesis

A Telemyo 2400 was used to collect lower extremity muscle activity.

Published in the *Digital Commons at East Tennessee State University*.

264)

Neuromuscular performance of bandal chagui: Comparison of subelite and elite taekwondo athletes

Pedro Vieira Sarmet Moreiraa, Márcio Fagundes Goethel, and Mauro Gonçalves.

A **Noraxon**Telemetry DTS was used in conjunction with a **Plug-in** optical motion capture system and **AMTI** force plates to assess round house kicks.

Published in the *Journal of Electromyography and Kinesiology*.

265)

The effects of forward and backward walking according to treadmill inclination in children with cerebral palsy

Won-hyo Kim, Won-bok Kim, Chang-kyo Yun.

A Telemetry DTS was used to measure muscle activity from the lower extremity.

Published in *The Journal of Physical Therapy Science*.

266)

Influence of Perspective of Action Observation Training on Residual Limb Control in Naïve Prosthesis Usage

Delisa T. Lawson, William F. Cusack, Regan Lawson, Ashley Hardy, Robert Kistenberg, and Lewis A. Wheaton.

A MyoSystem 1400L was used to collect data from twin-axis goniometers and a single axis torsionmeter.

Published in the *Journal of Motor Behavior*.

267)

Immediate and Long-Term Effects of Hippotherapy on Symmetry of Adductor Muscle Activity and Functional Ability in Children With Spastic Cerebral Palsy

Nancy H. McGibbon, William Benda, Burris R. Duncan, and Debbie Silkwood-Sherer.

A Noraxon Telemetry system was used to measure lower extremity muscle activity.

Published in the *Archives of Physical Medicine and Rehabilitation*.

268)

CORTICAL AND VESTIBULAR STIMULATION REVEAL PRESERVED DESCENDING MOTOR PATHWAYS IN INDIVIDUALS WITH MOTOR-COMPLETE SPINAL CORD INJURY

Jordan W. Squair, Anna Bjerkefors, J. Timothy Inglis, Tania Lam, and Mark G. Carpenter.

A Myosystem 1400A was used to measure muscle activity before and after TMS.

Published in the *Journal of Rehabilitation Medicine*.

269)

The influence of sitting posture on mechanics and metabolic energy requirements during sit-skiing: a case report

K. B. Hofmann, M. L. Ohlsson, M. Höök, J. Danvind, and Uwe G. Kerstin.

A Telemyo 2400 was used to measure force load cell data.

Published in the journal *Sports Engineering*.

270)

EXTRACORPOREAL SHOCK WAVE STIMULATION AS ALTERNATIVE TREATMENT MODALITY FOR WRIST AND FINGERS SPASTICITY IN mPOST-STROKE PATIENTS A PROSPECTIVE, OPEN-LABEL, PRELIMINARY CLINICAL TRIAL

Robert Dymarek, Jakub Taradaj, Joanna Rosińczuk.

A MyoSystem 1400L was used to characterize resting muscle activity.

A clinical trial published by the *Medical University in Wroclaw*.

271)

Muscular and neuromuscular control following soccer-specific exercise in male youth: Changes in injury risk mechanisms

M. Lehnert, M. De Ste Croix, A. Zaatari, J. Hughes, R. Varekova, and O. Lastovicka.

A MyoSystem 1400A was used to measure isokinetic muscle actions performed on the IsoMed 2000.

Published in the *Journal of Sports Sciences*.

272)

Kicking modality during erratic-dynamic and static condition effects the muscular co-activation of attacker

Tae-Whan Kim, Sang-Cheol Lee, Se-Kee Kil, Sung-Chul Kang, Young-Tae Lim, Ki-Tae Kim, and Siddhartha Bikram Panday.

A Telemyo DTS system was used to measure muscle activity of the lower extremity of martial artists.

Published in the journal *Biomechanics*.

273)

Muscle Activation Among Supine, Prone, and Side Position Exercises With and Without a Swiss Ball

Rafael F. Escamilla, Clare Lewis, Amanda Pecson, Rodney Imamura, and James R. Andrews.

A MyoSystem was used to measure muscle activity during swiss ball use.

Published in the journal *Sports Health: A Multidisciplinary Approach*.

274)

Brain mechanisms that underlie the effects of motivational audiovisual stimuli on psychophysiological responses during exercise

Marcelo Bigliassi, Vinícius B. Silva, Costas I. Karageorghis, Jonathan M. Bird, Priscila C. Santos, and Leandro R. Altimar.

A Telemetry 2400 used to measure muscle activity from the flexor carpi radialis.

Published in the journal *Physiology and Behavior*.

275)

In vivo stiffness measurement and in silico stiffness prediction of biceps brachii muscle using an isometric contraction exercise

Wan-Ho Chung, Dong-Ki Min, Hyun-Jun Hwang, Jong-Kwang Lim, Jun-Hong Park, and Hak-Sung Kim.

A Telemetry 2400 was used to measure muscle activity of the biceps brachii.

Published in the *Journal of Mechanical Science and Technology*.

276)

Immediate effects of whole-body vibration on neuromuscular performance of quadriceps and oscillation of the center of pressure: A randomized controlled trial

Daniel T. Borges, Liane B. Macedo, Caio A.A. Lins, and Jamilson S. Brasileiro.

