

# **Sports Medicine**

Eligible Divisions: Secondary & Postsecondary / Collegiate	Round 1: 50 Q test in 60 minutes	Digital Upload: NO
Solo Event: 1 competitor	Round 2: Skill Demonstration	



New for 2024 – 2025

Health Professions Event ......

Editorial updates have been made.

#### **TEXAS HOSA**

Make sure to read TEXAS General Rules and Regulations for updated "Electronic Device Policies" and "Extended Stay Preparation".

#### Area Spring Leadership Conference

Round one online test for Area will be given in December. The top ten (10) competitors will advance to round two (2) in person at the Area Spring Leadership Conference. The top three (3) scores in each Area will advance to State.

#### Texas State Leadership Conference

A Round 1 written exam will be used to slate the top ten (10) competitors for Round 2. Both Round 1 and Round 2 for State will be in person at Kalahari in Round Rock. The top three (3) scores from State will advance to ILC.

#### **Event Summary**

Sports Medicine provides members with the opportunity to gain the knowledge and skills required for patient care in a sports medicine setting. This competitive event consists of two rounds. Round One is a written, multiple-choice test, and the top-scoring competitors advance to Round Two for the skills assessment. This event aims to inspire members to learn more about injury prevention, therapeutic intervention, and immediate care.

#### Sponsorship

HOSA-Future Health Professionals is appreciative for the sponsorship of Sports Medicine by the <u>National</u> <u>Athletic Trainers' Association</u>

#### Dress Code



Bonus points will be awarded for proper dress.

Round 1: Proper business attire, official HOSA uniform, or attire appropriate to the occupational area Round 2: Attire appropriate to the occupational area

#### Competitors must provide:

- A photo ID for both rounds
- Two #2 lead pencils (not mechanical) with eraser for the test.
- Appropriate tape of any size, color or type Elastic wrap (used for Skill III-C)
- Bandage scissors or athletic tape cutter
- Thin foam pads (heel and lace pads) with skin lubricant (used for Skill III-A & B)
- Pad for shoulder (used for Skill III-C)
- Underwrap of any size, color or type

Note: It is the competitor's responsibility to know what size and type(s) of tape/elastic wrap is (are) needed for each taping/wrapping skill, and to bring the appropriate materials to the event.

#### **General Rules**

1. Competitors must be familiar with and adhere to the <u>General Rules and Regulations</u>

#### **Official References**

- 2. The below references are used in the development of the test questions and skill rating sheets.
  - a. Beam, Joel W. Orthopedic Taping, Wrapping, Bracing, and Padding, F.A. Davis, Latest edition.
  - b. France, Bob. Introduction to Sports Medicine and Athletic Training. Cengage, Latest edition.

c. <u>Prentice, William E. The Role of the Athletic Trainer in Sports Medicine: An</u> Introduction for the Secondary School Student, McGraw Hill, Latest edition.

#### **Round One Test**

- 3. <u>Test Instructions:</u> The written test will consist of 50 multiple-choice items to be completed in a maximum of 60 minutes.
- 4. **Time Remaining Announcements:** There will be NO verbal announcements for time remaining during ILC testing. All ILC testing will be completed in the Testing Center and competitors are responsible for monitoring their own time.

#### 5. Written Test Plan

The test plan for Sports Medicine is:

- Injury / Illness Prevention and Wellness Promotion 30%
- Examination, Evaluation, and Assessment 30%
- Immediate and Emergency Care 16%
- Therapeutic Intervention 16%
- Healthcare Administration and Professional Responsibilities 8%
- 6. The test score from Round One will be used to qualify the competitor for Round Two.

