

## RELIABILITY, VALIDITY AND NORMATIVE DATA OF ACTIVE AND PASSIVE HAMSTRING FUNCTION USING VIMOVE SENSOR TECHNOLOGY

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**Question:** Is the Askling H-test reliable and accurate when assessed with ViMove sensor technology and if so what are normative scores?

**Design:** Intra-rater reliability, validity and normative data study.

**Participants:** 74 community AFL players and 9 healthy normals.

**Outcome Measures:** 11 participants were tested on two occasions a week apart to determine intra-rater reliability using ViMove sensor technology. Construct validity was assessed in nine participants using both ViMove sensor technology and VICON movement analysis. A further 63 participants (community AFL players) were tested to determine normative data.

**Results:** Reliability: Paired t-tests revealed no significant differences between the two testing sessions ( $p > 0.5$ ). Intra-class correlation coefficients ranged from .88 to .98. Construct validity: Vicon testing and ViMove testing were highly correlated ( $p < 0.01$ ). No significant differences between the two measures for active and passive straight leg raise and peak movement velocity were identified ( $p > 0.7$ ). Normative data: Active flexibility for the H-test averaged (SD) 100(11) degrees and was greater than passive flexibility 79(13) degrees. No significant differences were observed between the right and left legs ( $p > 0.05$ ).

**Conclusion:** This study demonstrates that ViMove sensor technology is a reliable and accurate way to assess the Askling H-test and provides normative data of community AFL players.

### Key Practice Points:

- ViMove sensor technology provides a quick, simple and reliable objective measure of the Askling's H-test.
- The reliability and normative data are comparable to previously published literature.
- Future research should evaluate populations with hamstring injuries and the usefulness of ViMove sensor technologies in predicting readiness to return to sport.

## A CLINICAL AUDIT AND SERVICE EVALUATION OF A NEW ROLE IN PRIMARY CARE: MUSCULOSKELETAL PRACTITIONER

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**Question:** With growing patient and financial demands on Primary Care, and the need for relevant referral into secondary care, the musculoskeletal (MSK) care pathway was identified as an area that could be streamlined to address these issues. Can a new role be created to benefit the patient, GP and secondary care?

**Design:** The MSK practitioner role was created to provide patients direct access to a highly specialised service for the assessment, diagnosis and triage for MSK problems.

**Intervention:** This evaluates the role as it was introduced into a general practice.

**Outcome Measures:** Data collection over the first three months of service implementation focusing on capacity, source of referral, assessment outcome and patient satisfaction.

**Participants:** All MSK patients at the general practice.

**Results:** Direct referral and General Practitioner use of the service increased. 81% of all patients seen had no general Practitioner contact, creating 168 available consultation spaces over the three month period. Referral into secondary care had a 99% conversion rate. A Patient satisfaction survey stated 90% excellent for the overall service.

**Conclusion:** The MSK practitioner role has provided an effective, efficient and a potentially financially viable role within primary care. It addresses both primary and secondary care service requirements, and provision of an easily accessible, highly specialised MSK service for patients.

### Key Practice Points:

- The new role creates capacity for GPs to focus on medical conditions
- The role reduces referral into secondary care
- Patients were very satisfied with direct access into a specialized MSK service.

## NEUROMAGNETIC AND LOW LEVEL LASER TREATMENT OF A TWO YEAR OLD COLT FOLLOWING EYE SURGERY TO DEPENDANT OEDEMA

Hermans D

A two year old colt was referred to Animal Physiotherapy following eye surgery in November 2014. The following hours post op presented with dependant oedema of near forefoot lameness of the thoroughbred colt. The horse was sedated for pain relief and had significant oedema of near fore leg. Treatment consisted of Low level Laser and Neuromagnetic devices over the next three days. Resulting in the horse not being euthanized returning to training as a racing thoroughbred.

## REHABILITATION AT THE END OF LIFE

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Working with people as they approach the end of their life can prove daunting to therapists. Some of the concerns that have been raised include: the dilemma of realistic goal setting while still maintaining hope; managing the expectations of patients and their families and the subtleties of adapting treatment sessions when a patient's medical condition deteriorates. This presentation aims to address these concerns while exploring the role of physiotherapy in Palliative Care. It will outline some of the challenges and opportunities of working with this particular patient group. Case studies will be utilised to provide examples of how physiotherapy interventions can positively impact a patient's physical, spiritual and psychosocial wellbeing.

### Key Practice Points:

- Goal setting within the context of Palliative Care
- Maintaining realistic hope; Flexible treatment progression/ regression
- Development of self-care strategies

## SPORTS AQUATIC PHYSIOTHERAPY: PRACTICAL OPTIONS FOR EARLY MOBILITY AND LOW LOAD EXERCISE THROUGH TO USING PLYOMETRICS IN REHABILITATION

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Aquatic physiotherapy with athletes covers a wide range of acute through to chronic management options. There is a lack of evidence in the literature related to acute rehabilitation of joint sprains and haematomas. However, there are effective outcomes due to hydrostatic pressure and lower load functional movement options. Early mobility can be addressed with slow dynamic movement in water which is may be of more value than static stretching. Follow up after aquatic sessions to maximise any improvements in swelling can include finishing with cold immersion as well as compression. Aquatic rehabilitation can involve plyometric options with skipping, bounding, landing and jogging prior to return to running on land. Aquatic plyometric training may offer similar loading in the push off phase with less joint impact in the landing phase. This has benefits for the lower limb joint with an effusion, pain or poor control with loading on land. Spinal rehabilitation offers a different challenge and many athletes have difficulty adapting to slower, efficient movement in water. Over recruitment of trunk muscles can be monitored to limit maladaptive stabilising strategies in water and basic level or initial stabilising is best completed on land. Hand-on mobilising of the thoracic spine can be valuable for athletes with heavy weights programs, thoracic stiffness or chronic shoulder pain. Functional carryover to improved performance on land is the main goal of aquatic physiotherapy and outcomes can be assessed poolside pre and post treatment or following a number of sessions. Individual preferences for the type of aquatic intervention, time and temperature immersed also plays a role.

### Key Practice Points:

- Despite limited research evidence acute sprains, strains and haematomas can be effectively managed in water
- Aquatic plyometrics reduces joint impact
- Close monitoring of muscle activity with aquatic exercise is required to limit over recruitment