NCAA RULES – STRENGTH & CONDITIONING

CONDUCT OF ATHLETICS STAFF

Buckley Amendment
An institution is not permitted to disclose information regarding a student-athlete’s:

1. Results of NCAA, Conference or institutional drug tests;

2. Academic transcripts from any institution including Carolina;

3. Pre-college test scores and information relating to eligibility of nonstandard testing (e.g. learning disabilities);

4. Records concerning financial aid; and

5. Any other papers or information pertaining to his/her NCAA eligibility.

NCAA Constitution. Article 2 Principles for Conduct of Intercollegiate Athletics

2.2 THE PRINCIPLE OF STUDENT-ATHLETE WELFARE
Intercollegiate athletics programs shall be conducted in a manner designed to protect and enhance the physical and educational welfare of student-athletes.

2.2.1 Overall Educational Experience
It is the responsibility of each member institution to establish and maintain an environment in which a student-athlete's activities are conducted as an integral part of the student-athlete's educational experience.

2.2.2 Cultural Diversity and Gender Equity
It is the responsibility of each member institution to establish and maintain an environment that values cultural diversity and gender equity among its student-athletes and intercollegiate athletics department staff.

2.2.3 Health and Safety
It is the responsibility of each member institution to protect the health of and provide a safe environment for each of its participating student-athletes.

2.2.4 Student-Athlete/Coach Relationship
It is the responsibility of each member institution to establish and maintain an environment that fosters a positive relationship between the student-athlete and coach.

2.2.5 Fairness, Openness and Honesty
It is the responsibility of each member institution to ensure that coaches and administrators exhibit fairness, openness and honesty in their relationships with student-athletes.

2.2.6 Student-Athlete Involvement
It is the responsibility of each member institution to involve student-athletes in matters that affect their lives.
2.8 THE PRINCIPLE OF RULES COMPLIANCE
2.8.1 Responsibility of Institution
Each institution shall comply with all applicable rules and regulations of the Association in the conduct of its intercollegiate athletics programs. It shall monitor its programs to assure compliance and to identify and report to the Association instances in which compliance has not been achieved. In any such instance, the institution shall cooperate fully with the Association and shall take appropriate corrective actions. Members of an institution's staff, student-athletes, and other individuals and groups representing the institution's athletics interests shall comply with the applicable Association rules, and the member institution shall be responsible for such compliance.

2.8.2 Responsibility of Association
The Association shall assist the institution in its efforts to achieve full compliance with all rules and regulations and shall afford the institution, its staff and student-athletes fair procedures in the consideration of an identified or alleged failure in compliance.

2.8.3 Penalty for Noncompliance
An institution found to have violated the Association's rules shall be subject to such disciplinary and corrective actions as may be determined by the Association.

Bylaw Article 10 ETHICAL CONDUCT
10.01.1 Honesty and Sportsmanship
Individuals employed by (or associated with) a member institution to administer, conduct or coach intercollegiate athletics and all participating student-athletes shall act with honesty and sportsmanship at all times so that intercollegiate athletics as a whole, their institutions and they, as individuals, shall represent the honor and dignity of fair play and the generally recognized high standards associated with wholesome competitive sports.

10.1 UNETHICAL CONDUCT
Unethical conduct by a prospective or enrolled student-athlete or a current or former institutional staff member (e.g., coach, professor, tutor, teaching assistant, student manager, student trainer) may include, but is not limited to, the following:

a. Refusal to furnish information relevant to an investigation of a possible violation of an NCAA regulation when requested to do so by the NCAA or the individual's institution;

b. Knowing involvement in arranging for fraudulent academic credit or false transcripts for a prospective or an enrolled student-athlete;

c. Knowing involvement in offering or providing a prospective or an enrolled student-athlete an improper inducement or extra benefit or improper financial aid;

d. Knowingly furnishing the NCAA or the individual's institution false or misleading information concerning the individual's involvement in or knowledge of matters relevant to a possible violation of an NCAA regulation; or

e. Receipt of benefits by an institutional staff member for facilitating or arranging a meeting between a student-athlete and an agent, financial advisor or a representative of an agent or advisor (e.g., "runner").

10.2 Knowledge of Use of Banned Drugs
A member institution’s athletics department staff members or others employed by the intercollegiate athletics program who have knowledge of a student-athlete’s use at any time of a substance on the list of
banned drugs, as set forth in Bylaw 31.2.3.1, shall follow institutional procedures dealing with drug abuse or shall be subject to disciplinary or corrective action as set forth in Bylaw 19.5.2.2.

10.3 GAMBLING ACTIVITIES
Staff members of a member conference, staff members of the athletics department of a member institution and student-athletes shall not knowingly:

a. Provide information to individuals involved in organized gambling activities concerning intercollegiate athletics competition;

b. Solicit a bet on any intercollegiate team;

c. Accept a bet on any team representing the institution;

d. Solicit or accept a bet on any intercollegiate competition for any item (e.g., cash, shirt, dinner) that has tangible value; or

e. Participate in any gambling activity that involves intercollegiate athletics or professional athletics, through a bookmaker, a parlay card or any other method employed by organized gambling.

10.4 DISCIPLINARY ACTION
Prospective or enrolled student-athletes found in violation of the provisions of this regulation shall be ineligible for further intercollegiate competition, subject to appeal to the Committee on Student-Athlete Reinstatement for restoration of eligibility. (See 10.3.1 for sanctions of student-athletes involved in violations of 10.3) Institutional staff members found in violation of the provisions of this regulation shall be subject to disciplinary or corrective action as set forth in Bylaw 19.5.2.2 of the NCAA enforcement procedures, whether such violations occurred at the certifying institution or during the individual’s previous employment at another member institution.

Bylaw, Article 11 Conduct and Employment of Athletics Personnel
11.1 CONDUCT OF ATHLETICS PERSONNEL
11.1.2 Responsibility for Violations of NCAA Regulations
Institutional staff members found in violation of NCAA regulations shall be subject to disciplinary or corrective action as set forth in the provisions of the NCAA enforcement procedures, whether such violations occurred at the certifying institution or during the individual’s previous employment at another member institution.

11.1.3 Use of Association Name or Affiliation
Staff members of member institutions and others serving on the Association’s committees or acting as consultants shall not use, directly or by implication, the Association’s name or their affiliation with the Association in the endorsement of products or services.

11.1.4 Representing Individuals in Marketing Athletics Ability/Reputation
Staff members of the athletics department of a member institution shall not represent, directly or indirectly, any individual in the marketing of athletics ability or reputation to an agent, a professional sports team or a professional sports organization, including receiving compensation for arranging commercial endorsements or personal appearances for former student-athletes, except as specified in Bylaw 11.1.4.1, and shall not receive compensation or gratuities of any kind, directly or indirectly, for such services.
11.1.5 Use of Tobacco Products
The use of tobacco products is prohibited by all game personnel (e.g., coaches, trainers, managers, and game officials) in all sports during practice and competition. Uniform penalties (as determined by the applicable rules-making committees and sports committees with rules-making responsibilities) shall be established for such use.

11.2.2 Athletically Related Income
Contractual agreements, including letters of appointment, between a full-time or part-time athletics department staff member (excluding secretarial or clerical personnel) and an institution shall include the stipulation that the staff member is required to provide written detailed account annually to the chief executive officer for all athletically related income and benefits from sources outside the institution. In addition, the approval of all athletically related income and benefits shall be consistent with the institution’s policy related to outside income and benefits applicable to all full-time or part-time employees. Sources of such income shall include, but are not limited to, the following:

a. Income from annuities;
b. Sports camps;
c. Housing benefits (including preferential housing arrangements);
d. Country club memberships;
e. Complimentary ticket sales;
f. Television and radio programs; and
g. Endorsement or consultation contracts with athletics shoe, apparel or equipment manufacturers.

11.3.1 Control of Employment and Salaries
The institution, as opposed to any outside source, shall remain in control of determining who is to be its employee and the amount of salary the employee is to receive within the restrictions specified by NCAA legislation.

11.3.2 Income in Addition to Salary
11.3.2.1 Bona Fide Outside Employment
A staff member may earn income in addition to the institutional salary by performing services for outside groups.
[Athletically related income requires the prior written approval of the institution’s chief executive officer (see Bylaw 11.2.2).]

