



# Weight Control Program

## Introduction

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The IHSA will implement its weight control program that includes body fat testing again for the 2023-24 school year. The program is designed to determine the minimum weight class a wrestler may participate in throughout the season. The establishment of a minimum weight class is based on a body fat measurement of **7%** for male wrestlers and **12%** for female wrestlers.

The IHSA is concerned for the safety of the young people who participate in our wrestling program. The establishment of minimum weight classes along with a maximum weight loss per week allows high school wrestlers to participate in a most healthy manner.

## SECTION 1: THE REGULATION

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The establishment of a minimum wrestling weight based on 7% body fat for males and 12% for females is required for all high school wrestlers. The IHSA does not advocate that a wrestler's established minimum weight is the athlete's best weight, but simply the minimum weight at which the athlete will be allowed to compete.

### I. Establishing Minimum Wrestling Weight

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- A) Skinfold measurements will be utilized by all schools to determine each wrestler's body fat percentage. Only measurements taken by IHSA Certified Skinfold Measurers will be accepted. Schools may elect to have a person certified as a body fat tester. Information about the first-time body fat certification session will be emailed out in September/October each year. The school may sign someone up for the training through the online form sent via email. All previously certified assessors will need to renew their license through the IHSA website each school year.
- B) The lowest weight class a wrestler may compete at will be determined as follows:
  - 1) If the predicted weight, at 7% male or 12% female, is exactly that of one of the weight classes, that weight class shall be the wrestler's minimum weight class. I.e.: 7% body fat is 132, then that wrestler may wrestle 132 or above.
  - 2) If the weight class falls between two weight classes, he/she must wrestle at the higher weight class. I.e.: The 7% body fat is 129, then that wrestler may wrestle at 132 or above.
  - 3) Any male or female wrestler, whose body fat percentage at the time of measurement falls below 7% male or 12% female, must wrestle at the weight class that he/she is at. No weight loss will be allowed. I.e.: When the wrestler is body fat tested, he/she is hydrated and has only 6% body fat. The wrestler at a hydrated 6% body fat and weighs 128 pounds may wrestle at 132 or above.
- C) The school must have all wrestlers body fat tested prior to the wrestlers competing in interscholastic matches. The school will print the results of the body fat testing from their OPC. Each coach must carry a copy of this with him to all meets. **A wrestler may not wrestle until the appeal is complete/final and posted in the school center.** Each coach must provide each school with a copy of their Certified Body Fat Test Result Form for all dual meets and one copy to the meet manager in tournaments.



## II. Time Periods for Measurements

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- A) Skinfold measuring may begin on Monday of Week 19 of the IHSA calendar. All wrestlers, including those coming out late, must have their minimum weight established prior to any competition.
- B) Skinfold measuring must be completed by Friday, of Week 30.
- C) Results of measurements will be posted in TrackWrestling's OPC. A wrestler **may not wrestle** until his/her name appears on this result sheet.

## III. Weight Loss Per Week

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- A) A weight loss of 1.5% of a wrestler's total body weight per week on the descent, has been established by the IHSA. A wrestler will not be allowed to wrestle at the established minimum weight until the date specified on the body fat result sheet provided by the IHSA. These dates allow for a descent of 1.5% weight loss per week from the date of the body fat testing.
- B) A wrestler must make weight at the next lowest weight class on his/her descent down to his/her certified weight class on the first weigh in for that wrestler on or after the target date listed on the weight control certification form listed in the schools center for each school. If a wrestler has an issue with making the target date, the Principal of that school may submit an appeal to the IHSA to review the reasons why that wrestler was not able to make the target deadline. The IHSA would then supply to the school written documentation to allow for a different weigh in date to meet that wrestler's certified weight class.
- C) A wrestler may not weigh in more than one weight class above the certified weight class that he/she has ever weighed in at. If the wrestler does weigh in higher than one weight class above the lowest weight, he/she has weighed in at, then the weight class that is one weight class above his lowest weight class becomes the lowest weight that the wrestler can wrestle for the remainder of the season. I.e., A wrestler weighs in at 136 for the 138-weight class and wrestles, then that wrestler may weigh in the next time at 138 or 145. Two weeks later the same wrestler weighs in at 131 for the 132-pound weight class. The same wrestler may now only weigh in at 132 or 138 for the remainder of the year. If this same wrestler weighs in at the 145 lb. weight class anytime during the remainder of the year, this wrestler would not be allowed to weigh in below the 138-pound weight class for the remainder of that year.
- D) After December 25th, a wrestler may only get growth allowance for the lowest weight class that he/she has made scratch weight at or one weight class above that scratch weight. This is true, even if the wrestler plans to go down one more weight class. Before a wrestler can get the growth allowance at that next lower weight, he/she must make scratch weight the first time down to that weight class after December 25th.

