

**INSTRUCTIONS FOR ABSTRACT SUBMISSION**  
**(Deadline for Abstract Submissions is November 23<sup>rd</sup>, 2009)**

**ACL Research Retreat V**  
**March 25<sup>th</sup> – 27<sup>th</sup>, 2010**  
**Greensboro, North Carolina**

**MEETING DETAILS:**

The format will feature presentations by well known experts in the field, as well as 15-minute podium presentations and poster presentations of research relating to non-contact ACL injury epidemiology, risk factor identification, and prevention. Significant time will be provided for group discussion following each keynote and each group of podium presentations. At the conclusion of the meeting our goal will be to revisit and update the consensus statement from the 2008 research retreat and set sights on future research directions based on progress in the field. All proceedings will be published in the *Journal of Athletic Training*.

**CONTENT:**

All abstracts must be research-based and be related to non-contact ACL injury. Topics relating to structural, hormonal, or neuromuscular/biomechanical, and covering areas of epidemiology, screening, prevention and rehabilitation would all be appropriate.

*ABSTRACTS RECENTLY PRESENTED ELSEWHERE (WITHIN THE PREVIOUS YEAR) MAY BE SUBMITTED FOR REVIEW.* (Please indicate at the bottom of the abstract where the abstract was previously presented – If the abstract is accepted, it will be the responsibility of the Author to seek and obtain permission to reprint the abstract in the *Journal of Athletic Training*) – See below example-  
“Previously presented at the 58th Annual National Athletic Trainers’ Annual Meeting and Clinical Symposia: Ambegaonkar JP, Shultz SJ, Perrin DH, Schmitz RJ, Ackerman T, Schulz MR. Ground reaction forces but not knee muscle activation, or sagittal knee joint stiffness differ between female dancers and basketball players during drop jumps. June 27–30, 2007; Anaheim, CA”

**FORMAT:**

**Please see next page for full instructions.**

**SUBMISSION:**

An original and one blinded copy of the abstract (authors and affiliations removed) with ‘First author’s last name - ACL Retreat Abstract’ (eg. Shultz – ACL Retreat Abstract) in the subject line should be emailed to: [anrl@uncg.edu](mailto:anrl@uncg.edu).

Abstracts are due November 23<sup>rd</sup>, 2009. Abstracts will be reviewed for both content and scientific merit, and will be considered for both 15-minute podium and poster presentation formats. Notification of acceptance and presentation format will be given to authors no later than Dec 20, 2009. Please include your mailing and email address along with your phone and fax numbers in your email communication. If you do not wish your abstract to be considered as an oral presentation (i.e. considered as poster only), please also designate this in your email correspondence.

**For more information regarding abstract submission and meeting information, please contact:**

Sandra Shultz PhD ATC  
336-334-3027  
[sjshultz@uncg.edu](mailto:sjshultz@uncg.edu)

Complete information on the Meeting can be found online at:

<http://www.uncg.edu/ess/anrl/accretreatv.html>

## ***Instructions for Preparation of Abstracts*** **(DEADLINE FOR ABSTRACT SUBMISSION IS November 23<sup>rd</sup>, 2009)**

Please read all instructions before preparing and submitting the abstract. An individual may submit only one abstract as the primary (presenting) author but may submit unlimited abstracts as a secondary author. All abstracts will undergo blind review. All presentations should be of original work. However, highly pertinent studies previously presented elsewhere within a year of the date of the meeting will also be considered.

Prepare your abstract in accordance with the following instructions. Abstracts that do not comply with this format will be returned.