11.3.2.2 Supplemental Pay
An outside source is prohibited from paying or regularly supplementing an athletics department staff member’s annual salary and from arranging to supplement that salary for an unspecified achievement. This includes the donation of cash from outside sources to the institution earmarked for the staff member’s salary or supplemental income. It would be permissible for an outside source to donate funds to the institution to be used as determined by the institution, and it would be permissible for the institution, at its sole discretion, to use such funds to pay or supplement a staff member’s salary.
11.3.2.3 Bonuses for Specific and Extraordinary Achievement
An institution may permit an outside individual, group or agency to supplement an athletics department staff member’s salary with a direct cash payment in recognition of a specific and extraordinary achievement (e.g., contribution during career to the athletics department of the institution, winning a conference or national championship, number of games or meets won during career/season), provided such a cash supplement is in recognition of a specific achievement and is in conformance with institutional policy.

11.3.2.4 Non-institutional Publications That Report on Athletics Program
Athletics department staff members shall not endorse (either orally or in writing) any non-institutional publication dedicated primarily to reporting on an institution’s athletics activities, except as provided in this section, and shall not write for such publications.

11.3.2.5 Recruiting Service Consultants
Institutional athletics department staff members may not endorse, serve as consultants or participate on advisory panels for any recruiting or scouting service involving prospects.

11.7.1.1 General Provisions Applicable to All Sports with Numerical Coaching Limits
11.7.1.1.1 Countable Coach
An athletics department staff member must count against coaching limits as soon as the individual participates (in any manner) in the coaching of the intercollegiate team in practice, games or organized activities directly related to that sport, including any organized staff activity directly related to the sport.

11.7.1.1.1 Non Coaching Activities
Institutional staff members involved in non coaching activities (e.g., administrative assistants, recruiting coordinators in sports other than football, academic counselors) do not count in the institution’s coaching limitations, provided such individuals are not identified as coaches, do not engage in any on- or off-field coaching activities (e.g., attending meetings involving coaching activities, analyzing videotape or film involving the institution’s or an opponent’s team), and are not involved in any off-campus recruitment of prospects or scouting of opponents.

11.7.2 Division I-A Football. [I-A]
11.7.2.1.1 and 11.7.4.2.1 Weight or Strength Coach
A weight (strength and conditioning) coach may conduct flexibility, warm-up and physical conditioning activities prior to any game and prior to or during any practice or other organized activities without being included in the limitations on number of coaches.

11.7.4.2 Sports Other Than Football – Limitations on Number.
11.7.4.2.1 Weight or Strength Coach
A weight (strength and conditioning) coach may conduct flexibility, warm-up and physical conditioning activities prior to any game and prior to or during any practice or other organized activities without being included in the limitations on number of coaches.

Bylaw, Article 12 Amateurism
AGENTS / PROFESSIONAL TEAMS
12.2 INVOLVEMENT WITH PROFESSIONAL TEAMS
12.2.1.2 Tryout after Enrollment
A student-athlete shall not try out with a professional athletics team in a sport or permit a professional athletics team to conduct medical examinations during any part of the academic year (i.e., from the beginning of the fall term through completion of the spring term, including any intervening vacation period) while enrolled in a collegiate institution as a regular student in at least a minimum full-time
academic load, unless the student-athlete has exhausted eligibility in that sport. The student-athlete may try out with a professional organization in a sport during the summer or during the academic year while not a full-time student, provided the student-athlete does not receive any form of expenses or other compensation from the professional organization. [See Bylaw 14.7.3.2 – (e)]

12.2.1.2.1 Medical Examination Exception
A single scouting bureau recognized by a professional league is permitted to conduct one medical examination per student-athlete during the academic year without jeopardizing the student-athlete’s eligibility in that sport, provided the examination does not occur off campus.

12.3 USE OF AGENTS
12.3.1 General Rule
An individual shall be ineligible for participation in an intercollegiate sport if he or she ever has agreed (orally or in writing) to be represented by an agent for the purpose of marketing his or her athletics ability or reputation in that sport. Further, an agency contract not specifically limited in writing to a sport or particular sports shall be deemed applicable to all sports, and the individual shall be ineligible to participate in any sport.

12.3.1.1 Representation for Future Negotiations
An individual shall be ineligible per 12.3.1 if he or she enters into a verbal or written agreement with an agent for representation in future professional sports negotiations that are to take place after the individual has completed his or her eligibility in that sport.

12.3.1.2 Benefits from Prospective Agents
An individual shall be ineligible per 12.3.1 if he or she (or his or her relatives or friends) accepts transportation or other benefits from:

a. Any person who represents any individual in the marketing of his or her athletics ability. The receipt of such expenses constitutes compensation based on athletics skill and is an extra benefit not available to the student body in general; or

b. An agent, even if the agent has indicated that he or she has no interest in representing the student-athlete in the marketing of his or her athletics ability or reputation and does not represent individuals in the student-athlete’s sport.

Bylaw, Article 13 Recruiting
13.1 CONTACTS AND EVALUATIONS
Recruiting contacts (per Bylaw 13.02.3) and telephone calls with a prospect (or the prospect’s relatives or legal guardians) by institutional staff members and/or representatives of the institution’s athletics interests are subject to the provisions set forth in this bylaw.

13.1.2 Permissible Recruiters
13.1.2.1 General Rule
All in-person, on- and off-campus recruiting contacts with a prospect or the prospect’s relatives or legal guardian(s) shall be made only by authorized institutional staff members. Such contact, as well as correspondence and telephone calls, by representatives of an institution’s athletics interests are prohibited except as otherwise permitted in this section.

13.1.2.1.1 Institutional Staff Members - Off-Campus Recruiters
An institutional staff member is not permitted to recruit off campus until he or she has been certified on an annual basis as to knowledge of applicable recruiting rules per Bylaw 11.5.1.1.

Interpretation: Faculty Members Involved in the Entertainment of Prospect at Staff Member’s Home. A faculty member is precluded from participating in off-campus recruiting in
accordance with 13.1.2.4-(a), but is permitted to participate in entertainment activities involving a prospect on an official visit held at the home of an institutional staff member. Further, an athletics department staff member (e.g., recruiting coordinators, administrative assistants) may participate in off-campus entertainment with a prospect on an official visit, provided the entertainment is within a 30-mile radius of the institution. (10/23/92 Staff Interpretation).

**Strength & Conditioning Recruiting Duties**

<table>
<thead>
<tr>
<th>Duty</th>
<th>Restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write to prospects</td>
<td>Yes (except football)</td>
</tr>
<tr>
<td>Telephone prospects</td>
<td>Yes, as the one call per week (except football) *</td>
</tr>
<tr>
<td>E-Mail prospects</td>
<td>Yes (attachments must conform to NCAA bylaw 13.4.1)</td>
</tr>
<tr>
<td>Recruit on-campus</td>
<td>Yes (if pass annual coaches certification exam)</td>
</tr>
<tr>
<td>Evaluate off-campus</td>
<td>No</td>
</tr>
<tr>
<td>Recruit off-campus</td>
<td>No (unless during the official visit within 30 miles of campus.)</td>
</tr>
</tbody>
</table>

* **Bylaw 13.1.3.4.1.4 Non-coaching Staff Members with Football Specific Responsibilities.** It is permissible for a non-coaching staff member with football specific responsibilities to initiate and receive telephone calls from football prospects, provided the calls relate only to general pre-enrollment administrative issues and such calls occur subsequent to the prospect’s signing a National Letter of Intent with that institution.

**13.1.6.3 Post NLI Contacts**

Subsequent to the calendar day on which the prospect signs a NLI, there is no limit on the number of contacts by the institution with which the prospect has signed. However, the following conditions continue to apply:

(a) Any contact at the prospect’s educational institution in football and basketball shall be confined to the permissible contact period and shall not exceed one visit per week;

(b) No in-person, on- or off-campus contact may be made during a “dead period;”

(c) No in-person, on-or off-campus contact may be made with a nonqualifier enrolled in the first year of a two-year college;

(d) No on- or off-campus contact (including correspondence and telephone calls) any be made by a representative of the institution’s athletics interests except for those involving permissible preenrollment activities (e.g., a discussion of summer employment arrangements); and

(e) Contact at the site of a prospect’s competition shall continue to be governed by the provisions of Bylaw 13.1.7.2. Note: contact with the prospect’s relatives or legal guardian at the site of the prospect’s competition shall be permitted.

**13.1.8.13 Post NLI Evaluations**

Subsequent to the calendar day on which the prospect signs a NLI, there is no limit on the number of evaluations by the institution with which the prospect has signed.

<table>
<thead>
<tr>
<th>Post NLI Signing Benefits</th>
<th>ENROLLED PROSPECTS</th>
<th>NON-ENROLLED PROSPECTS</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVITY</td>
<td>(Summer Prior)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USE OF WEIGHT ROOM</td>
<td>Yes</td>
<td>Yes</td>
<td>Bylaw 13.2.2 (b)</td>
</tr>
<tr>
<td>ISSUE EQUIPMENT</td>
<td>No *</td>
<td>No *</td>
<td></td>
</tr>
</tbody>
</table>
USE OF TRAINING ROOM  
STRENGTH & CONDITIONING INFO.  
Yes    No  
Yes    Yes  
Bylaw 13.2.7  
Bylaw 13.4.1 (f)  

* Football Exception – Equipment can only be issued to those prospects who have signed a National Letter of Intent and athletics scholarship.