*Note:* A wrestler may not take consecutive day weight allowance at any time during the year until he/she has made scratch weight at that weight class.

## SECTION 2: QUALIFICATIONS

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### I. Certifying for Body Fat Testing

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- A) Each school will have the opportunity to certify a person that will be responsible for the body fat testing of each member of the wrestling team. **This person cannot be connected with the coaching staff or related to a coach or wrestler in your school district.**
- B) Suggestions for Body Fat Tester:
  - Individuals educated and experienced in the fields of health, sport, and/or fitness. This includes but not limited to: Exercise Physiologists, Team Physicians, Physical Therapists, Athletic Trainers, Personal Trainers, Nurses, Physical Education and/or Health Education teachers.
  - Qualified individuals enthusiastic to participate in the program. It does neither the athletes nor the sport any good if the certified assessors are reluctant, forced and/or not committed to the IHSA Wrestling Weight Control Program.
  - Individuals that are color-blind or have challenges distinguishing colors SHOULD NOT be certified.
- C) The cost of the initial training is \$35, payable before the date of the course. Checks are payable to the IHSA. As a part of the new body fat testing program, all Athletic Trainers will receive Continuing Education Units (CEUs) from the Board of Certification (BOC). Teachers can now receive Continuing Professional Development Units (CPDUs).
- D) Once an individual has attended an in-person course they will be required to annually renew their certification by watching an online video and completing an online exam in the IHSA Officials Center. The cost to renew a license is \$10. Attendance to another in-person course would only be required if extensive changes have been made to the course material.
- E) We need to know the number of people attending each training session as classes are limited to 30 students per class, so you must register for a class location. The IHSA will send out an email with a link for an online form to complete registration.
- F) Assessors will log body fat data through their TrackWrestling account.

## SECTION 3: ETHICS & CODE OF CONDUCT

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### I. Professional Responsibilities

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- A) All individual “Assessors” registered with the IHSA Wrestling Weight Monitoring Program will respect the athletes “right to privacy” and the confidentiality of all the data collected during the assessment. Assessors are expected to provide the highest professional and ethical conduct relative to performing assessments on the student athletes. Independent circumstances may require assessors to make professional judgments to further validate the assessment process; therefore, mastering assessment skills and understanding the nature of the Wrestling Weight Monitoring Program is essential for the success of the program.

### II. School Responsibilities in the Measurement Process

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- A) It is the school’s responsibility to ensure that an approved IHSA skinfold measurer conducts the body fat testing for your school. Individuals have the opportunity each year school year to take the course and become licensed.
- B) The school must have available at the time of the skinfold measuring: 1) a scale (recommendation that scales be certified once every two years), 2) skinfold data sheets (on pages 22-23 of the manual), 3) school officials (nurse, teacher, A.D.) who will assist in obtaining the weight of each wrestler and with the recording of data.
- C) The school shall see that all charges for skinfold measuring are paid. IHSA certified skinfold measurers may charge up to \$5.00 per wrestler measured. (Most schools are certifying people in their District so that no fee is paid).
- D) **First Appeal:** The school may file and complete an appeal within 7 calendar days of the data appearing on the school’s body fat result sheet, which is located in the Schools Center. Appeal forms must be e-mailed to Brooke Finchum (bfinchum@ihsa.org). **(A form is provided by the IHSA in the Schools Center under downloadable forms).**
- E) **Final Appeal:** The school may file a final appeal for weight certification after their first certification date and on or before Friday of week 24 on the IHSA Standardized calendar with approval of the IHSA administrator. A final appeal can only occur if the athlete wishing to appeal has not exceeded 1.5% weight loss per week each week from the date of the athlete’s first certification. This appeal would allow the wrestler to drop no more than one weight class from the original minimum result from the first test.