#### 7. Sample Test Questions

- 1. Which professional can best advise an athlete on the psychological aspects of the rehabilitation process and how to cope with an injury? (Prentice pp 15)
  - A. Sports physiologist
  - B. Sports neurologist
  - C. Sports psychologist
  - D. Sports massage therapist

- 2. Which vitamin is essential for the metabolism of carbohydrates and some amino acids, maintenance of normal appetite and functioning of the nervous system? (France pp 96)
  - A. Ascorbic acid
  - B. Niacin
  - C. Riboflavin
  - D. Thiamine
- 3. What is a common mechanism of injury for an MCL sprain? (Beam pp 157)
  - A. Quick deceleration, cutting, twisting, and landing movement
  - B. Abduction and lower leg rotation on a planted foot
  - C. Falling on the anterior knee while in a flexed position
  - D. Adduction and internal rotation of the knee

#### **Round Two Skills**

8.

Round Two is a selected skill(s) performance. The Round Two skill	s approved for
this event are: Skill I:	Anatomical
Landmark Identification	7 minutes
Skill II: Joint Action and Maximum Range of Motion Identification	15 minutes
Skill III: Taping / Wrapping	
A. Ankle (Inversion)	5 minutes
B. Achilles Tendon	6 minutes
C. Shoulder Spica	5 minutes

- D. Wrist / Hand (Circular Wrist/Figure Eight) 4 minutes
- **NOTE:** Skill II Options- This skill may use a live patient to demonstrate poses for competitors to identify. In this case, the competitor will have 15 minutes to identify 15 different numbered poses. The competitor will be responsible for telling the patient when the competitor is ready to move to the next numbered pose. Competitors may request the live patient repeat poses as often as needed during this timeframe, and poses do not need to be done in order. As an alternative to a live patient, numbered photographs of patients in varying poses may be used. **Spelling counts!** Competitors should come prepared for either option.

- 9. The selected skill(s) will be presented to competitors as a written scenario at the beginning of the round. The scenario will be the same for each competitor. Some scenarios may involve the combination of multiple skill sheets, in which case some elements may not be scored due either to being duplicative or not appropriate within the scenario. A sample scenario can be found here.
- 10. The scenario is a secret topic. Competitors MAY NOT discuss or reveal the secret topic until after the event has concluded or will face penalties per <u>the GRRs.</u>
- 11. Judges will provide competitors with information as the rating sheets directed. Competitors may ask questions of the judges while performing skills if the questions relate to the patient's condition. Judges will only respond if requested information is included in the scenario or judge script/rating sheet.

#### **Final Scoring**

- 12. The competitor must earn a score of 70% or higher on the combined skills of the event (excluding the test, Anatomical Landmark Identification, and Joint Action and Range of Motion Identification) to be recognized as an award winner at the ILC.
- 13. The final rank is determined by adding the Round One test score plus Round Two skill score. In case of a tie, the highest test score will be used to determine final placement.

Anatomy of the:	Bones (including bony landmarks & joint names)	Ligaments or Other Structures	Muscles (including origin & insertion, belly, & tendons)
Foot	Phalanges 1-5 Metatarsals Tarsals	Transverse arch Metatarsal arch Longitudinal arches	Adductor Hallucis Flexor/Extensor Digitorum Extensor Hallucis Longus
Ankle & Lower Leg	Tibia Fibula Tarsals	Anterior/Posterior Tibiofibular Anterior/Posterior Talofibular Deltoid Calcaneofibular	Fibularis(Peroneus) Longus/Brevis Achilles Tendon Extensor/Flexor Digitorum Longus Soleus Tibialis Anterior Extensor/Flexor Hallucis Longus Gastrocnemius
Knee	Femur Patella Tibia Fibula	Medial Collateral Lateral Collateral Patellar Ligament/Tendon	Rectus Femoris Vastus Lateralis Vastus Medialis Oblique Sartorius Gracilis Biceps Femoris Semitendinosus Semimembranosus Popliteus
Elbow &	Humerus	Ulnar Collateral	Biceps/Triceps
Forearm	Radius	Radial Collateral	Brachioradialis
	Ulna	Annular	Supinator Pronator Teres Pronator Quadratus Flexor/Extensor Carpi Ulnaris Flexor/Extensor Carpi Radialis
Wrist, Hand & Fingers	Phalanges 1-5 Carpals Metacarpals	Anatomical Snuffbox Thenar/Hypothenar Eminence	Flexor/Extensor Digiti Minimi Abductor Pollicis Longus Flexor/Extensor Pollicis
Shoulder	Clavicle Scapula Humerus	Sternoclavicular Acromioclavicular Glenohumeral Coracoclavicular Coracoacromial	Infraspinatus Teres Major/Minor Deltoid Biceps/ Triceps Rhomboids Major/Minor Levator Scapula Trapezius Serratus Anterior Latissimus Dorsi
Neck, Spine & Head	Cervical Spine 1-7 Thoracic Spine 1-12 Lumbar Spine 1-5 Parietal Occipital Temporal Zygomatic Frontal Nasal Maxilla Mandible	None	None