13.2.7 Academic Support Services/Use of Training-Room Facilities
A prospect who has signed a National Letter of Intent and is enrolled in the institution’s summer term prior to the student’s initial, full-time collegiate enrollment may be provided academic support services by the institution and also may utilize the institution’s training-room facilities.

Interpretations: Academic Support Services/Use of Training-Room Facilities for a 4-4 Transfer (I). It is permissible for an institution to provide academic support services and the use of training room facilities to a prospect who previously attended a four year institution, provided he/she has signed a written offer of financial aid and/or admission and is enrolled at the institution during the summer prior to initial full-time enrollment. The subcommittee noted that such individuals are not permitted to sign another National Letter of Intent. (Official March 28, 2001)

Academic Support Services/Use of Training Room Facilities for a Prospect who has Signed a National Letter on Intent (I). The provisions of 13.2.7 are applicable only to a prospective student-athlete who has signed a National Letter of Intent and is enrolled in that institution’s summer term. A prospective student-athlete who has signed a National Letter of Intent and is enrolled in a member institution as a part-time student during the regular academic year may not be provided academic support services by the institution or use the institution’s training room facilities. (Official: Feb. 22, 2001)

13.4 Recruiting Materials
13.4.1.1 Responding to Prospect's Request
Institutional staff members (including athletics staff members) may respond to a prospect’s letter requesting information from an institution’s athletics department prior to September 1 at the beginning of the prospect’s junior year in high school, provided the written response does not include information that would initiate the recruitment of the prospect or information related to the institution’s athletics program (e.g., the reply contains an explanation of current NCAA legislation or a referral to the admissions department).

13.12.1 Prohibited Activities
A member institution, on its campus or elsewhere, shall not conduct (or have conducted on its behalf) any physical activity (e.g., practice session or test/tryout) at which one or more prospects (as defined in Bylaw 13.12.1.1) reveal, demonstrate or display their athletics abilities in any sport except as provided in 13.12.2 (recreational activities, local sports club, camps and clinics, and medical examinations) and 13.12.3 (tryout exceptions).

Bylaw, Article 16 Awards, Benefits and Expenses for Enrolled Student-Athletes
16.02.3 Extra Benefit. An extra benefit is any special arrangement by an institutional employee or a representative of the institution's athletics interests to provide a student-athlete or the student-athlete's relative or friend a benefit not expressly authorized by NCAA legislation. Receipt of a benefit by student-athletes or their relatives or friends is not a violation of NCAA legislation if it is demonstrated that the same benefit is generally available to the institution's students or their relatives or friends or to a particular segment of the student body (e.g., foreign students, minority students) determined on a basis unrelated to athletics ability.
16.5.2 (g) Nutritional Supplements
An institution may provide only non-muscle-building nutritional supplements to a student-athlete at any time for the purpose of providing additional calories and electrolytes, provided the supplements do not contain any NCAA banned substances. Permissible non-muscle-building nutritional supplements are identified according to the following classes: Carbohydrate/electrolyte drinks, energy bars, carbohydrate boosters and vitamins and minerals.

**Muscle Building Supplements.** It is not permissible for an institution or an institutional staff member to sell or arrange the sale of muscle-building supplements to student-athletes. [References: NCAA Bylaw 16.02.3 (extra benefit) and Proposal No. 99-72 (housing and meals – nutritional supplements)]

**Interpretation: Nutritional Supplements.**
It is not permissible for an institution to provide any nutritional supplement to its student-athletes, unless the supplement is a non-muscle-building supplement and is included in one of the four classes identified specifically in NCAA Bylaw 16.5.2.(g) (i.e., carbohydrate/electrolyte drinks, energy bar carbohydrate boosters, and vitamins and minerals). The following is a list of examples of permissible and non-permissible nutritional supplements/ingredients as developed by the NCAA Competitive Safeguards and Medical Aspects of Sports Committee (CSMAS). The list below is not exhaustive but should assist institutions in determining the types of nutritional supplements that may be provided to student-athletes.

**Permissible**
Vitamins and Minerals
Energy bars
Calorie replacement drinks (e.g., Ensure, Boost)
Electrolyte replacement drinks (e.g., Gatorade, Powerade)

**Non-permissible**
Amino Acids
Chrysin
Condroitin
Creatine/creatine-containing compounds
Ginseng
Glucosamine
Glycerol
HMB
I-carnitin
Melatonin
Pos-2
Protein powders
Tribulus

The subcommittee, at the recommendation of the CSMAS, also determined that a supplement that contains protein may be classified as a non-muscle-building supplement provided it is included in one of the four permissible categories, does not contain more than 30 percent of calories from protein (based solely on the package label) and does not contain additional ingredients that are designed to assist in the muscle-building process (see examples of non-permissible supplements/ingredients). **Nutritional supplements** containing more than 30 percent of calories from protein are classified as muscle-building supplements and may not be provided to student-athletes.
To assist the membership in calculating the percentage of calories from protein contained in a particular supplement, the subcommittee noted that one gram of protein equals four calories. Therefore, the percentage of calories from protein contained in a nutritional supplement may be calculated by multiplying the number of grams of protein per serving by four and dividing the product by the total number of calories per serving. For example, a nutritional supplement that contains 120 total calories per serving and nine grams of protein per serving would contain 36 calories from protein (i.e., 9 grams x 4). Therefore, the percentage of calories from protein would be 0.3 or 30 percent (i.e., 36 calories from protein/120 total calories). [References: Bylaw 16.5.2 (g) (nutritional supplements) and Proposal No. 99-72 (benefits/nutritional supplements)] [Official: July 26, 2000]

16.10.1 Permissible Travel Expenses Not Related to Practice or Competition. It is permissible for an institution to provide the following travel expenses not related to practice or competition:

(e) Local Transportation. Reasonable local transportation to student-athletes on an occasional basis.

16.12.1.5 Occasional Meals
A student-athlete or the entire team in a sport may receive an occasional meal in the locale of the institution on infrequent and special occasions from an institutional staff member. An institutional staff member may provide reasonable local transportation to student-athletes to attend such meals. A student-athlete may receive an occasional family home meal from a representative of athletics interests on infrequent and special occasions under the following conditions:

(a) The meal must be provided in an individual’s home (as opposed to a restaurant) and may be catered; and

(b) A representative of the institution’s athletics interest may provide reasonable local transportation to student-athletes to attend the meal function only if the meal function is at the home of that representative.

16.12.2.3 Other Prohibited Benefits
An institutional employee or representative of the institution’s athletics interests may not provide a student-athlete with extra benefits or services, including, but not limited to:

a. A loan of money;

b. A guarantee of bond;

c. An automobile or the use of an automobile; or

d. Transportation (e.g., a ride home with a coach), except as permitted in 16.10.1-(e), even if the student-athlete reimburses the institution or the staff member for the appropriate amount of the gas or expense; or

e. Signing or cosigning a note with an outside agency to arrange a loan.

NOTE: SEE NCAA BYLAW 16 FOR MORE DETAILED QUESTIONS:
Bylaw 16.1 Awards
Bylaw 16.2 Complimentary Admissions & Ticket Benefits
Bylaw 16.3 Academic & Other Support Services
Bylaw 16.4 Medical Expenses
Bylaw 16.5 Housing & Meals
Bylaw 16.6 Expenses for Student-Athlete’s Friends & Relatives
Bylaw 16.7 Team Entertainment
Bylaw 16.8 Expenses Provided By Institution for Practice & Competition
Bylaw 16.10 Other Travel Expenses Provided By the Institution
Bylaw 16.11 Provisions of Expenses by Individuals or Organizations Other Than The Institution
Bylaw 16.12 Benefits, Gifts & Services
Bylaw 16.13 Expense Waivers

Bylaw, Article 17 Playing and Practice Seasons

17.02.1 Countable Athletically Related Activities
Countable athletically related activities include any required activity with an athletics purpose involving student-athletes and at the direction of, or supervised by, one or more of an institution’s coaching staff (including strength and conditioning coaches) and must be counted in the weekly or daily time limitations specified under Bylaw 17.1.5.1 and 17.1.5.2. Administrative activities (e.g. academic meetings, compliance meetings) shall not be considered as countable athletically related activities.