## SECTION 4: SPECIFIC GRAVITY ASSESSMENT

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Dehydration compromises the accuracy of body composition assessments; therefore, all athletes are required to pass a urine specific gravity test in order to be eligible for the body composition assessment. Dehydration increases the concentration of particles in the urine thereby, increasing the urine’s specific gravity. The specific gravity of water is 1.000g/ml and the specific gravity of a hydrated individual is established at 1.020g/ml or lower. This test is simply a pass/fail assessment based on the specific gravity level equal to or lower than 1.020g/ml. If an athlete fails the specific gravity test, the assessment process is ended, and the athlete will not be eligible for reassessment for 24 hours.

### I. Equipment Needed

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- A) Latex-free Exam Gloves
- B) Urine Collection Cups
- C) Reagent Strips (Bayer Multistix SG 10) or a refractometer
- D) Copies of Specific Gravity Color Chart
- E) Biohazard Waste Bags for Urine Collection Cups and Reagent Strips

### II. Procedures

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- A) The following procedures have been developed in order to minimize dishonest techniques to bypass the urine test and to maximize the athlete’s right to privacy.
- B) Mark each urine collection cup to identify the athlete being tested.



- C) Instruct each wrestler to enter the toilet or urinal one at a time with nothing but the urine collection cup.
- D) Allow reasonable time for the athlete to provide a sample of urine.
- E) After collection of the urine by the athlete, appropriate personnel should ensure that the urine is warm by feel on the outside of the collection cup. If the urine is cold or suspect, reject that sample and require the athlete to provide another sample under closer supervision.

### III. How the Test is Performed

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- A) Instruct the athlete to collect a "clean-catch" (midstream) urine sample. To obtain a clean-catch sample, males should wipe clean the head of the penis and females should clean the area between the lips of the vagina.
- B) Instruct the athlete to begin urinating, allowing a small amount to fall into the toilet bowl (this clears the urethra of contaminants). Then, in the urine collection cup, catch approximately 1 to 2 ounces of urine and remove the collection cup from the urine stream.
- C) Once completed, the athlete will give the sample immediately to the proper authority.

### IV. Determining Specific Gravity

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- A) Specific gravity will be determined using IHSA approved Reagent Strips (Bayer Multistix 10SG).
- B) Assessors will use latex-free exam gloves when measuring specific gravity.
- C) The specific gravity test should be administered as soon as possible after the urine is collected.
- D) Remove one strip from bottle and replace cap immediately and tightly. Do not remove strip from the bottle until immediately before it is to be used for testing.
- E) Completely immerse the Reagent strip in the fresh urine (make sure the Reagent patches are completely moistened) and remove immediately to avoid dissolving out the reagents.
- F) While removing, run the edge of the strip along the urine collection cup to remove excess urine.
- G) Hold the reagent strip in a horizontal position (to prevent possible mixing of chemicals from adjacent reagent areas and/or contaminating the exam area with urine) for 45 seconds.
- H) Visually compare the reagent area to the specific gravity color chart on the bottle or supplied chart. HOLD STRIP CLOSE TO COLOR BLOCKS AND MATCH CAREFULLY. Avoid laying the strip directly on the Color Chart, as this will result in the urine soiling the chart.
- I) Record the results of the test. REMEMBER, if the specific gravity is equal to or greater than 1.020g/ml, testing will be discontinued, and a retest will need to be rescheduled.
- J) Discard urine in toilet or urinal.
- K) Discard collection container and reagent strip in a biohazard waste bag.