A Telemetry DTS system was used to measure muscle activity of the quadriceps.

Published in the journal *Manual Therapy*.

277)

Effects of Locomotor Exercise Intensity on Gait Performance in Individuals With Incomplete Spinal Cord Injury

Kristan A. Leech, Catherine R. Kinnaird, Carey L. Holleran, Jennifer Kahn, and T. George Hornby.

A 32-channel Noraxon EMG system was used to gait muscle activity.

Published in the *American Physical Therapy Journal*.

278)

Neuromechanical synergies in single-leg landing reveal changes in movement control

Andrew D. Nordin and Janet S. Dufek.

A MyoSystem 2000 was used in conjunction with a **Vicon** motion capture system

and **Kistler** force plate to capture leg biomechanics.
Published in the journal *Human Movement Science*.

279)

Tibiofemoral contact forces during walking, running and sidestepping

David J. Saxby, Luca Modenese, Adam L. Bryant, Pauline Gerus, Bryce Killen, Karine Fortin, Tim V. Wrigley, Kim L. Bennell, Flavia M. Cicuttini, and David G. Lloyd.

A Telemetry 900 was used to measure knee muscle activity.

Published in the journal *Gait and Posture*.

280)

Fabrication of a Micro-Needle Array Electrode by Thermal Drawing for Bio-Signals Monitoring

Lei Ren, Qing Jiang, Keyun Chen, Zhipeng Chen, Chengfeng Pan, and Lelun Jiang.

A Telemetry 2400 used to collect EMG signals through labview.

Published in the journal *Sensors*.

281)

Effects of Whole Body Vibration on Muscle Contractile Properties in Exercise Induced Muscle Damaged Females

Nicole C. Dabbs, Christopher D. Black, and John C. Garner.

A Telemetry DTS was used to measure muscle activity of the lower extremity.

Published in the *Journal of Electromyography and Kinesiology*.

282)

Effects of chronic neck-shoulder pain on normalized mutual information analysis of surface electromyography during functional tasks

Pascal Madeleine, Yanfei Xie, Grace P.Y. Szeto, and Afshin Samania.

A Noraxon Impedance Checker was used to assess skin-electrode impedance values and a Noraxon Telemetry DTS was used to assess neck, shoulder, and forearm muscles.

Published in the journal *Clinical Neurophysiology*.

283)

Effects of movement from a postural maintenance position on lumbar hemodynamic changes

Tsuneo Kumamoto, Toshiaki Seko, Yui Takahashi.

A Telemetry 2400 G2 was used to measure EMG and a NorAngle was used to measure

joint angles.

Published in the *Journal of Physical Therapy Science*.

284)

Abdominal muscle activity according to knee joint angle during sit-to-stand

Juri Eom, Min-Hyung Rhee, Laurentius Jongsoon Kim.

A Telemyo 2400 was used to measure abdominal muscle activity.

Published in the *Journal of Physical Therapy Science*.

285)

Effects of lumbar stabilization exercises on the flexion-relaxation phenomenon of the erector spinae

San-seong Park and Bo-ram Choi.

A MyoTrace 400 was used to analyse erector spinae muscles.

Published in the *Journal of Physical Therapy Science*.

286)

Modular control of gait after incomplete spinal cord injury: differences between sides

S Pérez-Nombela, F Barroso, D Torricelli, A de los Reyes-Guzmán, A J del-Ama, J Gómez-Soriano, J L Pons, and Á Gil-Agudo.

A Noraxon EMG system was used to investigate injury on gait.

Published in the journal *Spinal Cord*.

287)

Verification of the Effects of Snoboard Training Simulators

Chong-Hoon Lee and Jin-ho Back.

A Noraxon Telemyo 2400 was used in conjunction with a Qualisys motion capture system to assess kinematic and EMG parameters.

Published in the *International Journal of Bio-Science and Bio-Technology*.

288)

Comparison of knee valgus angle, leg muscle activity, and vastus medialis oblique/vastus lateralis ratio during a single leg squat on flat and inclined surfaces in individuals with patellofemoral pain syndrome

Yoon Tae-Lima, Kim Ki-Songb, and Cynn Heon-Seock.

A Telemyo system was used to measure leg muscle activity.
Published in the journal *IOS Press*.

289)

Peroneal electromechanical delay and fatigue in patients with chronic ankle instability

Dimitrios A. Flevas, Manfred Bernard, Stavros Ristanis, Constantina Moraiti, Anastasios D. Georgoulis, and Evangelos Pappas.

A Telemyo 2400T was used to measure muscle recruitment and fatigue.
Published in the journal *Knee Surgery, Sports Traumatology, Arthroscopy*.

290)

Effects of different warm-up modalities on power output during the high pull
Matthew John Barnes, Ashley Petterson, and Darryl J. Cochrane.
A Telemyo DTS was used to measure upper extremity movements.
Published in the journal *Sports Sciences*.

291)

The trunk muscles activity on whole body vibration during bridging position in young healthy adults

Won-tae Kim, Hyun-ju Lee, and Ki-sik Tae.

A Telemyo 2400T was used to measure trunk muscles.
Published in the *International Journal of Precision Engineering and Manufacturing*.