Interpretations: Sports Psychologist/Use of Outside Consultants. In Division I, it is permissible for an institution's athletics department to employ a sports psychologist without including such an individual in the institution's coaching limitations in a particular sport, provided the individual does not engage in any on- or off-field coaching activities. (Staff: Dec. 15, 1995).

Supervision of Voluntary Workouts. Voluntary participation by student-athletes in weight-training or conditioning programs utilizing the institution's facilities outside the institution's established playing season may be supervised both by members of the institution's strength and conditioning staff and athletics trainers. (Legislative Assistance Column: Jan. 31, 1990)

COUNTABLE ATHLETICALLY RELATED ACTIVITIES:
Practices (not more than 4 hours per day).

Athletics meetings with a coach initiated or required by a coach (e.g., end of season individual meetings)

Competition (and associated activities, regardless of their length, count as 3 hours).
NOTE: No countable athletically related activities may occur after the competition.

Field, floor or on-court activity

Setting up offensive and defensive alignment

On-court or on-field activities called by any member of the team and confined primarily to members of that team.

Required weight-training and conditioning activities.

Required participation in camps/clinics.

Visiting the competition site in the sports of cross country, golf and skiing

Participation outside the regular season in individual skill-related instructional activities with a member of the coaching staff.

Discussion or review of game films.
Participation in a physical activities class for student-athletes only and taught by a member of the athletics staff (e.g., coach).

**NON-COUNTABLE ATHLETICALLY RELATED ACTIVITIES:**

Compliance meetings.

Meetings with a coach initiated by the student-athlete.

Drug/alcohol educational meetings or CHAMPS/Life Skills meetings.

Study hall, tutoring or academic meetings.

Student-athlete advisory committee/Captain’s Council meetings.

Voluntary weight training not conducted by a coach or staff member.

Voluntary sport-related activities (e.g., initiated by student-athlete, no attendance taken, no coach present.)

Traveling to/from the site of competition (as long as no countable activities occur).

Training room activities (e.g., treatment, taping), rehabilitation activities and medical examinations.

Recruiting activities (e.g. student host.)

Training table meals.

Attending banquets (e. g., awards or post-season banquets).

Fund-raising activities or public relations/promotional activities and community service projects.

**17.02.13 Voluntary Athletically Related Activities.**

In order for any athletically related activity to be considered "voluntary," all of the following conditions must be met:

a. The student-athlete must not be required to report back to a coach or other athletics department staff member (e.g., strength coach, trainer, manager) any information related to the activity. In addition, no athletics department staff member who observes the activity (e.g., strength coach, trainer, manager) may report back to the student-athlete's coach any information related to the activity;

b. The activity must be initiated and requested solely by the student-athlete. Neither the institution nor any athletics department staff member may require the student-athlete to participate in the activity at any time. However, it is permissible for an athletics department staff member to provide information to student-athletes related to available opportunities for participating in voluntary activities (e.g., times when the strength and conditioning coach will be on duty in the weight room or on the track). In addition, for students who have initiated a request to engage in voluntary activities, the institution or an athletics department staff member may assign specific times for student-athletes to use institutional facilities for such purpose and inform the student-athletes of the time in advance;
c. The student-athlete's attendance and participation in the activity (or lack thereof) may not be recorded for the purposes of reporting such information to coaching staff members or other student-athletes, and
d. The student-athlete may not be subjected to penalty if he or she elects not to participate in the activity. In addition, neither the institution nor any athletics department staff member may provide recognition or incentives (e.g., awards) to a student-athlete based on his or her attendance or performance in the activity.

17.02.12.1 Team Sports
The following are team sports: Baseball, Basketball, Football, Soccer, Softball, and Volleyball.

17.02.12.2 Individual Sports
The following are individual sports: Cross Country, Equestrian, Golf, Gymnastics, Swimming, Tennis, and Track & Field.

17.1.5 Time Limits for Athletically Related Activities
In all sports, the following time limitations shall apply:

17.1.5.1 Daily and Weekly Hour Limitations - Playing Season
A student-athlete's participation in countable athletically related activities (See Bylaw 17.02.1) shall be limited to a maximum of four hours per day and 20 hours per week.

17.1.5.1.1 Multi-sport Participant Exception
For a multi-sport participant, the daily and weekly hour limitations apply separately to each sport in which the student-athlete is a participant.
[NOTE: There is a proposal before the NCAA membership to change this legislation. The Management Council and the Board of Directors will vote in April 2004.]

17.1.5.2 Golf/Practice Round Exception
A practice round of golf may exceed the four-hours-per-day limitation, but the weekly limit of 20 hours shall remain in effect. A practice round played on the day prior to the start of a collegiate golf tournament at the tournament site shall count as three hours, regardless of the actual duration of the round.

17.1.5.2.2 Skill Instruction Participation by student-athletes in individual skill related instruction in sports other than football is permitted outside the institution's declared playing season provided no more than four student-athletes from the same team are involved in skill-related instruction with their coach(es) at any one time in any facility and the student-athletes request the instruction.

17.1.5.2.3 Conditioning Activities Conditioning drills that may simulate game activities are permissible, provided no offensive or defensive alignments are set up and no equipment related to the sport is used.
17.1.5.3.2 Competition Day
All competition and any associated athletically related activities on the day of a competition shall count as three hours regardless of the actual duration of these activities.

17.1.5.3.2.1 Practice Prohibited after Competition
Practice may not be conducted at any time (including vacation periods) following competition, except between contests, rounds or events during multi-day or multi-event competition (e.g., double-headers in softball or baseball, rounds of golf in a multiday tournament).

17.1.5.4 Required Day Off - Playing Season
During the playing season, all countable athletically related activities shall be prohibited during one calendar day per week, except during participation in one conference and postseason championship and any postseason certified bowl games, and during any participation in NCAA championships.

17.1.5.5.1 No Class Time Missed for Practice Activities
No class time shall be missed for practice activities except when a team is traveling to an away-from-home contest and the practice is in conjunction with the contest.

17.1.5.5.2 Preseason Off-Campus Intra-squad Games and Practice Activities
Preseason off-campus intra-squad games and preseason publicized off-campus practice activities conducted at a site not normally used by the institution for practice shall be prohibited in all sports.

NOTE: SEE NCAA BYLAW 17.1, GENERAL PLAYING-SEASON REGULATIONS FOR ADDITIONAL QUESTIONS

Bylaw, Article 19 Enforcement
19.01.4 Violations by Institutional Staff Members. Institutional staff members found in violation of NCAA regulations shall be subject to disciplinary or corrective action as set forth in the provisions of the NCAA enforcement procedures, whether such violations occurred at the certifying institution or during the individual’s previous employment at another institution.

Administrative Bylaw, Article 30 Administrative Regulations
30.6 FIVE-YEAR/10-SEMESTER RULE WAIVER
As authorized in Bylaws 14.2.1.6, the Committee on Student-Athlete Reinstatement, or a Committee on Student-Athlete Reinstatement-designated committee, by a two-thirds majority of its members present and voting, may approve waivers of the five-year rule in addition to the waivers in Bylaw 14.2.1.5.

30.6.1 Waiver Criteria
A waiver of the five-year period of eligibility is designed to provide a student-athlete with the opportunity to participate in four seasons of intercollegiate competition within a five-year period. This waiver may be granted, based upon objective evidence, for reasons that are beyond the control of the student-athlete or the institution, which deprive the student-athlete of the opportunity to participate for more than one season in his/her sport within the five-year period. The Committee on Student-Athlete Reinstatement reserves the right to review requests that do not meet the more-than-one-year criteria detailed in this bylaw for circumstances of extraordinary or extreme hardship. A student-athlete who has exhausted his or her five years of eligibility may continue to practice (but not compete) for a maximum of 30 consecutive calendar days, provided the student-athlete’s institution has submitted a waiver request. The student-athlete may not commence practice until the institution has filed such a request. Further, if such a request is denied prior to exhausting the 30 day practice period, the student-athlete must cease all practice activities upon the institution’s notification of the denial.
30.6.1.1 Circumstances Beyond Control
Circumstances considered to be beyond the control of the student-athlete or the institution and do not cause a participation opportunity to be used shall include, but are not limited to, the following:

(a) Situations clearly supported by contemporaneous medical documentation, which states that a student-athlete is unable to participate in intercollegiate competition as a result of incapacitating physical or mental circumstances;

(b) The student-athlete is unable to attend a collegiate institution full time as a result of a life threatening or incapacitating injury or illness suffered by a member of the student-athlete’s immediate family, which clearly is supported by contemporaneous medical documentation;

(c) Reliance by the student-athlete upon written, contemporaneous, clearly erroneous academic advice provided to the student-athlete from a specific academic authority from a collegiate institution regarding the academic status of the student-athlete or prospective student-athlete, which directly leads to that individual not being eligible to participate and, but for the clearly erroneous advice, the student-athlete would have established eligibility for intercollegiate competition;

(d) Natural disasters (e.g., earthquakes, floods); and

(e) Extreme financial difficulties as a result of a specific event (e.g., layoff, death in the family) experienced by the student-athlete or by an individual upon whom the student-athlete is legally dependent, which prohibit the student-athlete from participating in intercollegiate athletics. These circumstances must be clearly supported by objective documentation (e.g., decree of bankruptcy, proof of termination) and must be beyond the control of the student-athlete or the individual upon whom the student-athlete is legally dependent.