### V. How to Prepare for the Test

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- A) Eat a normal balanced diet emphasizing foods with high water content such as fruits and vegetables.
- B) Avoid foods and/or supplements that may contribute to water loss such as: chocolate, soft drinks, coffee, and creatine for at least 24-48 hours.
- C) Avoid vigorous physical activities that cause excessive sweating for at least 24 hours.
- D) Consume plenty of fluids; at least eight to twelve 8-ounce glasses per day for several days prior to testing.
- E) Avoid early morning assessment, if possible, due to the effect of not consuming fluids during sleep.

## SECTION 5: BODY WEIGHT ASSESSMENT

Each athlete's body weight will be obtained using a certified/calibrated scale to the nearest 0.2lb.

### I. Equipment Needed

- A) Certified/calibrated scale
- B) Assessment Procedures Manual & Tanita Instruction Manual
- C) Tanita TBF-300WA or 300A
- D) Stadiometer (for measuring stature)
- E) Towels for wiping underside of athletes' feet
- F) Disinfectant (for cleaning Tanita)

### II. Tanita Scale

A TANITA TBF-300-A or 300-WA Body Composition Analyzer/Scale may be used by the certified body fat tester to establish the body fat percentage for wrestlers, but **schools are required to receive approval from the IHSA Wrestling Administrator to use this scale**. Only certified body fat testers can use this method after confirming the wrestler is hydrated through testing.

#### A) Tanita Scale Set Up

Prior to scheduling body fat assessments follow steps 1-3 to ensure the body fat scale is properly set up. To ensure optimum performance of the Tanita body fat scale, read the Maintenance Instructions on pg. 7 in the Tanita Instruction Manual

- 1) SETTING THE NUMBER OF PRINTOUTS AND PRINTING LANGUAGE (pg. 25 Tanita Instruction Manual)
  - I. While holding the "0" key, press the "on/off" key. Release the "0" key after "Prt-1" is displayed on the screen
  - II. Select the number of printouts for **TWO** printouts (if "0" printouts is selected it will not be possible to pre-set the wrestler mode print-out). The IHSA requires that assessors print a minimum of one tape printout for each wrestler per assessment and one printout for the assessor's records. Once the number of printouts has been selected the LCD will automatically advance to the Language Selection Screen.
  - III. The language selection will be displayed as a numerical value (LNG-1) denotes English as the selected language.
  - IV. Be sure there is ample tape in the machine and that you have back up if needed.
- 2) SETTING TO WRESTLER MODE (pg. 21 Tanita Instruction Manual).
  - I. While holding down the 9 key, press the on/off button to turn the control box on.
  - II. The screen should show "rse" on the screen. This is your confirmation that you are in Wrestler mode.
  - III. "rse" will flash off and you should see the arrow pointing to "clothes" flashing and a 0.0 next to Kg.
  - IV. If the 0.0 is next to Kg, push the blue kg/lb. button immediately below the screen. This should move that 0.0 to lbs. on the screen
- 3) SETTING THE MINIMUM BODY FAT "GOAL" MODE-7% (pg. 22 Tanita Instruction Manual)
  - I. While holding down the "7" key, press the on/off button to turn on the control box. Holding the "7" key sets the minimum BF% to the automatic calculation value of 7%.
  - II. The screen should now display "rse" goal 07" This shows that you are in the high school mode for the lowest % of body fat (7%).
  - III. Once this input has been completed, the unit will automatically continue to the measurement screen



*Once the Tanita scale is properly set up the Assessor can schedule body fat testing.  
It is essential to carefully follow these standardized procedures to maximize the accuracy and reliability of this test.*