1. Top, bottom, right, and left margins of the body of the abstract (in a WORD file) should be set at 1" using the standard 8.5" x 11" format. Use either Arial or Helvetica 12pt. font with single spacing. Provide the title of the paper or project starting at the top left margin.
2. On the next line, indent 3 spaces and provide the names of all authors, with the author who will make the presentation listed first. Enter the last name, then initials (without periods), followed by a comma, and continue the same format for all secondary authors (if any), ending with a colon.
3. On the same line following the colon, indicate the name of the institution (including the city and state) where the research was conducted. If primary author is not at the institution where the work was completed place an \* after their name and following the institution where the research was conducted the primary author can indicate their present institution (including the city and state). For collaborative projects where portions of the project were conducted at different institutions, list all authors as described above (#3), then list institutional affiliations using the following consecutive symbols (\*, †, ‡, §, ||, ¶, #, \*\*, etc.) See example below or click <http://www.uncg.edu/ess/anrl/sample.doc> for formatted .doc file
4. Double space and begin entering the body of the abstract flush left in a single paragraph with no indentions. **The text of the body must be structured** (with the headings as indicated in the various formats below). Do not justify the right margin. Do not include tables or figures. **The body of the abstract is limited to 450 words.** A word count generated by MS Word must be included at the bottom of the abstract. The word count should include the body of the abstract and structured headings.
5. **NOTE:** If this abstract was previous presented or published elsewhere, please add an acknowledgement at the bottom of the abstract noting meeting, location and date. Example: "Previously presented at the 58<sup>th</sup> Annual National Athletic Trainers' Annual Meeting and Clinical Symposia, Anaheim, CA, June 2007" (If abstract is accepted, it will be the responsibility of the author to obtain permission for the abstract to be reprinted in the *Journal of Athletic Training*.)
6. The required formats for the structured abstract are as follows. For further clarification, authors should consult the AMA Manual of Style 9<sup>th</sup> edition.

### **Format For Original Research Abstracts** (See sample abstract below)

**Context:** Write a sentence or two summarizing the rationale for the study, providing a reason for the study question and/or uniqueness of study. **Objective:** State the precise objective(s) or question(s) addressed in the report, including a *priori* hypotheses if applicable. **Design:** Describe the overall study design of the project reported (e.g., randomized controlled trial, case-control, crossover trial, cohort or cross-sectional). **Setting:** Describe the environment in which the study was conducted to help readers understand the transferability of the findings, (e.g., patient clinic, research laboratory or field). **Patients or Other Participants:** Describe the underlying target population, selection procedures (e.g., population based sample, volunteer sample or convenience sample) and important aspects of the final subject pool (e.g., number, average age, weight, height and measures of variance, years of experience or gender). Appropriate sample size should be evident. **Interventions:** Interventions are the independent variables in the study. Describe the essential pieces of the experimental methods, types of materials, measurements and instrumentation used, and data analysis procedures and statistical tests employed. Provide validity and reliability information on novel instrumentation. For survey research, describe the essential pieces of the experimental methods, the mode of survey administration (e.g., in-person interview, telephone, self-administered, online or computer-assisted), details of the survey development (formative research or pre-testing for new instruments), execution and data collection process, and instruments utilized. Provide validity and reliability information for all new instruments. **Main Outcome Measures:** Clearly identify primary or critical dependent variables that support the primary objective(s) of the study. Describe how any data was manipulated (e.g. scoring process for scaled instruments or categorization of variables). Indicate the statistical analysis employed to answer the primary research objective(s). **Results:** The main results of the study should be given. Comparative reports must include descriptive data (e.g., proportions, means, rates, odds ratios or correlations), accompanying measures of dispersion (e.g., ranges, standard deviations or confidence intervals) and inferential statistical data. Results should be accompanied by the exact level of statistical significance. The *P* value should not exceed 3 digits to the right of decimal. When the exact significance is below  $P < .001$ , the exact significance should be reported as  $P < .001$ . **Conclusions:** Summarize or emphasize the new and important findings of the study. The conclusion must be consistent with the study objectives and results as reported and should be no more than three to four sentences. If possible, relate implications of the findings for clinical practice. **Word Count:** Limited to 450 words including headings.