30.6.1.2 Circumstances Within Control
Circumstances that are considered to be within the control of the student-athlete or the institution and cause a participation opportunity to be used include, but are not limited to, the following:

(a) A student-athlete’s decision to attend an institution that does not sponsor his/her sport, or decides not to participate at an institution that does sponsor his/her sport;

(b) An inability to participate due to failure to meet institutional/conference or NCAA academic requirements, or disciplinary reasons or incarceration culminating in or resulting from a conviction;

(c) Reliance by a student-athlete upon misinformation from a coaching staff member;

(d) Redshirt year;

(e) An inability to participate as a result of a transfer year in residence or fulfilling a condition for restoration of eligibility; and

(f) A student-athlete’s lack of understanding regarding the specific starting date of his or her five-year period of eligibility.
10.5 SPORTSMANSHIP – PUBLIC COMMENTS

10.5.1 Coaches and administrators shall refrain from directed public criticism of other member institutions, their staffs or players.

10.5.2 Coaches and administrators shall make every attempt to promote the Conference and its members in a positive manner.

10.5.3 Coaches and administrators shall make every effort to promote a cooperative environment with the media, providing them with reasonable access to players, injury information and staff interview opportunities.

10.5.4 Coaches, players and support personnel shall refrain from all public criticism of officials.

10.5.5 Coaches and support personnel shall provide favorable examples in appearance, conduct, language and sportsmanship and shall refrain from personnel conduct that might incite spectators.

10.5.6 Coaches and support personnel shall exhibit respect and courtesy toward opposing players and coaches.

10.5.7 Institutional officials should assure that all students involved in athletics activities – including student-athletes, band members, cheerleaders, mascots and students as fans – are informed of the acceptable behavior that is expected of them as students at that institution and are expected to demonstrate such behavior.

10.6 INFRACTIONS

10.6.1 Coaches and administrators shall refrain from making public statements and accusations with regard to infractions concerning member institutions and their personnel. Should questions by the media be directed to these individuals concerning published reports of infractions, appropriate responses should state that such matters, if valid, are reported and investigated in compliance with established Conference and NCAA procedures.
NCAA PROPOSED LEGISLATION

2003-70 COMMITTEES -- COMMITTEE ON COMPETITIVE SAFEGUARDS AND MEDICAL ASPECTS OF SPORTS -- COMPOSITION

Status: 60-Day Comment Period

Intent: To add one member to the Committee on Competitive Safeguards and Medical Aspects of Sports; further, to specify that the additional member be a strength and conditioning professional.

Bylaws: Amend 21.1.2.1, pages 363-364, as follows:

"21.1.2.1 Composition. The Committee on Competitive Safeguards and Medical Aspects of Sports shall consist of 20 members, including five positions allocated for men, five allocated for women and 10 unallocated. The membership of the committee shall be constituted as follows:

[Common provision, all divisions, divided vote]

"(l) One student-athlete from each division (who shall have one combined vote) shall serve as a member of the committee. The Division I student-athlete and may serve on the committee up to one year after completion of his or her intercollegiate athletics eligibility. The Division II and Division III student-athlete may serve on the committee up to two years after completion of his or her intercollegiate athletics eligibility; and

"(m) One strength and conditioning professional with an accredited certification who is responsible for the athletics strength and conditioning program at a member institution; and"

[21.1.2.1-(a) through 21.1.2.1-(k) unchanged.]

"(l) One student-athlete from each division (who shall have one combined vote) shall serve as a member of the committee. The Division I student-athlete and may serve on the committee up to one year after completion of his or her intercollegiate athletics eligibility. The Division II and Division III student-athlete may serve on the committee up to two years after completion of his or her intercollegiate athletics eligibility; and

"(m) One strength and conditioning professional with an accredited certification who is responsible for the athletics strength and conditioning program at a member institution; and"

[21.1.2.1-(a) through 21.1.2.1-(k) unchanged.]

Source: NCAA Division I Management Council (Sun Belt Conference).

Effective Date: Immediate

Proposal Category: Amendment

Topical Area: Committees

Rationale: The current committee composition does not provide a designated seat for representation by member institutions' strength and conditioning professionals. As an integral part of athletics department programs and student-athletes' careers, these professionals should be represented within the NCAA. Strength and conditioning staff members interact regularly with the sports medicine staff and play a primary role in the preparation of student-athletes in their chosen sport. These professionals are directly responsible for the health and safety of student-athletes during strength and conditioning activities, which prepare them for participation. They coach all student-athletes, (verses one team or injured athlete) year round, as opposed to seasonally. Their understanding of training student-athletes in extreme environmental conditions is a key factor. These professionals possess scientifically based knowledge used in a practical and applied setting. This expertise and experience will provide insight that is not represented currently; yet, it is vital to the mission of this committee. Furthermore, in light of the tragic deaths of three college athletes in 2001-02, who were under the direct supervision of strength and conditioning professionals, this opportunity will empower these professionals to take a proactive role and further solidify the committee's commitment to the safe and productive experience of the student-athlete.

Estimated Budget Impact: Impact only on NCAA travel budget for additional member of the committee.

Impact on Student Athlete's Time: None.

Position Statement(s)

Championships/Competition Cabinet: The cabinet opposes Proposal No. 2003-70. Feedback from the
committee that reviewed this proposal indicates that it is unnecessary to designate a specific seat for a strength and conditioning coach in light of the current committee composition. The nature of the committee already requires members with expertise in assessing the health and safety impact of conditioning on student-athletes. The committee composition identifies seats for members with a specialty in exercise science and exercise research. These existing categories provide an avenue for strength and conditioning coaches with this expertise to be nominated to the committee, eliminating the need to designate a new seat for this purpose.

Management Council Governance Subcommittee: The subcommittee recommends that the Management Council amend this proposal to provide that one of the current 20 members on the committee is a strength and conditioning professional. Given that the Committee on Competitive Safeguards and Medical Aspects of Sports already has twenty members, the subcommittee questions the need to add an additional member position. Accordingly, without questioning the need for a strength and conditioning professional, the subcommittee recommends that such a professional be added without increasing the size of the committee.

2003-22 RECRUITING -- BANNED DRUG LIST AND NUTRITIONAL SUPPLEMENTS

Status: 60-Day Comment Period

Intent: To require an institution to provide the list of NCAA banned drugs and information about the risks of nutritional supplements to all incoming prospective student-athletes at the earliest practical time but in no case later than July 1 prior to the prospect's initial full-time enrollment; further, for a prospect whose recruitment is initiated after July 1, the institution must send the banned drug list at the earliest opportunity.

Bylaws: Amend 13.3 by adding new 13.3.2 , page 101 , as follows:

13.3 ADMISSIONS AND GRADUATION DATA AND BANNED DRUG LIST
[13.3.1 unchanged.]
"13.3.2 Banned Drug List and Information about Nutritional Supplements.

"13.3.2.1 Report Publication. The Association's national office annually shall publish the banned drug list specified in Bylaw 31.2.3.1 and shall update the list on its Web site.

"13.3.2.2 Report Distribution. Member institutions shall provide to all incoming prospects and to prospects' parents the NCAA banned drug list and information about nutritional supplements (See Bylaw 31.2.3.1). The information shall be provided at the earliest practical opportunity (e.g., after the institution's first arranged in-person encounter with the prospect) or upon request; however, in no event shall an institution provide the information later than July 1 before the prospect's initial enrollment at the institution. For a prospect whose recruitment is initiated after July 1, the institution must send the banned drug list and information about nutritional supplements at the earliest opportunity. Violations of this bylaw shall be considered institutional violations per Constitution 2.8.1; however, such violations shall not affect the prospective student-athlete's eligibility."

Source: NCAA Division I Management Council [Championships/Competition Cabinet (Committee on Competitive Safeguards and Medical Aspects of Sports), NCAA Division Academics/Eligibility/Compliance Cabinet) (Subcommittee on Recruiting)].