292)

The Correlation Between Hip Abductor Strength and Functional Performance in Division I Female Collegiate Soccer Athletes

Caitlin E. Whale.

A Noraxon EMG system was to measure EMG activity of soccer players.
A dissertation presented by *University of Arkansas*.

293)

Changes in the internal movement structure during the push and paddle phases in Olympic national team lugers

ARTUR GOŁAŚ, MIŁOSZ DROZD, MICHAŁ KRZYSZTOFIK, KATARZYNA STROŃSKA, PAULINA BOJACZ, MARCIN ŻAK, and KATARZYNA PAJERSKA.

A Telemetry 2400T was used to measure upper extremity muscle activity.
Published in the journal *Trends in Sports Sciences*.

294)

Adaptation of mastication mechanics and eating behaviour to small differences in food texture

Benjamin Le Révérend, Françoise Saucy, Mireille Moser, and Chrystel Loret.
A Myosystem 1400 was used to measure masticatory muscles.
Published in the journal *Physiology and Behavior*.

295)

Single-leg landing neuromechanical data following load and land height manipulations

Andrew D. Nordin and Janet S. Dufekb
A Myosystem 2000 was used to collect EMG data.
Published in the journal *Data in Brief*.

296)

Identification of Biomechanical Risk Factors for the Development of Lower-Back Disorders during Manual Rebar Tying

Waleed Umer, Heng Li, Grace Pui Yuk Szeto, and Arnold Yu Lok Wong.
A Noraxon Telemetry DTS was used in conjunction with the MyoMotion sensor based motion capture system to measure human motion.
Published in the *Journal of Construction Engineering and Management*.

297)

Focusing attention on circular pedaling reduces movement economy in cycling

L. Schücker,, M. Fleddermann, M. de Lussanet, J. Elischer, C. Böhmer, and K. Zentgraf.
A Telemetry DTS was used to measure acceleration.
Published in the journal *Psychology of Sport and Exercise*.

298)

Three-dimensional assessment of postural tremor during goal-directed aiming

K. J. Kelleran, S. Morrison, and D. M. Russel.
A Noraxon Tri-Axial accelerometer was used to measure fine motor tasks.
Published in the journal *Experimental Brain Research*.

299)

Effects of drop height and surface instability on neuromuscular activation during drop jumps

M. Lesinski, O. Prieske, R. Beurskens, D. G. Behm, and U. Granacher.

A Telemyo 2400 was used to measure lower extremity muscle activity.

Published in the *Scandinavian Journal of Medicine and Science in Sports*.

300)

Post-exercise branched chain amino acid supplementation does not affect recovery markers following three consecutive high intensity resistance training bouts compared to carbohydrate supplementation

Wesley C. Kephart, Petey W. Mumford, Anna E. McCloskey, A. Maleah Holland, Joshua J. Shake, C. Brooks Mobley, Adam E. Jagodinsky, Wendi H. Weimar,

Gretchen D. Oliver, Kaelin C. Young, Jordan R. Moon, and Michael D. Roberts.

A noraxon Myosystem 1200 was used to measure MVIC and isokinetic trials.

Published in the *Journal of the International Society of Sports Nutrition*.

301)

The Effect of Ankle Bracing on Lower Extremity Coordination, Coordination Variability, and Neuromuscular Activity in Individuals with and without Chronic Ankle Instability

Adam Edward Jagodinsky

A Telemyo 2400 was used to measure lower extremity muscle activity.

Published in the Graduate Dissertation annals of *Auburn University*.

302)

Muscle coordination, activation and kinematics of world-class and elite breaststroke swimmers during submaximal and maximal efforts

Bjørn Harald Olstad, João Rocha Vaz, Christoph Zinner, Jan M.H. Cabri, and Per-Ludvik Kjendlie.

MyoResearch XP was used to evaluate raw EMG data.

Published in the *Journal of Sports Sciences*.

303)

Clinical effectiveness of a Pilates treatment for forward head posture

Sun-Myung Lee, Chang-Hyung Lee, David O'Sullivan, Joo-Ha Jung, and Jung-Jun Park.

A Telemyo 2400 was used to measure the sternocleidomastoid.

Published in the *Journal of Physical Therapy Science*.

304)

The immediate intervention effects of robotic training in patients after anterior cruciate ligament reconstruction

Chunying Hu, Qiuchen Huang, Lili Yu, and Miao Ye.

A Telemyo 2400 was used to measure the vests laterals and vestus medalis.

Published in the *Journal of Physical Therapy Science*.

305)

Immediate effects of neuromuscular joint facilitation intervention after anterior cruciate ligament reconstruction

Lei Wang.

A Telemyo 2400 was to measure the vastus medalis and vestus lateralis.

Published in the *Journal of Physical Therapy Science*.

306)

Short-term performance peaking in an elite cross-country mountain biker

Bent R. Rønnestad, Joar Hansen, Geir Vegge, and Iñigo Mujika.

A Telemyo DTS system was used to measure vastus lateralis and vastus medialis activity.

Published in the *Journal of Sports Science*.