## B) Stature (Height)

- 1) Set up Stadiometer in body fat station
- 2) Athlete must be barefoot for this measurement
- 3) Instruct athlete to stand erect with heels together, and arms hanging naturally
- 4) The measurement is taken as the maximum vertical distance from the floor to the vertex of the head (vertex is the highest point on the skull when head is held in the Frankfort plane). This position is achieved when the line joining the orbitale to the tragion is horizontal or at right angles to the long axis of the body. The orbitale is located on the lower or most inferior position on the margin of the eye socket. Tragion is the notch above or superior to the flap of the ear (tragus), at the superior aspect of the zygomatic bone.
- 5) Instruct athlete to look straight ahead and take a deep breath. Be sure athlete's heels don't elevate
- 6) Bring the stadiometer headpiece firmly down and making firm contact with the vertex.
- 7) Measurement must be taken before the athlete exhales.
- 8) Measurement is taken and rounded to the nearest  $\frac{1}{2}$  (half) inch. For example, if wrestler is exactly 6 feet tall you must enter "6.00".  $\frac{1}{4}$  inch and below you must round down; above  $\frac{1}{4}$  inch and below  $\frac{3}{4}$  inch should be entered as  $\frac{1}{2}$  inch;  $\frac{3}{4}$  and over should be rounded up to the next inch:
  - From 6' to < 6'  $\frac{1}{4}$ " = 6'0" entered 6.00
  - Between 6'  $\frac{1}{4}$ " and < 6'  $\frac{3}{4}$ " = 6'  $\frac{1}{2}$ " entered as 6.05
  - From 6'  $\frac{3}{4}$ " to 6' 1" = 6' 1" entered as 6.10

## C) Bioelectrical Impedance Procedures

- 1) Athlete's attire
- 2) Prior to stepping on the Tanita scale make sure the soles of the feet are free of excess dirt, as this may act as a barrier to the mild current. **NOTE:** Large calluses on the soles of the feet can produce an error message. To remedy this, you may try placing 0.5cc of saline or water in the center of each electrode. This will act as a conductive material and may allow the current to pass freely through the callus.
- 3) After turning on the Tanita scale, the control panel will show flashing arrows next to male/female. It is extremely important that the scale is in STANDARD mode. Once you have confirmed the scale is in STANDARD mode, select the appropriate gender.
- 4) Wrestler's age arrow will flash- enter the two-digit age of the wrestler
- 5) Wrestler's height arrow will flash next to ft.in (if flashing next to "cm" press the blue kg/lb. button) enter the height of the athlete to the nearest  $\frac{1}{2}$  inch. The scale will wait for you to enter the height to the  $\frac{1}{2}$  inch.
- 6) The screen will now flash "Goal". This is in no way related to the wrestling mode and by entering 0.0 you can bypass this
- 7) The screen will now flash "Step on". The athlete should be dressed properly and be barefoot
- 8) Have the athlete wipe their feet prior to stepping on the scale
- 9) Instruct the wrestler to remain still on the scale until you hear a beeping sound, after which the wrestler can then step off the scale
- 10) The scale will automatically provide both tape printout profile of the wrestler
- 11) After testing each wrestler wipe the scale surface with cleaning disinfectant
- 12) Record Tanita body fat % and weight on the individual profile form. An additional person can be used to record the measurements on the individual profile form



- 13) Staple the thermal paper assessment printout to the individual profile form
- 14) Sign and date the individual profile form

#### **CAUTIONS REGARDING SAFETY OF TANITA**

The use of the bio-electrical impedance (Tanita Body Fat Scale) may not be safe for the following circumstances and an alternative body fat test will be required.

- Pregnancy
- Implanted Defibrillators or pacemakers

### **III. Athlete's Attire**

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Under no circumstances, may a wrestler be weighed-in, in the nude. Males must be in shorts and will be required to remove their shirt during the skinfold measurement; females must be in shorts and halter or sports bra.

## **SECTION 6: SKINFOLD ASSESSMENT**

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Athletes that passed the specific gravity test will proceed immediately to the area where the skinfold assessment is conducted. This area should be controlled to allow privacy for the athletes and confidentiality of the recorded information. The key to the success of this program will be our ability to standardize the assessment procedures.

Skinfold measurements shall be taken **only** with either the Slim Guide or Lange Caliper. This is a low and medium-priced caliper and can be obtained from most health care product suppliers. Measurements taken with the Slim Guide or Lange caliper must be taken by an IHSAA certified body fat tester. The IHSAA recommends the Lange Caliper be calibrated once every two years.