Effective Date: August 1, 2004

Proposal Category: Amendment
**Topical Area:** Recruiting  

**Rationale:** The Committee on Competitive Safeguards and Medical Aspects of Sports has conducted appeals of positive drug tests involving freshman football players and transfer students who were using legal over-the-counter nutritional supplements containing NCAA banned substances and who claimed no prior knowledge of this risk. Because student-athletes tend to do all they can to stand out, the potential for unwitting illicit performance enhancement through the use of legal over-the-counter nutritional supplements increases with these uninformed prospective student-athletes. At the time of use during the summer, these prospective student-athletes have not yet been oriented by the institution's drug education program and have not signed the drug testing consent form. When the NCAA conducts drug testing in early fall, these student-athlete risk testing positive from substances still in their system from their summer use. Adoption of this recommendation would serve as early education and intervention with new student-athletes before they reach campus. Appropriate strategies (e.g., campus visit, training room packet, clearinghouse certification mailing) will be developed that would best achieve this objective. Also, the cabinet believes that the relevant information should be contained in the Guide to the College-Bound Student-Athlete to facilitate ease of distribution.  

**Estimated Budget Impact:** Minimal.  

**Impact on Student Athlete's Time:** None.  

**Position Statement(s)**  

*Academics/Eligibility/Compliance Cabinet:* The cabinet unanimously supports Proposal No. 2003-22 and agrees with the sponsor's rationale.
Weight Train To Help Vision

Colorado Springs, CO – (December 16, 2003) – Weight training, strength training, and resistance training are all different names for an exercise program that increases flexibility, builds bone density, improves strength, decreases the chance of obtaining certain diseases such as diabetes, osteoporosis, and heart disease, and boosts metabolism, which in turn results in weight loss.

But there is another exciting benefit. Weight training may also decrease your chances of developing glaucoma—the second leading cause of legal blindness. This, according to a recent study published in the National Strength and Conditioning Association’s Journal of Strength and Conditioning Research (Vol.17, No. 4, Nov. 2003, page 715-720).

The study, conducted at Mississippi State University and the University of Mississippi School of Medicine, examined the effects of resistance training on the internal pressure within the eye, called intraocular pressure (IOP). Having high IOP is related to an increased risk of developing glaucoma. Researchers found that strength training decreases this pressure, thus decreasing the risk.

Thirty healthy subjects (15 male and 15 female) performed 3 sets of 10 repetitions at 70% one repetition maximum on either a chest press or leg press. Eye pressure was measured before the exercise, after each set, and five minutes after each exercise.

The results of this study show that intraocular pressure decreases immediately after one or more sets of either exercise. The cause of this decrease is not known, however research suggests that the changes in blood and blood flow to the eye after exercise affects eye pressure. The authors of this study stress caution about generalizing these results. Although the study suggests that resistance training can reduce the likelihood of developing glaucoma, more research is needed in this area.

To get started in a weight training program, the NSCA recommends that you work with a Certified Strength and Conditioning Specialist® (CSCS®) or NSCA-Certified Personal Trainer® (NSCA-CPT®) to learn proper lifting technique, and maximize your efforts while strength training. You can find these strength and conditioning professionals listed by city on the NSCA web site at www.nscalift.org/CPTReferrals.

The National Strength and Conditioning Association seeks to educate its members and increase respect for the strength and conditioning profession by providing a wide variety of resources such as: exceptional professional journals; cutting edge conferences; scholarship and grant opportunities; educational text
and videos; and career services to its 26,000 members. Visit the NSCA Online Media Center at www.nsca-lift.org/press for more information.

NOTE: The Journal of Strength and Conditioning Research is the official research journal of the National Strength and Conditioning Association, and is available from Alliance Communication Group at 800-627-0932. For a complete copy of the research paper (Vol. 17, No. 4, page 715-720) or to speak with a leading strength and conditioning expert on the topic, you may contact the NSCA Public Relations Department at 800-815-6826.
Study: Correct Use of Weight Belt Not Clear to Most


The recent study examined weight belt usage in a population of health club members over a one-month period. Members filled out a survey to identify their weight belt usage and rationale for using the apparatus. Of the 352 members who filled out the survey, 189 were men and 156 were women, with ages ranging from 20 to 72 years.

The lack of knowledge in weight belt use is evident throughout the survey. When asked why they used a weight belt, most had responded that the belt would prevent injury and improve performance, while others listed because they see others using them, because they look good, it serves as a mental reminder, or to gain acceptance in the weight room.

“The underlying principle for wearing a weight belt while strength training is for safety purposes when lifting maximal or near maximal loads,” explains Peter Melanson, CSCS, Education Programs Coordinator for the National Strength and Conditioning Association. “We suggest avoiding belts for lesser weights in order to strengthen surrounding trunk muscles.”

Therefore the findings of the study, conducted by researchers at the Dan Abraham Healthy Living Center, Mayo Clinic, in Rochester, Minnesota, should concern health and fitness professionals.

When surveyed regarding the amount of weight deemed necessary to wear the apparatus, 51 percent responded when lifting any weight, 30% when lifting moderate or greater, and only 24% when lifting maximum weight.

The most frequent exercises listed where weight belts were used were the squat, dead lift, shoulder press, bench press, and bent-over row. The use of a belt during bench press exercises was unexpected, and 51% of weigh belt users specified they would use a belt while lifting any weight during one or more of the above-mentioned exercises. The most surprising discovery is that 32% used a weight belt for all machine and free weight exercises at all loads. And one individual used a belt during cardiovascular exercises.
“Not only are weight belt users using the device inappropriately, but are potentially hurting themselves by using the device on exercises where the belt is not necessary and weakening the core stability muscles,” stated Melanson. “Weight belts will not prevent you from getting injured or allow you to lift more weight. Proper lifting technique and knowing your limitations is the most important thing to keep in mind.”

The NSCA recommends that exercisers work with a Certified Strength and Conditioning Specialist® (CSCS®) to learn the proper usage of weight belts and how to perform exercises for improving core stability.

*Throughout its 26-year history, the National Strength and Conditioning Association has sought to educate its members and increase respect for the strength and conditioning profession. The NSCA fulfills this goal by providing a wide variety of resources such as: exceptional professional journals; cutting edge conferences; scholarship and grant opportunities; educational text and videos; and career services to its 26,000 members. Visit the NSCA web site www.nsca-lift.org for more information.*

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**NOTE:** *The Journal of Strength and Conditioning Research* is the official research journal of the National Strength and Conditioning Association, and is available from Alliance Communication Group at 800-627-0932. For a complete copy of the research paper (Vol. 17, No. 3, page 498-502) or to speak with a leading strength and conditioning expert on the topic, you may contact the NSCA Public Relations Department at 800-815-6826.
New Study Supports Combined Strength and Endurance Training

Study indicates that incorporating both strength and endurance training simultaneously is more beneficial than strength or endurance training alone.

Colorado Springs, CO – (September 8, 2003) – The National Strength and Conditioning Association (NSCA) recently published a study in its official scientific journal, The Journal of Strength and Conditioning Research (Vol.17, No. 2, page 393-401) that confirms concurrent strength and endurance training is more effective in improving athletic performance than are either endurance or strength training separately. This is contrary to previous studies, which found combined training inhibits muscle and power improvements.

Strength, endurance, and power are the key factors in athletic performance. Knowing how to maximize each component, to create the most effective program, is often difficult to achieve. On one hand, endurance training increases capillary density (the muscle’s ability to receive oxygen) and decreases the ratio of fast-twitch fibers (strength muscles) to slow-twitch fibers (endurance muscles). On the other hand, strength training causes fiber hypertrophy (the muscle to get bigger), decreases capillary density, and increases the ratio of fast-twitch fibers to slow-twitch fibers.

In theory, these would seem to cancel each other out. However, researchers at The University of Athens and St. Savas Hospital in Athens, Greece recently compared the effects of these two types of training and found that the body actually works better when strength and endurance training are combined. Twenty-six male basketball players were divided into four groups: endurance group, strength group, strength and endurance group, and control group. All groups, except the control group, trained four times a week for seven weeks. The strength and endurance group performed both the strength and endurance group’s programs on the same day, while the control group was restricted from all types of training.

The results of the study showed improvements in vertical jump, anaerobic power, and aerobic capacity in the strength and endurance group. The strength group increased anaerobic power, but showed a decrease in aerobic capacity. The endurance group was the exact opposite. They showed a decrease in anaerobic power, and an increase in aerobic capacity. The control group remained unaffected.

The findings of this study demonstrate that concurrent strength and endurance training results in significant increases in power, strength, and endurance. Strength training alone significantly improved
power and strength, but significantly reduced aerobic capacity. Endurance training alone significantly improved aerobic capacity, but power and strength were greatly decreased. As stated earlier, these results are not consistent with other studies that suggest strength training alone can maintain endurance, or even has the potential to produce small but significant increases in aerobic capacity. The results of the study are far from conclusive. Many factors can influence the outcome of scientific studies, and it is important to take into account the different training modes, intensities, and frequencies that are being tested. Further research on this topic is needed to fully realize its impact.