307)

Tibial impacts and muscle activation during walking, jogging and running when performed overground, and on motorised and non-motorised treadmills

Gallon Montgomery, Grant Abt, C.A. Dobson, T. Smith, and Massimiliano Ditroilo.

Accelerometer and EMG data were simultaneously recorded using a Telemyo Desktop DTS system.

Published in the journal *Gait and Posture*.

308)

THE EFFECTS OF CLOSED KINETIC CHAIN AND OPEN KINETIC CHAIN EXERCISE ON HIP MUSCULATURE STRENGTH AND TIMING IN FEMALES

KJ Wood.

A Myosystem 2400 was used to measure muscle activity of the lower extremity.

Published in the Annals of Graduate Theses from *Miami University*.

309)

Serratus anterior and trapezius muscle activity during knee push-up plus and

knee-plus exercises performed on a stable, an unstable surface and during sling-suspension

Brian Horsak, Marion Kiener, Andreas Potzelsberger, and Tarique Siragy.
A MyoTrace 400 was used to measure upper extremity muscle activity.
Published in the journal *Physical Therapy in Sport*.

310)

Effects of Time-Based Metering on Heart-Rate Variability and Ocular Indices of Mental Workload

Rob Bastholm, Ben Willems, and Anthony J. Masalonis.
A Noraxon DTS BioMonitor was used to measure HRV and ECG.
A presentation given the *Federal Aviation Administration*.

311)

Coordination of deep hip muscle activity is altered in symptomatic femoroacetabular impingement

Laura E Diamond, Wolbert Van den Hoorn, Kim L Bennell, Tim V Wrigley, Rana S Hinman, John O'Donnell, and Paul W Hodges.
A Myosystem 2400 was used to measure lower extremity muscle activity.
Published in the *Journal of Orthopaedic Research*.

312)

Coordination of deep hip muscle activity is altered in symptomatic femoroacetabular impingement

Jihyun Lee, Jangwhon Yoon, and Heonseock Cynn.
A Telemyo DTS was used to measure lower extremity muscle activity.
Published in the *Journal of Bodywork and Movement Therapies*.

313)

Repetitive Transcranial Magnetic Stimulation of the Primary Somatosensory Cortex Modulates Perception of the Tendon Vibration Illusion

D. C. Huh, J. M. Lee, S. M. Oh, and J-H. Lee.
A Myosystem 1400A was used to measure forearm muscle activity.
Published in the journal *Perceptual and Motor Skills*.

314)

The role of visual stimuli on standing posture in children with bilateral cerebral palsy

Cecilia LidbeckEmail author, Åsa Bartonek, Priti Yadav, Kristina Tedroff, Per Åstrand, Kerstin Hellgren, and Elena M. Gutierrez-Farewik.

A **Noraxon Telemyo 900** was used in conjunction with a **Vicon** to measure movement of children with CP.

Published in the journal *BMC Neurology*.

315)

Muscle contributions to center of mass excursion in ankle and hip strategies during forward body tilting

Shinya Ogayaa, Yusuke Okita, and Satoshi Fuchioka.

A **Noraxon Telemyo 2400** was used in conjunction with a **Kistler** force plate and **Vicon** motion capture system to measure muscle activity relative to COM.

Published in the *Journal of Biomechanics*.

316)

Prophylactic knee bracing alters lower-limb muscle forces during a double-leg drop landing

Katie A. Ewing, Justin W. Fernandez, c, Rezaul K. Begg, Mary P. Galea, and Peter V.S. Lee.

A **Noraxon Telemyo 2400** was used in conjunction with an **AMTI** force plate and **Vicon** motion capture system to measure muscle activity and motion.

Published in the *Journal of Biomechanics*.

317)

Development and evaluation of an EMG-based model to estimate lumbosacral loads during seated work

Bochen Jiaa and Maury A. Nussbaum.

A Telemyo 900 was used to measure lower extremity muscle activity.

Published in the *International Journal of Industrial Ergonomics*.

319)

Immediate effects of different treatments for the wrist joints of subdominant hands, using electromechanical reaction time

Chunying Hu, Qiuchen Huang, Lili Yu, Yue Zhou, Rui Gu, Yao Cui, Meng Ge, Yanfeng Xu, and Jianfeng Liu.

A Noraxon Telemetry 2400 was used to measure reaction time.
Published in the journal *The Journal of Physical Therapy Science*.

321)

Effects of the Drop-set and Reverse Drop-set Methods on the Muscle Activity and Intramuscular Oxygenation of the Triceps Brachii among Trained and Untrained Individuals

Masahiro Goto, Shinsuke Nirengi, Yuko Kurosawa, Akinori Nagano, and Takafumi Hamaoka.

A Noraxon DTS system was used to measure kinematics and EMG.
Published in the *Journal of Sports Science and Medicine*

323)

Development, validity and reliability of a new pressure air biofeedback device (PAB) for measuring isometric extension strength of the lumbar spine

Andries W. Pienaar and Justhinus G. Barnard

A MyoTrace 400 was used to measure lumbar muscle activation.
Published in the *Journal of Medical Engineering & Technology*.

324)

The Effect of a Combination of Scapular Protraction With Resistance and Forward Flexion of the Shoulder on Serratus Anterior Muscle Activity

Sung-hoon Jung, In-cheol Jeon, Ui-jae Hwang, Jun-hee Kim, and Oh-yun Kwon.