### **I. Equipment Needed**

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- A) Assessment Procedures Manual
- B) Slim Guide or Lange Skin-fold Calipers with calibration block
- C) Tape measure preferably made with flexible material
- D) Water-soluble markers

### **II. Skinfold Techniques**

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It requires a great deal of time and practice to develop your skill as a professional skinfold assessor. Therefore, it is essential to carefully follow these standardized procedures to maximize the accuracy and reliability of your measurements.

- A) Athlete should be standing in the anatomical position with the skin for skinfold sites exposed.
- B) Take all skinfold measurements on the right side of the body. An exception might be made where a deformity or missing limb would necessitate using the left side.
- C) Make sure the athlete's skin is dry and lotion-free.
- D) Do not measure skinfolds immediately after exercise because the sweaty skin is difficult to grasp; it may cause the skin to partially roll out of the caliper tips and thereby give an underestimate of skin folds and body fat. Additionally, exercise causes increase blood flow to the skin, creating a larger skin fold.
- E) Carefully identify, measure, and mark each skinfold site (triceps, sub scapular, abdominal for males; triceps and sub scapular for females).
- F) Palpate the site to familiarize both you and the athlete with the area being measured.
- G) Hold the skinfold caliper in the right hand while raising the skinfold with the thumb and index finger of the left hand. Position yourself so you are looking directly at the caliper dial to avoid errors from viewing from the caliper dial from a disadvantaged angle.



- H) The skinfold should be grasped one centimeter above or adjacent to the measurement site. Practice is essential to feel the underlying adipose tissue separate from the muscle. Hold the skinfold firmly, but do not pinch to the point of pain.
- I) Measure midway between the surface and the crest of the fold. Allow the caliper jaws to gently come in contact with the skinfold. Release the caliper so that the thumb, index finger, and caliper spring tension is supporting the skinfold.
- J) Leave the caliper jaws in contact with the skin for two to four seconds. Longer contact may decrease the skinfold value due to fluid being forced from the tissue.
- K) Read the dial of the caliper to the nearest .5mm.
- L) Record three measurements at each site in rotation order. If the difference between the three values is more than 1mm for a single site, the subject will need to wait 20 minutes for additional skinfold reading (this allows the skin to return to normal condition).
- M) In certain cases, even the most highly skilled assessor will be unable to precisely measure the skinfold thicknesses to the nearest 1mm of extremely obese or heavily muscled individuals. In such cases, an alternative method may be assigned.

### III. Skinfold Locations

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- A) Triceps
  - 1) The triceps skinfold is measured vertically on the midline of the posterior aspect of the upper arm, over the triceps muscle.
  - 2) The fold is measured midway between the posterior-lateral aspect of the acromion process of the scapula and the olecranon process of the ulna.
  - 3) The elbow should be flexed to 90 degrees to identify the landmark. Use a tape measure and mark the location.
  - 4) The arm should then be extended and fully relaxed at the side to raise the skinfold.
- B) Subscapular
  - 1) The sub scapular skinfold is raised on a diagonal one centimeter below the inferior angle of the scapula.
  - 2) With the arms comfortably at their side, palpate the vertebral border with the fingers until the inferior angle is identified. The inferior angle is the lowest point of the scapula. To aid identification of the site, have the athlete place their arm behind their back to make the anatomical features more prominent.
  - 3) the arm to their side and be sure the shoulders are level and relaxed while raising the skinfold.
- C) Abdominal
  - 1) The skinfold is raised vertically on the right side of the subject's abdomen three centimeters from the midpoint of the umbilicus.
  - 2) The athlete should stand with their weight equally distributed on each foot.
  - 3) Encourage the athlete to breathe normally and relax the abdominal wall.

## SECTION 7: HYDROSTATIC WEIGHING PROCEDURES

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Hydrostatic weighing involves determining an individual's residual lung volume and land weight calculation. While dressed in a swimsuit, the participant will then be seated on a submerged platform/chair that is suspended in shoulder deep water from a weighing scale above. The participant exhales completely and then instructed to immerse themselves under the water briefly, while an underwater weight is measured. Several trials are performed and recorded.