Through its 26-year history, the National Strength and Conditioning Association has sought to educate its members and increase respect for the strength and conditioning profession. The NSCA fulfills this goal by providing a wide variety of resources such as: exceptional professional journals; cutting edge conferences; scholarship and grant opportunities; educational text and videos; and career services to its 26,000 members. Visit the NSCA web site www.nsca-lift.org for more information.

NOTE: The Journal of Strength and Conditioning Research is the official research journal of the National Strength and Conditioning Association, and is available from Alliance Communication Group at 800-627-0932. For a complete copy of the research paper (Vol. 17, No. 2, page 393-401) or to speak with a leading strength and conditioning expert on the topic, you may contact the NSCA Public Relations Department at 800-815-6826.
GUIDELINE 2c Prevention of Heat Illness
June 1975 • Revised June 2002

Practice or competition in hot and/or humid environmental conditions poses special problems for student-athletes. Heat stress and resulting heat illness is a primary concern in these conditions. Although deaths from heat illness are rare, constant surveillance and education are necessary to prevent heat-related problems. The following practices should be observed:

1. An initial complete medical history and physical evaluation, followed by the completion of a yearly health-status questionnaire before practice begins, should be required. A history of previous heat illness, and the type and duration of training activities for the previous month, also are essential.

2. Prevention of heat illness begins with aerobic conditioning, which provides partial acclimatization to the heat. Student-athletes should gradually increase exposure to hot and/or humid environmental conditions over a period of seven to 10 days to achieve heat acclimatization. Each exposure should involve a gradual increase in the intensity and duration of exercise until the exercise is comparable to that likely to occur in competition. When conditions are extreme, training or competition should be held during a cooler time of day. Hydration should be maintained during training and acclimatization.

3. Clothing and protective equipment such as helmets, shoulder pads, and shin guards increase heat stress by interfering with the evaporation of sweat as well as inhibiting other pathways for heat loss. Dark-colored clothing increases the body’s absorption of solar radiation. Frequent rest periods should be scheduled so that the gear and clothing can be loosened to allow heat loss. During the acclimatization process, it may be advisable to use a minimum of protective gear and clothing and to practice in T-shirts, shorts, socks and shoes. Excessive tape and outer clothing that restrict sweat evaporation should be avoided. Rubberized suits should never be used.

4. To identify heat stress conditions, regular measurements of environmental conditions are recommended. Use the ambient temperature and humidity to assess heat stress (see Figure 1). Utilize the wet-bulb temperature, drybulb temperature and globe temperature to assess the potential impact of humidity, air temperature and solar radiation. A wetbulb temperature higher than 75 degrees Fahrenheit (24 degrees Celsius) or humidity above 90 percent may represent dangerous conditions, especially if the sun is shining or the student-athletes are not acclimatized. A wet-bulb globe temperature (WBGT) higher than 82 degrees Fahrenheit (28 degrees Celsius) suggests that careful control of all activity be undertaken. The value for caution may need to be adjusted down when wearing protective equipment. (See reference No. 6)

5. Dehydration must be avoided not only because it hinders performance, but also because it can result in profound heat illness. Fluid replacement must be readily available. Student-athletes should be encouraged to drink as much and as frequently as comfort allows. They should drink one to two cups of water in the hour proceeding practice or competition, and continue drinking during activity (every 15-20 minutes). For activity up to two hours in duration, most weight loss represents water loss, and that fluid loss should be replaced as soon as possible. Following activity, the student-athlete should rehydrate with a volume that exceeds the amount lost during the activity. A two-pound weight loss represents approximately one quart of fluid loss. Urine volume and color can be used to assess general hydration. If output is plentiful and the color is “pale yellow or straw colored” the student-athlete is not dehydrated. Water and carbohydrate/electrolyte drinks are appropriate for exercise in heat. Carbohydrate/electrolyte drinks enhance fluid intake, and the electrolytes aid in the retention of fluid. In addition, the carbohydrates provide energy and help maintain immune and cognitive function.
6. By recording the body weight of each student-athlete before and after workout or practice, progressive dehydration or loss of body fluids can be detected, and the potential harmful effects of dehydration can be avoided. Those who lose five percent of their body weight or more over a period of several days should be evaluated medically and their activity restricted until rehydration has occurred.

7. Some student-athletes may be more susceptible to heat illness. Susceptible individuals include those with: inadequate acclimatization or aerobic fitness, excess body fat, a history of heat illness, a febrile condition, inadequate rehydration, and those who regularly push themselves to capacity. Also, substances with a diuretic effect or that act as stimulants may increase risk of heat illness. These substances may be found in some prescription and over-the-counter drugs, nutritional supplements and foods. Student-athletes should be informed of and monitored for signs of heat illness such as: cessation of sweating, weakness, cramping, rapid and weak pulse, pale or flushed skin, excessive fatigue, nausea, unsteadiness, disturbance of vision and incoherency. If heat illness is suspected, prompt emergency treatment is recommended. When training in hot and/or humid conditions, student-athletes should train with a partner or be under observation by a coach or athletic trainer.

First aid for heat illness
Heat exhaustion—Symptoms usually include profound weakness and exhaustion, and often dizziness, syncope, muscle cramps and nausea. Heat exhaustion is a form of shock due to depletion of body fluids. First aid should include rest in a cool, shaded environment. Fluids should be given orally. A physician should determine the need for electrolytes and additional medical care. Although rapid recovery is not unusual, student-athletes suffering from heat exhaustion should not be allowed to practice or compete for the remainder of that day.

Prevention of Heat Illness
Heatstroke—Heatstroke is a medical emergency. Medical care must be obtained at once; a delay in treatment can be fatal. This condition is characterized by a very high body temperature and usually (but not always) hot, dry skin, which indicates failure of the primary temperature-regulating mechanism (sweating), and possibly seizure or coma. First aid includes immediate cooling of the body without causing the student-athlete to shiver. Recommended methods for cooling include using ice, immersion in cold water, or wetting the body and fanning vigorously. Victims of heatstroke should be hospitalized and monitored carefully.
RISK FACTORS AND WARNING SIGNS
ASSOCIATED WITH HEAT ILLNESS

RISK FACTORS
Air temperature, humidity, and dehydration are common risk factors associated with heat illness. In addition, the following factors also put student-athletes at increased risk:

1. Nutritional supplements. Nutritional supplements may contain stimulants, such as ephedrine, ma huang or caffeine.* These substances can dehydrate the body and/or increase metabolism and heat production. They are of particular concern in people with underlying medical conditions such as hypertension, asthma and thyroid dysfunction.

2. Medication/drugs. Certain medications and drugs have similar effects. These substances may be ingested through over-the-counter or prescription medications or with food. Examples include antihistamines, decongestants, certain asthma medications, Ritalin, diuretics and alcohol.

3. Medical conditions. Examples include illness with fever, gastrointestinal illness or sickle cell trait.

4. Acclimatization/fitness level. Lack of acclimatization to the heat or poor conditioning.


*NOTE: Stimulant drugs such as amphetamines, ecstasy, ephedrine and caffeine are on the NCAA banned substance list and may be known by other names. A complete list of banned substances classes can be found on the NCAA Web site at www.ncaa.org/health-safety.

WARNING SIGNS
Warning signs with heat illness include cessation of sweating, weakness, cramping, rapid and weak pulse, pale or flushed skin, excessive fatigue, nausea, unsteadiness, disturbance of vision and incoherency. If heat illness is suspected, prompt emergency treatment is recommended.

For more information, contact your team physician or athletic trainer.

*[NOTE: Stimulant drugs such as amphetamines, ecstasy, ephedrine and caffeine are on the NCAA banned substance list and may be known by other names. A complete list of banned substances classes is available as part of the NCAA Drug-Testing Program.]
ACL Injury Prevention
A Goal Magazine Piece

Intro

Over the past 25 years there has been a wonderful rise in the number of females participating in competitive athletics. You can’t turn on the television without seeing a cute ad with little girls playing soccer. Women of all ages are gaining respect and self esteem through their efforts in athletic competition. We have come a long way from the days when "ladies don’t sweat, they glow". Women are now sweating with pride.