A Telemetry DTS system was used to measure upper extremity muscle activity.
Published in the *Journal of Physical Therapy*.

325)

Comparison of the Electromyographic Changes in the Vastus Medialis Obliquus and Vastus Lateralis Muscles According to the Knee Joint Angle During Squat Exercise Using a Gym Ball

Hee-won Jeong and Seung-chul Chon.

A Telemetry DTS system was used to measure upper extremity muscle activity.
Published in the *Journal of Physical Therapy*.

326)

Walking with a backpack using load distribution and dynamic load compensation reduces metabolic cost and adaptations to loads

Joon-Hyuk Park, Paul Stegall, Haohan Zhang, and Sunil Agrawal.

A **Noraxon** Telemyo System was used in conjunction with a **Vicon** motion capture system and a **Bertek** force plate.

Published in the *Transactions on Neural Systems and Rehabilitation Engineering*.
327)

Effectiveness of a Proprioceptive Resistance Device in Changing Landing Style in Recreational Runners Learning to Land on the Ball of the Foot

Connie Sol

A Telemyo DTS EMG system was used with Noraxon EMG and Foot-Switch sensors to assess running and muscle recruitment patterns.

This PhD Dissertation was published in the *University of Miami Scholarly Repository*.

329)

Volitional Spine Stabilization During a Drop Vertical Jump From Different Landing Heights: Implications for Anterior Cruciate Ligament Injury

Ram Haddas, Troy Hooper, C. Roger James, Phillip S. Sizer.

A Telemyo 900 was used in conjunction with **Bertec** force plates to measure drop jump mechanics.

330)

Effects of performing abdominal hollowing and abdominal bracing exercises on abdominal muscle activity during curl-up exercise

Giedrė Praškevičiūtė, Ieva Aleknaitė-Dambrauskienė, and Vilma Mauricienė.

A Telemyo 900 was used to measure abdominal muscle activity.

Published in the *The 2nd International Conference Exercise for Health and Rehabilitation. Book of Abstracts 2016*.

331)

Examinations of factors influencing toe grip strength

Masayuki Soma, Shin Murata, Yoshihiro Kai, Hideyuki Nakae, Yousuke Satou, Jun Murata, and Junya Miyazaki.

A Telemyo G2 was used to measure EMG and goniometer measurements.

Published in the *The Journal of Physical Therapy Science*.

332)

Comparison of maximum voluntary isometric contraction of the biceps on various posture and respiration conditions for normalization of electromyography data

Sang-Yeol Lee, and Marg-Eun Jo.

A Noraxon Telemetry EMG system was used to measure MVC.
Published in the *The Journal of Physical Therapy Science*.

333)

The temporal relationship of thresholds between muscle activity and ventilation during bicycle ramp exercise in community dwelling elderly males

Kentaro Sasaki, Tsuyoshi Kimura, Satoshi Kojima, and Hiroyuki Higuchi.
A Telemetry 2400 was used to measure lower extremity muscle activity.
Published in the *The Journal of Physical Therapy Science*.

334)

Electromyographic analysis of muscle activation during pull-up variations

James A. Dickie, James A. Faulkner, Matthew J. Barnes, Sally D. Lark.
A Telemetry DTS was used to measure upper extremity muscle activity.
Published in the *Journal of Electromyography and Kinesiology*.

335)

Multifactorial cycling performance of Cyclists and Non-Cyclists and their effect on skin temperature

Jose Ignacio Priego Quesada, Lucas Tavares Sampaio, Rodrigo R. Bini, Mateus Rossato, Vinicius Cavalcanti.
A Noraxon MyoSystem 1400 was used to measure lower extremity muscle activity.
Published in the *Journal of Thermal Analysis and Calorimetry*.

336)

Combining Exergame Training with Omega-3 Fatty Acid Supplementation: Protocol for a Randomized Controlled Study Assessing the Effect on Neuronal Structure/Function in the Elderly Brain

Alexandra Schättin and Eling D. de Bruin.
A Telemetry DTS was used to measure M. tibialis muscle activity.
Published in the journal *Frontiers Aging in Neuroscience*.

337)

Kinematics and muscle activation patterns during a maximal voluntary rate activity in healthy elderly and young adults

Kitae Kim, In-sik Shin, Siddhartha Bikram Panday, Jin-hae Kim, Hye-young Kim, Gwang-jae Yu, and Ji-hyun Kim.

A Telemyo DTS was used to measure skiing mechanics.
Published in the journal *Aging Clinical and Experimental Research*.

339)

Increased Postural Sway and Changes in the Neuromuscular Activities of the Ankle Stabilizing Muscles at Ovulation in Healthy Young Women

Haneul Lee and JongEun Yim.

A **Noraxon** Telemyo DTS EMG system was used in conjunction with a **Zebris** FDM-S pressure platform to measure muscle activity and sway.

Published in the *Tohoku Journal of Experimental Medicine*.

340)

Aging effect on muscle synergies in stepping forth during a forward perturbation

Yun Wang, Kazuhiko Watanabe, and Tadayoshi Asaka.

