the middle 95.5 m portion of a 365 m swim at a self-selected pace completed at the beginning of each workout. Physiological markers of stress, salivary cortisol and alpha-amylase, were collected daily upon waking. One-way repeated measures ANOVA were used to assess changes in affect, cortisol, and alpha-amylase levels, stroke rate, and speed.

RESULTS: By the midpoint of training, pleasure-displeasure affect and sleepiness-tiredness affect were reduced by 14% (p < 0.01, ES = 0.98) and 16% (p < 0.01, ES = 0.84), respectively. Self-selected swimming speed was decreased by 4.0% (p < 0.001, ES = 0.66) by the midpoint of training. This reduction in speed was not due to changes in stroke rate which remained unchanged (p < 0.78, ES = 0.2) suggesting that changes in stroke length were responsible. Neither salivary cortisol (p = 0.80, ES = 0.37) or alpha-amylase (p = 0.75, ES = 0.07) changed significantly by the midpoint of training. While pleasure-displeasure (p = 0.78, ES = 0.12) and sleepiness-tiredness (p = 0.78, ES = 0.13) affect recovered by the end of the training period, self-selected swimming speed did not (p = 0.62, ES = 0.27). DISCUSSION: An isolated period of substantially increased training volume resulted as a suppression of both dimensions of affect, but not physiological markers of stress. The suppression in affect correlates with a slower self-selected swimming speed at the midpoint of training. This suggests that over-training has negative consequences that appear by the middle of training, but that swimmers recover from these effects by the end of over-training. The athletes were previously aware of the substantial increase in volume associated with over-training and that this period would be followed by reductions in normal training volume. This suggests that the swimmers’ expectations could explain the rebound of affective responses to pre-training levels. The lack of correlation between psychological markers of stress suggests that further research should examine the relationship of these measures.

1548 Board #187 9:30 AM - 10:30 AM
Mood States of NCAA Division II Female Soccer Athletes Over Seasonal Play
Nicole M. De Jongh, Michael C. Meyers, FACSM, Breede G. Goodwin, C. Matthew Laurenz, Jr., Robert Lauffer, Chad Webb. Texas A&M University, College Station, TX. (Sponsor: Michael Meyers, FACSM)
Email: mldjng@gmail.com

To maintain consistent performance from match-to-match, soccer requires a stable disposition. Most prior studies, however, have focused on single-observation descriptive investigations to parcelify psychological indices deemed essential for success. With soccer becoming one of the fastest growing sports in the United States, limited research efforts have been directed toward quantifying psychological states throughout a competitive season.

PURPOSE: To quantify the mood state changes of NCAA Division II female soccer athletes over seasonal play.

METHODS: Following written informed consent, 32 female NCAA Division II athletes from a top 20 program (Mean ±SD: age = 18.8 ± 1.20 yr, complete Mood Profile of Mood States (MPMS; McNair et al., 1971); ten mood (TEN), depression (DEF), anger (ANG), vigor (Vig), fatigue (FAT), confusion (CON), total mood disturbance (TMD); weekly over three consecutive seasons. Data were grouped by position (defense, forward, goalkeeper, midfielder), classification (freshman, sophomore, junior, senior), and season (Fall, Fall; Spring). Statistical significance was determined at <0.05 level.

RESULTS: Repeated measures MANOVAs (Wilk’s Lambda) indicated no significant main effects across position by time (F = 0.404, p = 0.874; n = 0.060), classification by time (F = 0.396, p = 0.915; n = 0.078), or season by time (F = 0.207, p = 0.930; n = 0.05) demonstrating that mood states were neither affected by an athlete’s position, classification, or season. Although not statistically significant, negative mood states increased concurrently with match losses throughout seasonal play.

CONCLUSION: NCAA Division II female soccer athletes exhibited profound but insignificant shifts in mood states during seasonal play. The negative shifts in mood states can be attributed to the affect of critical losses during conference and post-conference play, the strength of opponents, and other noncompetitive stressors such as problematic interpersonal relationships and personal injury. Future study over seasonal play is warranted to delineate the optimal level of mood states required for successful performance, from potential stressors reifying a maladaptive mindset.

1549 Board #188 10:30 AM - 11:30 AM
Salivary Cortisol and Affective Changes During a Swimming Training Program
Khaleel S. Kame1, Paddy Ekelsalas, FACSM, Rick L. Sharp. Athabasca University, Alberta, Canada; Egmont State University, Annapolis, MD.

Training overload is intended to improve performance but, in certain individuals, may result in the overtraining syndrome, which is characterized by a variety of psychological and physiological symptoms and even performance decrements.

PURPOSE: To examine the changes in salivary cortisol (C), Energetic arousal (EA) and Tense arousal (TA) during a structured competitive swimming training program.

