



SPORTS MEDICINE

WRESTLING MINIMUM WEIGHT CERTIFICATION PROGRAM

INTRODUCTION AND PLAN BACKGROUND

The health hazards associated with excessive weight reduction through food deprivation and/or dehydration are well documented. These hazards include, but are not limited to, reduced regulation of body temperature, kidney failure, and acute and/or chronic fatigue. The KHSAA urges all to consider the information contained herein in making decisions regarding competitive weight of wrestlers.

The purpose of this plan is to develop and determine an athlete's minimum weight, not necessarily best weight, as those are individual decisions. This only forms a limitation for competition, not an artificial standard for normal practice. In order to participate in wrestling, all participants must have a minimum weight determination made by a designated assessor. The establishment of a minimum weight class is based on a body fat measurement of 7% for male wrestlers and 12% for female wrestlers. This determination must be made through a four-part process,

- 1) The determination and validation of the proper hydration level of the athlete;
- 2) The determination of the athlete's body fat percentage;
- 3) The determination of the athlete's minimum weight were his / her body fat percentage reduced to the minimum level; and
- 4) The projection and stipulation for the point in time when a wrestler could actually wrestle at that minimum weight.

Questions about the program or its implementation should be directed to Assistant Commissioner Michael Barren at the KHSAA offices in Lexington.

WRESTLING WEIGHT MANAGEMENT REGULATION AND POLICY

BACKGROUND AND FUNDAMENTALS

- 1) An accepted method of determining this weight shall be used and the Commissioner shall approve the method. Any one of the four approved methods may be used in accordance with the weight management procedures, including skin-fold caliper testing; BOD POD® air displacement; Bioelectrical Impedance Analysis or Hydrostatic (under water) determination.
- 2) The NWCA (National Wrestling Coaches Association) online system shall be used to record and track the procedures.

PROCEDURES

A) Background

- 1) The KHSAA remains 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 limit allows high school wrestlers to participate in a most healthy manner.
- 2) Each school is required to certify minimum weights of all wrestlers and turn in the forms to the KHSAA, either in the form of paper forms or the electronic spreadsheet.
- 3) 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 KHSAA 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.
- 4) No wrestler representing a KHSAA member school may compete in a match against an outside team without a weigh-in and without adhering to NFHS weight class rules.
- 5) To be entered in a specific weight class in the post season tournament series, each wrestler is required to make weight prior to a specified date in the desired postseason weight class.
- 6) All weigh-ins must be recorded using the approved recording system of they do not count toward postseason eligibility.

B) Weight Loss Per Week

- 1) A weight loss of 1.5% of a wrestler's total body weight per week (or 3.5 pounds per week whichever is greater) has been established and therefore that is divided to get the allowable loss per day (.015 of Alpha weight / 7) for the first week or .5 pound per day.
- 2) A wrestler will not be allowed to wrestle at any time in a weight class that would require him/her to lose more than this amount.

C) Designation/Selection/Qualifications of an Assessor

- 1) When an individual is listed with the KHSAA as an "Assessor", there is always a concern about professional responsibility. There is an expectation of the highest professional and ethical conduct relative to performing assessments on the young wrestlers. These young wrestlers MUST be treated with the highest regard for their right to privacy, and for the confidentiality of all data collected with the program.
- 2) Assessors are required to conduct themselves in a manner such that there will be no questions about the positive contribution to the program and to the sport of wrestling. There will be times when professional judgment will be involved to clarify and validate the assessment process; the greater the depth of understanding the program, the more likely you are to represent the best interests of both the KHSAA and the student-athlete.