A **Noraxon** Telemyo 2400 was used in conjunction with a **Kistler** force plate to measure EMG and kinetic gait parameters.

Published in the *European Journal of Applied Physiology*.

341)

The effect of bilateral trainings on upper extremities muscle activation on level of motor function in stroke patients

Kyung Min Lim, Jinhwa Jung, and Sunhwa Shim.

A Telemyo 2400T was used to measure upper extremity muscle activity.

Published in the *The Journal of Physical Therapy Science*.

342)

High Risk of Muscle Strain in the Rectus Femoris Muscle: Anatomical and Physiological Analysis

TOSHIMASA KUMAZAKI and TATSUO SAKAI.

A Telemyo 2400T was used to measure lower extremity muscle activity.

Published in the *Juntendo Medical Journal*.

343)

Activation of back and lower limb muscles during squat exercises with different trunk flexion

Tae-Sik Lee, Min-Young Song, and Yu-Jeong Kwon.

A Telemyo DTS was used to measure stabilizer muscle activity.
Published in the *Journal of Physical Therapy Science*.

344)

Ergonomic evaluation of an alternative tool for cake decorating

C. Harris-Adamson, B. Chen, I. Janowitz, and D.M. Rempel.

A Telemyo 2400T was used to measure hand muscle activity.

Published in the *International Journal of Industrial Ergonomics*.

345)

Effects of button position on a soft keyboard: Muscle activity, touch time, and discomfort in two-thumb text entry

Joonho Chang, Bori Choi, Amir Tjolleng, and Kihyo Jung.

A Telemyo DTS was used to measure forearm and hand muscle activity.

Published in the journal *Applied Ergonomics*

346)

Dual-task does not increase slip and fall risk in healthy young and older adults during walking

Rahul Soangra.

A Telemyo DTS was used in conjunction with **Bertec** force plates and **Qualysis** motion capture.

Published in the journal *Hindawi*.

347)

Changes in lower limb muscle activity after walking on a split-belt treadmill in individuals post-stroke

Martina Betschart, S  l  na Lauzi  re, Carole Mi  ville, Bradford J. McFadyen, and Sylvie Nadeau.

A Noraxon Telemyo DTS was used in conjunction with **Bertec** force plate instrumented force plate and **Optotrak** motion capture system.

348)

Quantifying knee mechanics during balance training exercises

Lauren C. Benson, Thomas G. Almonroeder, and Kristian M. O'Connor.

A Telemyo DTS was used in conjunction with a **Motion Analysis** motion capture system and **Bertec** force plates.

Published in the journal *Human Movement Science*.

349)

The influence of a semi-reclined seated posture on head and neck kinematics and muscle activity while reading a tablet computer

EC Douglas and KM Gallagher.

A **TeleMyo DTS** was used in conjunction with a **Qualysis** motion capture system for this ergonomics study.

Published in the journal *Applied Ergonomics*.

350)

EMG-Based Decoding of Grasp Gestures in Reaching-to-Grasping Motions

I. Batzianoulis, S. El-Khoury, E. Pirondini, M. Coscia, S. Micerab, and A. Billarda.

A Telemyo DTS was used to measure upper extremity muscle activity.

Published in the journal *Robotics and Autonomous Systems*.

351)

Exercise in myasthenia gravis: a feasibility study of aerobic and resistance training

Martin Amadeus Rahbek, Erik Elgaard Mikkelsen, Kristian Overgaard, Lotte Vinge, Henning Andersen, and Ulrik Dalgas.

A Telemyo DTS was used to measure upper extremity muscle activity.

Published in the journal *Muscle and Nerve*.

352)

Slower but not faster unilateral fatiguing knee extensions alter contralateral limb performance without impairment of maximal torque output

Olaf Prieske, Saied J. Aboodarda, José A. Benitez Sierra, David G. Behm, and Urs Granacher.

A Telemyo 2400 was used to measure muscle fatigue.

Published in the *European Journal of Applied Physiology*.

353)

Female Age Related Differences in Biomechanics and Muscle Activity during Descents on the Outstretched Arms

Lauren Jane Lattimer, Joel Lanovaz, Jon Farthing, Stéphanie Madill, Soo Kim, Stephen Robinovitch, and Cathy Arnold.

A Telemyo 2400 was used to measure upper extremity muscle activity.

Published in the *Journal of Aging and Physical Activity*

355)

Effects of Unstable Versus Stable Free Weights on Surface EMG of Shoulder Musculature in Males

Jared A. Azar.

A Telemyo DTS was used to measure upper extremity muscle activity.

Published by the *Ohio University Theses Collection*.

356)

Change of Muscle Activity as Well as Kinematic and Kinetic Parameters during Headers after Core Muscle Fatigue

Stephan Becker, Michael Fröhlich, Jens Kelm, and Oliver Ludwig.

A Telemyo 2400 was used to measure EMG and kinematic data.

Published in the journal *Sports*.

357)

No Influence of Transcutaneous Electrical Nerve Stimulation on Exercised-Induced Pain and 5-Km Cycling Time-Trial Performance

Andrew Hibbert, François Billaut, Matthew Varley, and Remco Polman.

A Telemyo system was used to measure lower extremity muscle activity.

Published in the journal *Frontiers in Physiology*.