See example below or click <http://www.uncq.edu/ess/anrl/sample.doc> for formatted .doc file

### **Format For Meta-Analysis Research Abstracts**

**Context:** Write a sentence or two summarizing the rationale for the study, providing a reason for the study question. **Objective:** State the precise objective(s) or question(s) addressed in the report, including a *priori* hypotheses if applicable. **Data Sources:** Identify how relevant research papers were identified - include databases and timeframe, key words and search limits. **Study Selection:** Describe the processes through which studies were selected for inclusion for further analysis. **Data Extraction:** Identify the number of investigators, the descriptive and measurement data obtained and if and how the quality of study methods was evaluated. **Data Synthesis:** Describe how the data were organized, the statistical procedures applied (during assessment of heterogeneity) and the results (e.g., effect sizes, odds ratios and confidence intervals) of the analysis. **Conclusions:** Summarize or emphasize the new and important findings of the study and relate implications of the findings for future research and/or for clinical practice and offer an indication as to the strength of the evidence provided. The statement of your findings must be consistent with the results as reported. **Word Count:** Limited to 450 words including headings.

## **Influence of Static Hip and Pelvis Alignment on Hip Strength**

Nguyen A, Leonard MD, Shultz SJ: University of North Carolina at Greensboro; Greensboro, NC.

**Context:** The posteriolateral hip musculature plays an important role in controlling alignment of the lower extremity during dynamic activity. Increased hip anteversion (HA) and anterior pelvic angle (PA) may potentially influence the moment arms of the hip musculature, reducing their muscular efficiency and force producing capabilities. This in turn may lead to dynamic malalignments that are known to be predictive of lower extremity injury. **Objective:** To determine if greater HA and anterior PA predict decreased hip abduction, external rotation, and extension strength. **Design:** Descriptive cohort study design. **Setting:** Controlled, laboratory setting. **Patients or Other Participants:** Fifty (22M, 28F) healthy collegiate aged participants ( $23.4 \pm 3.5$  yrs,  $168 \pm 12.3$  cm,  $71.6 \pm 17.5$  kg) with no current history of injury to the lower extremity, or any previous history that would affect the alignment of the lower extremity. **Interventions:** All measures were performed on the dominant leg (stance leg when kicking a ball). HA was measured using the Craig's test while PA was measured in standing using an inclinometer. Hip abduction (standing, hip abducted  $5^\circ$ ), external rotation (semi-reclined, hip flexed  $40^\circ$ , knee flexed  $90^\circ$ ) and extension (supine, hip flexed  $90^\circ$ ) torques were measured during maximal isometric voluntary contractions (MVICs) with an isokinetic dynamometer. The average of 3 measurements for each alignment characteristic and the highest peak torque of 3 trials for each strength measure were used for analysis. Three step-wise, multiple linear regressions determined the extent to which HA and PA predicted each hip strength measure. **Main Outcome Measures:** HA and PA were recorded to the nearest degree while hip abduction, external rotation and extension torques were measured in Newton-meters and normalized to body weight (Nm/kg). **Results:** Means  $\pm$  SDs for HA and PA were  $10.7^\circ \pm 4.9^\circ$  and  $11.2^\circ \pm 4.7^\circ$ , respectively. Normalized hip abduction, external rotation and extension torques were  $.68 \pm .20$  Nm/kg,  $.71 \pm .17$  Nm/kg and  $3.28 \pm .10$  Nm/kg, respectively. HA had the highest zero order correlation with hip external rotation ( $r = -.427$ ), extension ( $r = -.327$ ) and abduction ( $r = -.177$ ) torques and was a significant predictor of external rotation ( $R^2 = .182$ ,  $p = .002$ ) and extension ( $R^2 = .107$ ,  $P = .02$ ) torques. HA was not a significant predictor of abduction torque ( $R^2 = .031$ ,  $P = .218$ ). PA was not correlated with external rotation ( $r = .043$ ), extension ( $r = .037$ ) or abduction ( $r = .150$ ) torques, nor did it contribute significantly to the prediction model once HA was accounted for. **Conclusions:** Participants who had greater HA had decreased hip external rotation and extension strength. Given the anatomical insertion of the gluteus maximus on the greater trochanter, an increase in HA may decrease the internal moment arm of the muscle resulting in decreased strength of external rotation and extension, primary actions of the gluteus maximus. Further work is needed to determine if this strength reduction is sufficient to adversely affect dynamic hip control and alignment during functional activities. **Word Count:** 450