METHODS: 21 male college swimmers (age = 20 ± 2.1 yr, height = 183 ± 5.5 cm, body mass = 79 ± 6.7 kg) were tested prior to the start of a 12-week competitive swimming training program (NCAA Division I) and at the end of week 4, 8, and 12. Saliva samples were collected at rest in the morning upon waking, and analyzed for C by radioimmunoassay. The Activation Deactivation Adjective Check List (ADACL; Tariiez, 1980; Nickell et al., 2000), a short (20-item) self-report measure of the bipolar affective dimensions of EA (ranging from Energy to Tiredness) and TA (ranging from Tension to Calmness), was also completed on test days.

RESULTS: Changes in EA during the course of the program were significant, with 4 (F(1, 14) = 14.65, P < 0.01). This was due to both a decrease in Energy and an increase in Tiredness. At week 12, Energy was significantly lower and Tiredness was significantly higher than at the onset of the program. Changes in TA and C were not significant. At week 12, when EA was at its lowest and Tiredness was at its highest, EA exhibited a negative (r = -0.47, P < 0.05) and Tiredness exhibited a positive (r = 0.50, P < 0.05) correlation with C.

CONCLUSIONS: Self-reports of affect, particularly those related to perceived energy and tiredness, might be useful as convenient, non-invasive indices of training stress. The correlation between EA and C extends the previous finding by O’Connor et al (1989) of a significant correlation between C and depression during overtraining (r = -0.50, P < 0.05).

1550 Board #189 11:30 AM - 12:30 PM
The Effect of Rival Mood on Equine Dressage Performance
Inga A. Wolframm1, Jerry Shearn2, Dominic Middlewhite3. 1University of West of England, Hartpury, United Kingdom. 2University of Leicester, De Montfort University, United Kingdom. (Sponsor: Ralph Benecke, FACSM)
Email: inga.wolframm@hartpury.ac.uk

Changes in the mood state of an individual athlete are known to have effects upon their subsequent exercise performance. Various studies have described the relationship between mood state and performance for a range of athletic activities. Such a relationship has yet to be investigated in equestrian sport, which is surprising given that emotional responses are a potentially critical factor in the performance of certain disciplines like dressage.

PURPOSE: This was a pilot study designed to compare a dressage riders’ mood state immediately before a competition against their general mood state in the preceding week. Possible links between mood response and competitive achievement were also investigated.

METHODS: Ten dressage riders competing at an international dressage competition were asked to complete a "right now" version of the profile of mood states questionnaire (POMS-N), and a "last week" version (POMS-W) on the day of competition. Total mood disturbance and mood sub-scale scores were compared between POMS-N and POMS-W trials. The change between POMS-W and POMS-N scores were correlated against rider performance. Dressage performance scores were compared against the average score for each rider taken over the previous three competitions.

RESULTS: There was no difference in dressage performance on the day of the competition and average performance of the three previous competitions (62.5 ± 3.0 vs. 64.1 ± 2.3, t = 1.18, p = 0.25) indicating "normal" rider performance. There was no difference in total mood disturbance between POMS-N and POMS-W (100 ± 13.3 ± 17.4, t = 1.49, p = 0.15). POMS-N scores were found to be lower than POMS-W for depression (38.1 ± 1.8 vs. 40.2 ± 2.9, t = -2.5, p = 0.05), and anger (38.2 ± 2.1 vs. 40.5 ± 3.4, t = -1.89, p = 0.15). No differences were detected for tension, vigil, fatigue, or confusion (p > 0.05). No significant correlations were detected between dressage performance and various mood states (r > 0.05).

CONCLUSION: The results indicate a reduction in depression and anger immediately prior to competition, however dressage performance does not seem to be related to the magnitude of mood state change. Future research may need to take into account the role of the horse as a potential modifier of mood responses in the rider.

1551 Board #190 9:30 AM - 10:30 AM
Personal and Interpersonal Aspects of Ultra-Endurance Triathlete Couples
Cheryl Jorgens, Elizabeth Sharp, Judith Fischer. Texas Tech University, Lubbock, TX. (Sponsor: Dan Heit, PhD, FACSM)
Email: cheryl.jorgens@ttu.edu

PURPOSE: The purpose of this exploratory investigation was to conduct a qualitative study of relationships of dual triathlete couples competing at the Ironman (IM) World Championships. This study examines ultra-endurance triathlete couples in terms of gender equity and time management issues. The lifestyle of IM triathletes involves tremendous work, discipline, sacrifice. How and why is this dual lifestyle negotiated within couples has been largely overlooked in the literature.

METHODS: Six heterosexual married couples were interviewed ranging in age from 30-50 years. Number of years married ranged from 0.16 to 36 years; two couples had children. Participants had competed in at least one IM triathlon in the past year. Both partners in two couples and one partner in three couples were competing at the 2004 World IM Championships. Recruitment was by flyers posted in the Expo area and by word of mouth. Interviews were 15-30 minutes and conducted using open-ended questions. Content forms were compiled prior to the interview. Hand written notes