358)

MUSCLE ACTIVATION PATTERN OF THE LOWER LIMBS IN A FEMALE RACE WALKER – CASE STUDY

Wanda Forczek, Waclaw Mirek, and Yuri P. Ivanenko.

A Telemyo 900 was used to measure lower extremity muscle activity.

Published in the *Journal of Kinesiology and Exercise Sciences*.

359)

Chronic patellofemoral pain syndrome: alternatives for cases of therapy resistance

F. Schneider, K. Labs, and S. Wagner.

A Telemyo EMG system was used to measure lower extremity muscle activity.

Published in the journal *Knee Surgery, Sports Trauma, and Arthroscopy*.

360)

Attentional focusing instructions influence quadriceps activity characteristics but not force production during isokinetic knee extensions

David C. Marchant and Matt Greig.

A Telemyo 2400 was used to measure lower extremity muscle activity.

Published in the journal *Human Movement Science*.

362)

**Walking Normally vs. Sideways in Simulated, Simple Assembly Operations:
Analysis of Muscular Strain in the Legs**

Jurij Wakula, Dorothee Mücklich, and Ralph Bruder.

A Telemyo 2400 was used to measure lower extremity muscle activity.

Published in the journal *Advances in Ergonomic Design of Systems, Products and Processes*.

363)

**In vivo fascicle behavior of the flexor hallucis longus muscle at different walking
speeds**

A. Péter, A. Hegyi, T. Finni, and N. J. Cronin.

A Noraxon EMG system was used to measure lower extremity muscle activity.

Published in the *Scandinavian Journal of Medicine & Science in Sports*.

365)

**Joint Angle Depending Representation of Maximum Forces in Digital Human
Models: Investigating Multivariate Joint-Torque Polynomials for Elbow Flexion and
Elbow Extension**

André Kaiser, Michael Spitzhirm, and Angelika C. Bullinger.

A Noraxon system was used to measure force and kinematic information.

Published in the journal *Advances in Ergonomic Design of Systems, Products and Processes*.

366)

**Joint Angle Depending Representation of Maximum Forces in Digital Human
Models: Investigating Multivariate Joint-Torque Polynomials for Elbow Flexion and
Elbow Extension**

Emilia Irzmańska and Tomasz Tokarski.

A Noraxon Telemyo DTS was used to measure upper extremity muscle activity.

Published in the journal *Applied Ergonomics*.

367)

Periodization effects during short-term resistance training with equated exercise variables in females

Thiemo Pelzer, Boris Ullrich, and Mark Pfeiffer.

A Telemyo 2400 was used to measure lower extremity muscle activity.

Published in the *European Journal of Applied Physiology*.

368)

Age-related differences in muscle co-activation during locomotion and their relationship with gait speed: a pilot study

Hwang-Jae Lee, Won Hyuk Chang, Byung-Ok Choi, Gyu-Ha Ryu³ and Yun-Hee Kim.

A **Noraxon** Telemyo DTS was used in conjunction with a **Motion Analysis Corp** motion capture system to measure gait parameters.

Published in the journal *BMC Geriatrics*.

369)

Valsalva versus straining: There is a distinct difference in resulting bladder neck and puborectalis muscle position

Kaven Baessler, Melanie Metz, and Baerbel Junginger.

A Noraxon EMG system was synchronized with an ultrasound device to collect simultaneous EMG and ultrasound images.

Published in the journal *Neurology and Urodynamics*.

370)

REDUCTION OF MAXIMUM EFFORT LEVEL OF LUMBAR MUSCLE AMONG WORKERS IN AEROSPACE INDUSTRY

Seri Rahayu KAMAT , Norhidayah HASHIM, Isa HALIM, Mohd Shahrizan OTHMAN, and Mohammad Firdaus ANI.

A Telemyo 2400 G2 was used to measure back muscle activation.

Published in the *Malaysian Journal of Human Factors and Ergonomics*.

371)

Effectiveness of using wearable vibration therapy to alleviate muscle soreness

Darryl J. Cochrane.

A Telemyo DTS was used to measure arm muscle activity.

Published in the *European Journal of Applied Physiology*.

372)

The Effect of ThermaCare Heat Wraps on Balance and Mobility in Seniors with Impaired Gait – A Cross Over Study

Jerrold S. Petrofsky, Michael S. Laymon, Iman Akef Khowailed, and Haneul Lee.

A Telemyo EMG system was used in conjunction with a pressure instrumented treadmill to measure gait parameters.

Published in the *Journal of Physiotherapy & Physical Rehabilitation*.

373)

Individual muscle contributions to ground reaction and to joint contact, ligament and bone forces during normal gait

F. Moissenet, L. Chèze, and R. Dumas.

A **Noraxon** DTS EMG system was used in conjunction with two **AMTI** force plates and **Qualysis** motion capture system.

Published in the journal *Multibody System Dynamics*.

376)

Performance of a concurrent cognitive task modifies pre- and post-perturbation-evoked cortical activity

George Mochizukia , Shaun G. Boe, Amanda Marlind, and William E. McIlroy.

A **Noraxon** EMG system was used in conjunction with an **AMTI** force plate.

Published in the journal *Neuroscience*.