### THE FOLLOWING ARE CERTIFIED APPEAL TESTERS FOR HYDROSTATIC WEIGHING:

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**KELLEY ALTOM - PH. (847) 525-3369**  
**Gold Standards System (by appointment)**

Please review the following instructions:

- Do not schedule if you have any lung or pulmonary disorders.
- Avoid vigorous activity 8 - 12 hours prior to testing.
- Fast for at least 4 hours before the test. (drink water during this time)
- Drink plenty of water to ensure that the athlete is hydrated.
- Swim attire is needed for the test.
- Report for testing free of jewelry.



- Try to avoid gaseous foods at least two days prior to test date. (carbonated beverage - high fiber foods such as beans)
- Practice expelling all your air and holding your breath. This will make the test much easier.

## SECTION 8: APPEALS PROCESS

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- A) A school may appeal the results of the body fat testing one time within seven (7) days per wrestler or in a final appeal on or before Friday of week 24 of the IHSA standardized calendar.
- B) Schools must fax a copy of the completed appeal form to the IHSA Office to start the appeal process. No wrestler will be allowed to complete an appeal if they have lost more than 1.5% of weight per week prior to the appeal.
- C) No wrestler may wrestle interscholastically without being body fat tested. If a wrestler's body fat test results are being appealed within the first 7 days, the wrestler may not wrestle in interscholastic competition until the appeal results are posted on the School Center. The final appeal is open to wrestlers who have wrestled previously.
- D) The appealing school shall assume all cost for any appeals it makes.
- E) The wrestler has the following options for the appeal:
- Have another skin fold test by any of the approved certified Body Fat Testers.  
**OR**
  - Be hydrostatic weighed by one of the certified hydrostatic weighing testers in the State of Illinois. **The school will be responsible to call and set up the appeal.** The date of the appeal must appear on the appeal form that is faxed to the IHSA office.  
**OR**
  - Use Bio-Impedence measurement from the TANITA TBF-300-A or 300-WA Body Composition Analyzer/Scale with IHSA administrator approval.
- F) The **wrestler must** take the results of the second or final test.
- G) The results of the appeal will be faxed or e-mailed to the IHSA Office, where the results will be posted in the Schools Center.
- H) No other appeals will be granted.

### TrackWrestling Entries

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For a detailed, step-by-step video on entering an assessment click [here](#)

- A) Go to: [www.trackwrestling.com/seasons](http://www.trackwrestling.com/seasons), pick the current season you want to enter data in and log into your TrackWrestling account.
- B) Go to My Account and select My Teams, then click the team's name you want to enter data for.
- C) On the Transactions tab, click Add Transaction. Select your name for the Assessor and choose "Live" for Transaction Mode in the pop-up window that appears. You will add your assessments for various wrestlers within the transaction folder you created.
- D) Click Add Assessment. Choose the wrestler from the drop-down menu or add new if necessary. (Measure type will be Skinfold)
- E) Enter the data you collected for that wrestler.

## SECTION 9 SUMMARIES & RECOMMENDATIONS

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### I. INSTRUCTIONS FOR BODY FAT TESTER SUMMARY SHEET

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- A) Have wrestlers being tested take the test for Urine Specific Gravity. **NOTE:** Follow directions for administering this test.
- B) Wrestlers that do not pass the Urine Specific Gravity Test will not be body fat tested on this date. They only get one opportunity on any given date to pass the Urine Specific Gravity Test. Wrestlers that do not pass the Specific Gravity Test **Must wait 24 hours to be re-tested.**
- C) Once a wrestler has passed the Urine Specific Gravity test, he/she must be body fat tested immediately on that date only. **Wrestlers should not be allowed to work out between the Urine Specific Gravity Testing, being weighed and the skin fold test.**



- D) Proceed with the body fat testing of each wrestler.
- E) Each body fat tester will have an account through TrackWrestling where data will be logged.
- F) In the new assessment pop-up window, the certified body fat tester must enter the following data on each wrestler:
- Name of wrestler
  - Assessment date
  - Result of hydration test
  - Weight of the wrestler and the three (3) measurements taken at each designated area on the wrestler.
- G) Please make sure that everything is correct prior to moving to the next wrestler. Once all data is recorded for each wrestler, click finish to commit the transaction. Remember that once you commit the transaction, data cannot be edited.
- H) Body Fat Tester must keep a hard copy of all data in case electronic submission does not work properly or tampering has occurred.
- I) Schools will get results from their OPC. The IHSAA reserves the right to have any wrestler re-tested.