### Skill I: Anatomical Landmark Identification

-	Judge's Signature:				-
Skill I Anatomic (Prentice, Time	al Landmark Identification : 7 minutes)		Possible	e Points	Awarded
musculoskeleta label over the sp Competitors will requested by th sites, muscles ( The Head Athletic locations are to have 15 second the correct loca finished with ea one. The timeke elapsed, so judg	es competitors to demonstrate the l anatomy. Competitors will place pecified anatomical location of a l l have 15 seconds to identify each e judge. Landmarks may include forigin, insertion, belly, tendon), of Trainer (judge) will inform the co be identified, one at a time. The ds to place the small adhesive lab tion. Competitor should verbalize ch landmark so the judge can mo eeper will stop competitor once 18 ge can verbalize next landmark. Ins 2 points for correctly identifying time frame.	a small adhesive live patient. h landmark specific boney r ligaments. mpetitor which 21 competitor will then el on the patient in when they are ove on to the next 5 seconds has			
2	ne Foot:		2 2 2	0 0 0	
4	ne Ankle & Lower Leg:		2 2 2	0 0 0	
8	ne Knee:		2 2 2	0 0 0	

Skill I Anatomical Landmark Identification (Cont'd)	Possible Points		Awarded
E. Anatomy of the Neck, Spine & Head:	0	0	
10	2	0	
11	2	0	
12	2	0	
F. Anatomy of the Shoulder:			
13	2	0	
14	2	0	
15	2	0	
10			
G. Anatomy of the Elbow & Forearm:			
16	2	0	
17	2	0	
18	2	0	
H. Anatomy of the Wrist, Hand & Fingers:			
19	2	0	
20	2	0	
21	2	0	
TOTAL POINTS SKILL I		42	

# Skill II: Joint Action & Maximum Range of Motion Identification

Foot/Ankle eversion	20 degrees
Foot/Ankle inversion	40 degrees
Ankle dorsiflexion	20 degrees
Ankle plantarflexion	45 degrees
Knee flexion	140 degrees
Hip adduction	40 degrees
Hip abduction	45 degrees
Hip extension	10 degrees
Hip flexion	125 degrees
Hip internal rotation	45 degrees
Hip external rotation	45 degrees
Shoulder flexion	180 degrees
Shoulder extension	50 degrees
Shoulder abduction	180 degrees
Shoulder adduction	40 degrees
Shoulder internal rotation	90 degrees
Shoulder external rotation	90 degrees
Elbow flexion	145 degrees
Forearm pronation	80 degrees
Forearm supination	85 degrees
Wrist extension	70 degrees
Wrist flexion	80 degrees
Wrist radial deviation/abduction	20 degrees
Wrist ulnar deviation/adduction	45 degrees

#### Skill II: Joint Action & Maximum ROM Identification

#### (Prentice, Time: 15 minutes)

Competitors will identify joint names, actions, and maximum ranges of motion from the photographs provided or from the live patient demonstration. **Spelling counts!** 