377)

Kissing knees – factors behind the attraction. Knee abduction in individuals with anterior cruciate ligament injury.

Anna Cronstrom.

A Desktop DTS was used to measure lower extremity activity affecting knee abduction.

A Dissertation published by *Lund University*.

378)

Differences in the activation and co-activation ratios of the four subdivisions of trapezius between genders following a computer typing task

Kimberly A. Szucs and Megan Molnar.

A Telemyo 900 was used to measure thoracic muscle activity.

Published in the journal *Human Movement Science*.

379)

The Impact of Crossramp Angle and Elliptical Path Trajectory on Lower Extremity Muscle Activation

Matthew M. Thorsen

A Telemyo DTS was used to measure both EMG and 2D goniometry.

Published in the *WWU Masters Thesis Collection*.

380)

Effect of the Abdominal Drawing-in Maneuver on the Scapular Stabilizer Muscle Activities and Scapular Winging During Push-up Plus Exercise in Subjects With Scapular Winging

Da-eun Kim, A-reum Shin, Ji-hyun Lee, and Heon-seock Cynn.

A Telemyo DTS was used to measure upper extremity muscle activity.

Published in the journal *Physical Therapy*.

381)

Comparison of Biomechanical Characteristics for the Skill Level in Cycle Pedaling

Geun Hyuk Lee, Jai Jeong Kim, Sung Sun Kang, Ah Reum Hong, and Jae Moo So.

A Telemyo 2400T was used to measure lower extremity muscle activity.

Published in the *Korean Journal of Sports Biomechanics*.

382)

Biomechanical Analysis of Injury Factor According to the Change of Direction After Single-leg Landing

Jong-Bin Kim and Sang-Kyoon Park.

A **Noraxon** accelerometer was used in conjunction with an **AMTI** force plate and **Qualysis** motion capture system.

Published in the *Korean Journal of Sports Biomechanics*.

383)

Does the Use of Sling Influence Scapular Stabilizers' Activity During Push Up Plus Exercises in Subjects With Scapular Dyskinesis?

Dong-hun Lee, Heon-seock Cynn, Tae-lim Yoon, and Ji-hyun Lee.

The Noraxon MRXP research software suite was used to measure upper extremity muscle activity.

Published in the journal *Physical Therapy*.

384)

The effects of Pilates breathing trainings on trunk muscle activation in healthy female subjects: a prospective study

Sung-Tae Kim and Joon-Hee Lee.

A Telemyo DTS was used to measure upper extremity muscle activity.

Published in the *Journal of Physical Therapy Science*.

385)

Changes in neck and upper trunk muscle activities according to the angle of movement of the neck in subjects with forward head posture

SongHee Cheon and SoHyun Park.

A Telemyo 2400 was used to measure neck and upper trunk muscle activity.

Published in the *Journal of Physical Therapy Science*.

386)

Influence of gender on muscle fatigue during dynamic knee contractions

Chiharu FUJISAWA, Akira TAMAKI, Eiji YAMADA, and Hirofumi MATSUOKA.

A Telemyo 2400 G2 was used to measure lower extremity muscle fatigue.

Published in the journal *J-STAGE*.

387)

SELF-REPORTED WALKING DIFFICULTY: A SUB-GROUP FOR IDENTIFYING DIFFERENCES IN GAIT MECHANICS IN PATIENTS WITH KNEE OSTEOARTHRITIS

Annalisa Na.

A **MyoMotion** sensor based motion capture system was used in conjunction with **AMTI** force plates, **Motion Builder** EMG, and **Qualysis** camera based motion capture system.

Published by *ProQuestion*.

388)

Influence of sustained submaximal clenching fatigue test on electromyographic activity and maximum voluntary bite forces in healthy subjects and patients with temporomandibular disorders

L. Xu, S. Fan, B. Cai, Z. Fang, and X Jiang.

A MyoSystem 1400A was used to measure muscle activity of the mandible.

Published in the *Journal of Oral Rehabilitation*.

389)

Effects of upper-body sprint-interval training on strength and endurance capacities in female cross-country skiers

Kristine Vandbakk, Boye Welde, Andrea Hovstein Kruken, Julia Baumgart, Gertjan Ettema, Trine Karlsen, and Øyvind Sandbakk.

A Noraxon force load cell was used to estimate friction of the pull down apparatus.
Published in the journal *PLOS ONE*.

390)

Increased Systolic Blood Pressure Driven Skeletal Muscle Activation Following Stroke: A Causality Study

Ajay K Verma, Da Xu, Nandu Goswami, Amanmeet Garg, Franz Fazekas, Andreas Rössler, Andrew Blaber, Reza Fazel-Rezai, and Kouhyar Tavakolian.

A MyoSystem 1200 was used to measure muscle activity during a sit-to-stand test.
Published in the journal *Computing in Cardiology*.

391)

Determining the Readiness of Recreational Ultra-Marathon Runners

Ali Arastu, Cristine Agresta, Jeffrey Housner, and Jessica D. Zandler.

MyoMotion, **MyoPressure** (Quasar treadmill), and **MyoMuscle** systems were used to collect kinematic and pressure distribution data.

Published in the *2017 AMSSM 26th Annual Meeting Research Oral Poster Presentations*.