## II. FITNESS ASSESSMENT: BODY COMPOSITION SUMMARY SHEET

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- A) Description of Skinfold Procedures
- Equipment:** Skinfold Calipers (Slim Guide or Lange Skinfold Calipers with calibration block)  
Flexible tape and erasable markers to mark the proper sites
- Procedures:**
- 1) All measurements should be made on the right side of the body.
  - 2) A caliper should be placed 1cm away from the thumb and finger perpendicular to the skinfold and halfway between the crest and the base of the fold.
  - 3) Pinch should be maintained while reading the caliper.
  - 4) Wait two (2) to four (4) seconds (and not any longer) before reading the caliper.
  - 5) Take triplicate measurements at each site and retest if triplicate measurements are not within 1 to 2 mm.
  - 6) Rotate through measurement sites or allow time for skin to regain normal texture and thickness.
  - 7) Take three (3) measurements at each testing point on the body.
- Test Selection:** Very lean and very obese people pose special measurement problems: there may be limitations in equipment placement and reproducible outcomes. In addition, there may be a psychological “drawback” to performing this test on individuals who are somewhat sensitive to such information.
- B) Standardized Descriptions of Skinfold Sites
- Skinfold Sites:**
- Abdominal:** Vertical fold; 3cm to the right side of the umbilicus
- Triceps:** Vertical fold; on the posterior midline of the upper arm, halfway between the acromion and olecranon processes, with the arm held freely to the side of the body.
- Subscapular:** Diagonal fold (at a 45-degree angle); one (1) cm below the inferior angle of the scapula
- Male test sites: Abdominal, Triceps, Subscapular
- Female test sites: Triceps, Subscapular



## FORMULA FOR CALCULATING BODY COMPOSITION & MINIMUM WRESTLING WEIGHT CLASS

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To determine a wrestler's body composition the IHSA will be using the Lohman Equation-Calculation for body density and the Brozek Equation-Calculation for % body fat.

*Step 1. Determine the wrestlers body density using the Lohman Equation-Calculation.*

$$BD = [1.0973 - (\text{sum SF} \times .000815)] + [(\text{sum SF})^2 \times .0000084]$$

$$\text{Sum of SF} = \text{Triceps SF} + \text{Sub scapula SF} + \text{Abdominal SF}$$

*Step 2. Use the Brozek Equation-Calculation to determine % body fat from body density*

$$\% \text{ BF} = (457/BD) - (4.142) \times 100$$

*Step 3. To calculate a wrestler's minimum weight based on 7% body fat you can use either of the following calculations.*

$$\text{Minimum wrestling weight (MWW)} = ([1 - (\%BF/100)] \times \text{TBW}) / (.93)$$

or

$$\text{Fat weight (FW)} = \text{TBW} \times (\%BF / 100)$$

$$\text{Lean Body Mass (LBM)} = \text{TBW} - \text{FW}$$

$$\text{MWW} = (\text{LBM}) / .93$$

NOTE: The IHSA will be using the Boileau Equation-Calculation for determining % body fat for female wrestlers.

$$\%BF = 1.35 \times (\text{sum SF}) - 0.012 \times (\text{sum SF})^2 - 3.4$$

$$\text{Sum of SF} = \text{Triceps SF} + \text{Sub scapula SF}$$

$$\text{MWW (Females)} = (\text{LBM}) / .88$$

Any female with a body fat percentage greater than 30% will have her descent hand calculated at the IHSA Office. Body Fat Testers should contact Sam Knox at the IHSA Office to notify him of the female wrestler needing this to be done. An e-mail can be sent with the following details: name, school, and testing measurements.