Competitor #: \_\_\_\_\_\_ Judge's Initials: \_\_\_\_\_ Total Points (75 possible)= \_\_\_\_\_

	15	14	13	12	11	10	6	8	7	6	5	4	3	2	1	
TOTAL: Name and Spelling 30 points																Name of Joint
																Points (1 each for name & spelling)
TOTAL: Action and Spelling 30 points																Name of Action
																Points (1 each là name & spelling
TOTAL: ROM 15 points																F Range of Motion
																Points (1 each for correct ROM)
TOTAL: 75 points																Points Awarded

Section # Competito	Division:SSPS/Collegiate	9		
Skill I	II-A Taping – Ankle (Inversion) Time: 5 minutes)	Pos	sible	Awarded
1.	Obtained instructions (scenario) from Head Athletic Trainer (judge).	1	0	
2.	Assembled equipment.	1	0	
3.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2	0	
4.	Greeted patient and introduced self.	1	0	
5.	Identified patient and explained skill.	2	0	
6.	Positioned patient sitting on a taping table with the leg extended off the edge with the foot in dorsiflexion.	1	0	
7.	Demonstrated spraying area with tape adherent (without actually spraying adherent on patient).	1	0	
8.	Applied thin foam pads with skin lubricant over the heel and lace areas to provide additional adherence and lessen irritation.	1	0	
9.	Applied one thin, smooth layer of pre-wrap to foot and ankle (pre-wrap may be under or over thin foam pads above).	1	0	
10.	Using non-elastic tape, applied two anchor strips at a slight angle around the distal lower leg, just inferior to the gastrocnemius belly.	1	0	
11.	Placed an anchor strip around the midfoot, proximal to the fifth metatarsal head.	1	0	
12.	Started the first stirrup on the medial lower leg anchor and proceeded down over the posterior medial malleolus, across the plantar surface of the foot and continued up and over the posterior lateral malleolus, finishing on the lateral lower leg anchor.	1	0	
13.	Began the first horseshoe strip on anchor of the medial aspect of the midfoot, continued around the distal Achilles tendon, across the distal lateral malleolus, and finished on the anchor of the lateral midfoot, proximal to the fifth metatarsal head.	1	0	
14.	Started the second stirrup on the medial lower leg anchor by overlapping the first by $\frac{1}{2}$ of the tape width, continued down over the medial malleolus, across the plantar foot, up and over the lateral malleolus, and finished on the anchor of the lateral lower leg.	1	0	

Skill II	I-A Taping – Ankle (con't)	Pos	sible	Awarded
15.	Began the second horseshoe on the medial rearfoot and overlapped the first by $\frac{1}{2}$ of the tape width.	1	0	
16.	Applied the third stirrup, beginning on the medial lower leg anchor, overlapping the second and covered the anterior medial and lateral malleoli.	1	0	
17.	Starting on the medial rearfoot, applied the third horseshoe, overlapping the second.	1	0	
18.	Beginning at the third horseshoe, applied closure strips in a proximal direction, overlapping each by ½, up to anchor strip on lower leg.	1	0	
19.	Applied two to three closure strips around the midfoot in a medial-to-lateral direction.	1	0	
20.	The tape strips and anchors did not put pressure on the 5 <sup>th</sup> metatarsal head.	2	0	
21.	Anchored the first heel lock across the lateral lace area at an angle toward the medial longitudinal arch. Continued across the arch, then angled the tape upward and pulled across the lateral calcaneus, around the posterior heel, finishing on the lateral lace area.	1	0	
22.	Repeated the same pattern on the other side of the ankle joint moving in the opposite direction.	1	0	
23.	Applied two or three heel locks to ensure maximum stability (use of either individual heel locks or continuous heel locks is acceptable).	1	0	
24.	Reported skill and observations to the Head Athletic Trainer (judge). ( <i>Judges evaluate taping at this time</i> )	4	0	
25.	Upon direction of the athletic trainer (judge), properly used bandage scissors/athletic tape cutter to remove taping.	2	0	
26.	All tape applied with mild to moderate roll tension.	1	0	
27.	Allowed tape to fit the natural contour of the skin.	1	0	
28.	Skill completed on the correct side / body part using equipment/materials appropriate for the task.	4	0	
29.	Properly disposed of used taping materials.	1	0	
30.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2	0	
31.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2	0	
TOTA	TOTAL POINTS SKILL III-A			
70%	Mastery for Skill III-A = 30.1		13	