Unfortunately, this increased activity has been paralleled or exceeded by a rise in serious athletic injuries among women. The most common of these serious injuries involve the anterior cruciate ligament in the knee. Estimates are that 250,000 such injuries occur every year, most commonly among 15 – 25 year old females. Female athletes suffer ACL injuries at a rate two to ten times that of males, depending upon the sport. Female soccer players suffer ACL injuries approximately three times as often as males. Professional women basketball players suffer ACL tears at a rate 10 times that of their male counterparts. Fortunately, there is some good news mixed in with the bad. Early medical research indicates that certain training activities can prevent these serious injuries, both in female and male athletes.

What is an ACL?

The ACL (anterior cruciate ligament) is a short ligament inside the knee connecting upper leg bone (femur) with the larger lower leg bone (tibia). It looks much like a very thick piece of white ribbon with its thin shiny fibers. The ACL maintains knee stability by preventing these bones from moving too far away from each other, either forward or to the side. It can be strained, partially or completely torn. In approximately 1/3 of cases the ACL is completely torn. An intact ACL is very important to knee function in competitive sports like soccer that require a lot of sudden stops, starts and changes of direction. Although athletes who have a torn ACL can sometimes continue to play their sports, their physical ability is markedly reduced because of the instability of that knee. They just can’t do the things they used to do. In addition, because of this instability, athletes who have torn an ACL are much more likely to experience another, potentially disabling knee injury. An athlete with a torn ACL must choose between quitting her sport, continuing to play with less ability and the threat of another injury that might permanently disable her or having major surgery hoping to repair the knee. So, tearing an ACL is a serious problem.

Just how serious? We know that ACL injuries are one of the main causes of permanent sports disability. We have new surgical techniques which are much better than a decade ago, when an ACL injury meant the certain end of sports careers for even highly trained and motivated athletes. Unfortunately, these welcome improvements don’t erase the problem. The sad fact is that nearly one third of high level competitive female soccer players sustaining ACL injuries
give up the sport because of poor function or fear of re-injury. It is even worse for less committed athletes.

**How common is the problem?**

ACL injuries are more common among female athletes than male athletes, up to eight times as common in some studies. In descending order, ACL injuries are most common in gymnasts, soccer, basketball and volleyball players. A survey of NCAA athletes from 1989-93 found that female soccer players suffered ACL injuries at a rate three times that of males. ACL injury rates are so high in college female soccer players that they translate (staggeringly) into nearly one ACL injury for every women’s NCAA soccer team every year. The only group of college athletes with a greater risk was female gymnasts. The high risk gymnasts face is easy to understand if one imagines a female gymnast with her hyperflexible joints flying through the air at high speeds and then coming to a dead stop with straight legs, as the form of gymnastics requires. It is distressing that female soccer players are so close behind their risk level.

The rate of ACL injuries increases with the level of competition. The highest rates are among the highest level female athletes. However, even among high school athletes, ACL injuries are the most common serious knee injury with approximately 20,000 occurring every year in the United States.

**How do ACL injuries occur?**

As you might imagine, a thin fibrous band inside a very small space surrounded by constantly moving bones is vulnerable to getting pinched or torn. In a way, it is a small miracle of design that ACLs don’t tear every time we bend and turn. Although injuring an ACL seems simple, the specifics of why one player gets injured at a particular time become much more complex and confusing. Probably the easiest way to understand ACL injuries is to divide them into two types of injury. The first type is ACL injuries occurring as a result of contact with another player and the second is those that don’t.

Contact ACL injuries occur when a player is hit from behind or on the outside of the knee. They are one reason referees should not hesitate to pull out a card when fouls of this nature occur. It doesn’t just look bad and hurt, it can end a players career. ACL injuries from contact occur at a similar frequency in male and female soccer players.

Non-contact ACL injuries result from sudden changes in direction, particularly while slowing down at the same time, and from landing on a straight knee. Either of these movements can shear the ligament practically instantaneously if performed the wrong way at the wrong time.

Non-contact ACL injuries are the reason for the massive difference in ACL injury rates between male and female soccer players. Nearly 80% of ACL injuries in females occur without contact, while non-contact ACL injuries represent a minority of injuries in males. Some studies have shown as much as a four-fold difference in non-contact ACL injury rates between females and males.
One of the factors believed to increase non-contact ACL injuries is the interaction between soccer shoes and the playing surface. In other words, cleats getting caught in the turf and poorly maintained fields can contribute to these injuries. Indoor soccer has a significantly higher rate of ACL injuries than outdoor soccer. It may be that the tendency of artificial turf to grab onto the shoes could lead to ACL injuries. In that case, the newer indoor surfaces, which appear not to catch players’ shoes so easily, may be safer surfaces for indoor play. More research is needed for definitive answers to these questions.

**Why are women at greater risk?**

This question could stump "Who Wants to be a Millionaire" winners. Faced with an epidemic of serious injuries with long-term consequences, we have been trying to understand what can be done to prevent ACL injuries. Many answers have been proposed and probably all of them play some part.

**Angle of knee:** Because women’s hips are wider, the upper leg bone comes down to the knee at a sharper angle, placing additional stress on the ACL.

**Anatomy of the notch inside the knee:** Some people have smaller spaces inside the knee, but whether there is a difference between males and females is controversial.

**Hormonal variations:** Estrogen makes ligaments looser. One small study found a higher rate of ACL tears around mid-cycle (days 10-14) when estrogen levels peak.

**Loose ligaments:** Women generally have looser ligaments, possibly increasing ACL risk.

**Weaker hamstrings:** The smart money is riding on this theory as the most important factor. The big leg muscles, the quads in the front of the thigh and the hamstrings in the back, also help stabilize the knee. When the stress is too great these muscles can’t counteract the force. If the stress then exceeds the strength of the ligament, it suddenly tears. Men have stronger hamstrings than women. Men use their stronger hamstrings when they land from a jump. This appears to be an important preventive factor because recent studies of a training program, which markedly reduced the rate of ACL injuries, also showed considerable improvement in hamstring strength and knee stability. The point of all this guesswork about "why" is to help us learn how to prevent ACL injuries. It looks like we are getting there.

**How to prevent ACL injuries**

The first study of any size to show a reduction in ACL injury rates was conducted with 600 Italian male semi-professional soccer players. They found that proprioceptive training reduced ACL injury rates by over 700%.

Proprioception is the ability to locate the extremities in space without looking. Although it may be surprising, loss of proprioception is an extremely common cause of re-injury following knee and ankle injury. The athlete slightly mis-steps and sprains an ankle or knee, even though the joint is strong. These soccer players spent 20 minutes a day (2-6 days a week) of balance training during
4-6 weeks of preseason. They would balance on a balance board for 2-5 minutes on each leg four times a day. During the season they did this three times every week.

Although they used fancier and much more expensive equipment, you can make an adequate balance board by purchasing a 12" round of plywood and gluing 1/2 of a softball to the middle of it. If you’ve seen the Ajax youth training videos you’ll remember their players practicing by standing on such a board while juggling a soccer ball inside a net (to save the furniture).

The biggest and best studies were recently conducted here in the USA by Hewitt on female athletes, including soccer players. Their intervention utilized a six week preseason program of muscles, nerves and coordination, owing much to plyometric jump training. They taught subjects to work on technically perfect jumping landing quietly with a toe to heel rock and bent knees. They also taught the subjects to recoil instantly, preparing for the next jump using images like "straight as an arrow", "light as a feather", "recoil like a spring" and "be a shock absorber." Trained study participants had a rate of ACL injury 3.6 times less than controls. They also found average increases in hamstring strength of 44% and jump height by 1.5 inches. One subject increased her vertical jump by six inches!

Last year I used Hewitt’s techniques with my U-10 Class I girls team. I was very interested to observe that the non-dominant leg of each girl would shake on landing. This shaking is a sign of weakness and one of the technical failures Hewitt’s group teaches to avoid. You can learn more about Hewitt’s program by purchasing their Cincinnati Sportsmetrics video (contact Cincinnati Sportsmedicine Research and Education Foundation).

Another recent study suggests that simply encouraging basketball players to come to a stop over three steps (perhaps too restrictive in soccer) and to keep the knees bent when turning can reduce knee injuries in female athletes.

Finally, because quadricep-hamstring strength imbalance appears so important, athletes must also work to maintain flexibility of both of these muscle groups. As muscles are strengthened, flexibility can be lost unless athletes conscientiously cool down and stretch at the end of the workout.

**The bottom line is:**

ACL injuries are a big problem ACL injuries are a bigger problem for females ACL injuries are preventable Every serious female soccer player (of ANY age) should Practice proprioceptive training (a good idea for competitive male soccer players as well). Strengthen hamstrings by Jump training and/or leg curls. Avoid turning and landing with straight legs. Cool down and stretch after exercise. These measures can help prevent serious injury and will almost certainly improve performance to boot. Sorry about the pun. I just couldn’t resist.

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