Sec Con	tion # E npetitor # Judge	Division:SS s Signature	PS/Col	legiate
Skill III-E	B Taping – Achilles Tendon ( <i>Technique Two</i> ) (Time: 6 minutes	6)	Possible	Awarded
1.	Obtained instructions (scenario) from Head Athletic Trai	ner (judge). 1	0	
2.	Assembled equipment.	1	0	
3.	Washed hands or used alcohol-based hand-rub for hand	hygiene. 2	0	
4.	Greeted patient and introduced self.	1	0	
5.	Identified patient and explained skill.	2	0	
6.	Positioned patient prone or kneeling on a taping table, w leg extended off the edge.		0	
7.	Placed hand on the plantar surface of the distal for slowly moved foot into dorsiflexion until patient notifies of that pain occurs.		0	
8.	When painful range of motion is determined, placed foor range & maintained the position during application.	in pain-free 1	0	
9.	Demonstrated spraying the lower leg and plantar the foot with tape adherent ( <i>without actually spraying ad</i> <i>patient</i> ).	herent on	0	
10.	Placed thin foam pad over the heel to prevent irritation.	1	0	
11.	Applied pre-wrap over the area being taped to lessen irr (pre-wrap may be under or over thin foam pad above).	1	0	
12.	Applied two anchors around the lower leg, inferior to the the upper portion of the gastrocnemius belly.	knee, around 1	0	
13.	Placed the other anchor around the ball of the foot.	1	0	
14.	Anchored a strip of heavyweight elastic tape on the mid- plantar foot. Proceeded over the middle calcaneus, and the distal lower leg anchor.	finished on	0	
15. An	head of the 5 <sup>th</sup> metatarsal, continued over the medial ca finished on the medial lower leg anchor.	Icaneus, and	0	
16.	Placed the last heavyweight elastic tape strip at a the head of the 1 <sup>st</sup> metatarsal, proceeded over the latera and finished on the lateral lower leg anchor.		0	
17.	Completed the series by placing 2-3 circular strips elastic tape around the foot.	s of 1	0	
18.	Placed 4-6 strips of elastic tape around the lower leg.	1	0	
19.	Reported skill and observations to the Head Athletic Tra (Judges evaluate taping at this time)	iner (judge). 4	0	
20.	Upon direction of the athletic trainer (judge), properly us scissors/athletic tape cutter to remove taping.	sed bandage 2	0	
21.	Completed tape allows for normal, yet pain free, a Achilles tendon with support.	action of the 2	0	
22.	Skill completed on the correct side / body part using equipment/materials appropriate for the task.	4	0	
23.	Properly disposed of used taping materials.	2	0	
24.	Washed hands or used alcohol-based hand-rub for hand	hygiene. 2	0	
25.	Used appropriate verbal and nonverbal communic patient and other personnel.	,0	0	
	POINTS SKILL III-B astery for Skill III-B = 26.6		38	

Section Compet	# Division: SSPS/Colleg   itor # Judge's Signature	giate -	
Skill I	II-C Wrapping – Shoulder Spica <sup>^</sup> (Time: 5 minutes)	Possible	Awarded
1.	Obtained instructions (scenario) from Head Athletic Trainer (judge).	1 0	
2.	Assembled equipment.	1 0	
3.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
4.	Greeted patient and introduced self.	1 0	
5.	Identified patient and explained skill.	2 0	
6.	Requested patient stand with hand of the involved arm placed on the lateral hip in a relaxed manner.	1 0	
7.	Placed pad or ice pack (as indicated in scenario) over the injured area	1 0	
8.	Anchored the extended end of the wrap on the mid-to-proximal lateral upper arm and proceeded around the upper arm in a medial direction to encircle the anchor.	1 0	
9.	At the posterior upper arm, continued the wrap in a medial direction over the lateral shoulder, across the chest, under the axilla of the non-involved arm, then across the upper back.	1 0	
10.	Next, continued over the lateral involved shoulder, under the axilla, and encircle the upper arm.	1 0	
11.	Repeat this spica pattern two to four times with the wrap, overlapping slightly.	1 0	
12.	Finished the wrap over the involved shoulder, upper back, or thorax area.	1 0	
13.	Anchored elastic tape at the end of the wrap and applied 1-2 spica patterns over the wrap with this tape.	1 0	
14.	Reported skill and observations to the Head Athletic Trainer (judge). (Judges evaluate taping at this time)	4 0	
15.	Upon direction of the athletic trainer (judge), properly used bandage scissors/athletic tape cutter to remove taping.	2 0	
16.	Wrap tension is moderate, yet prevents constriction and irritation of the axilla areas.	2 0	
17.	Skill completed on the correct side / body part using equipment/materials appropriate for the task.	4 0	
18.	Properly disposed of used taping materials.	2 0	
19.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
20.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
	AL POINTS SKILL III-C Mastery for Skill III- C = 23.1	33	

<sup>^</sup>This wrap may be done over a tee shirt or tank top for this event.

Skill II	I-D Taping – Wrist/Hand (Circular Wrist/ <i>Figure of Eight</i> ) (Time: 4 minutes)	Possible	Awarded
1.	Obtained instructions (scenario) from Head Athletic Trainer (judge).	1 0	
2.	Assembled equipment.	1 0	
3.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
4.	Greeted patient and introduced self.	1 0	
5.	Identified patient and explained skill.	2 0	
6.	The patient should sit on table or bench with the wrist in a neutral position and the fingers in abduction.	1 0	
7.	Demonstrated spraying area with tape adherent (without actually spraying adherent on patient).	1 0	
8.	Applied pre-wrap to the wrist and hand to lessen irritation.	1 0	
9.	Anchored non-elastic tape over the ulnar styloid process and continued in a circular, lateral-to-medial direction around the wrist and returning to the anchor.	1 0	
10.	Applied 4-5 additional circular strips around the wrist, overlapping by <sup>1</sup> / <sub>2</sub> the width of the tape. ( <i>Strips may be applied individually or continuously</i> )	1 0	
11.	Beginning again at the ulnar styloid process, applied tape in a medial direction over the dorsum of the hand, over the thenar web space, then across the distal palm. ( <i>Tape may need to be creased through the thenar web space to prevent constriction</i> )	1 0	
12.	Continued from the fifth metacarpal over the dorsum of the hand to the distal radius around the wrist, & returned to the ulnar styloid process.	1 0	
13.	Repeated this figure eight pattern, overlapping by 1/3 the tape width, and anchored on the dorsal wrist.	1 0	
14.	Reported skill and observations to the Head Athletic Trainer (judge). (Judges evaluate taping at this time)	4 0	
15.	Upon direction of the athletic trainer (judge), properly used bandage scissors/athletic tape cutter to remove taping.	2 0	
16.	Tape is of moderate tension and does not cause constriction of the hand and thumb.	2 0	
17.	Tape remains proximal to the metacarpophalangeal joints of hand.	1 0	
18.	Skill completed on the correct side / body part using equipment/materials appropriate for the task.	4 0	
19.	Properly disposed of used taping materials.	2 0	
20.	Washed hands or used alcohol-based hand-rub for hand hygiene.	2 0	
21.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	