- 3) Each school may select an individual to serve as the Assessor for this program within their wrestling program. Multiple schools may utilize the same assessors.
 - 4) Schools must submit the name of the assessor to be used to the KHSAA using the appropriate KHSAA form IN ADVANCE of the testing.
 - 5) Assessors may not be members of school coaching faculty in any sport.
 - 6) Assessors must have medical background – by definition, employed in the healing and health care profession – Registered Nurse, Licensed Practical Nurse, Advanced Registered Nurse Practitioner, Doctor, Physical Therapist, Physicians Assistant, Doctor of Osteopathy, Athletic Trainer Certified, nutritionist, health educator or an exercise physiologist.
 - 7) To be eligible to become a KHSAA approved assessor an individual must have demonstrated training and experience in skin-fold measurement or other approved assessment method.
 - 8) Schools may utilize any individuals for the compilation of the data, but must use a designated assessor to perform the actual measurements.
 - 9) Schools may use someone not in one of the categories in Item 1(c) with permission of the Association by requesting such permission in advance.
- D) Establishing Minimum Weights
- 1) The lowest weight class a wrestler may compete at will be determined as follows:
 - a) If the predicted weight, at 7% male/12% female is exactly that of one of the weight classes, that weight class shall be the wrestler's minimum weight class.
 - b) If the weight class falls between two weight classes, he/she must wrestle at the higher weight class.
 - c) Any male or female wrestler whose body fat percentage at the time of measurement falls below 7%/12% must obtain, in writing on the prescribed KHSAA form, a licensed physician's clearance stating that the athlete is naturally at this sub 7%/12% body fat level. A physician's clearance is valid for one season and expires April 1 of each year. A copy of this form shall be submitted to the KHSAA with the minimum weight spreadsheet for each applicable wrestler.
 - d) Any wrestler who first reports to a team after the posted deadline date shall have his minimum weight determined by his first scale weigh-in and he/she may not wrestle at a lower class the remainder of the season.
 - 2) There are four methods of determining the body fat percentage of a wrestler.
 - a) Bioelectrical Impedance Analysis using electronic methods to determine the body fat percentage. The end result of the body fat calculation is entered into the minimum body weight calculations in order to determine the minimum body weight. This is programmed to calculate lean body mass and percent body fat.
 - b) Traditional skin-fold testing, using specific measurements. In this case, skin-fold measurements will be utilized to determine each wrestler's body fat percentage. Only measurements taken by KHSAA approved assessors will be accepted. This method is based on the relationship between subcutaneous fat and total body fat and its inverse relationship to body density. The regression equations have been derived for the specific population of the wrestling community and these formulas calculate body density. The KHSAA will accept measurements using these different methods with the Lange or Harpenden calipers. These are medium priced calipers and can be obtained for around \$200.00 from most health care product suppliers.
 - c) BODPOD air displacement system of measurement. This advanced method uses air displacement technology and is as accurate as underwater weighing; yet, it is very safe and fast for the wrestlers. It also provides the wrestler and coach with an immediate calculation for any allowable weight loss and the allowable schedule for the loss. This device (named the BODPOD) is available for testing at several sites. If you wish to learn more about the BODPOD in the meantime, go to www.bodpod.com on the web. The end result of the body fat calculation is entered into the minimum body weight calculations in order to determine the minimum body weight.
 - d) Underwater or Hydrostatic body fat analysis in a supervised clinical setting. The end result of the body fat calculation is entered into the minimum body weight calculations in order to determine the minimum body weight. This method involves the submersion of an individual to determine the subject's underwater weight that is used along with the weight on land to calculate the body density. It utilizes the concept that muscle mass and fat have specific known densities relative to water. This method can be fairly accurate, although it is usually quite expensive. There is no appeal from the body fat percentage determination used in this method.
 - e) Competitors wishing to appeal the determination of body fat level as determined in (1), (2) or (3) above may do so by using method (4) within two weeks of the original test administration. The costs of such appeal shall be borne by the athlete.
- E) Definitions
- 1) SKIN-FOLD ASSESSMENT TERMINOLOGY - The use of skin-fold assessment in the process of determination of body composition requires some standardization of terminology used in this field. The following is an attempt to accomplish this standardization:
 - a) Total Body Weight (TBW): weight of the body on a certified, calibrated scale.
 - b) Body Density (BD): the mass of the body per unit of volume. (The fat free component is assumed to have a density of 1.100 gm/cm³. the mass of fat is considered to be about .90 gm/cm³)

- c) Percent Body Fat (%BF): the proportion of total body weight that is fat weight and expressed as a percentage. $\%BF = (TBW - LBM) / (TBW) \times 100$
 - d) Lean Body Mass (LBM): the weight of the lean tissue of the body such as muscle, bone, and blood. The weight of the body without the fat weight. $LBM = TBW - FW$.
 - e) Fat Weight (FW): the weight of the fat tissue of the body. Includes both essential and stored fat tissue. $FW = TBW \times \%BF$
 - f) Minimum Wrestling Weight (MWW): the lowest weight at which a wrestler may compete, determined to be 7 % body fat for the Kentucky Wrestling Minimum Weight Program less a 3% margin of error.
 - g) Ideal Body Weight: a body weight selected for a specific individual or group based on both empirical and scientific evidence that provides an optimum level of performance.
 - h) Minimum Weight: a body weight selected for a specific individual or group based on a specific percent body fat. A minimal, but not necessarily ideal or optimum body weight
 - i) Regression Equations: equations that express the relationship (based on correlation) between the criterion measure (GOLD STANDARD) and the prediction measure. In skin-fold assessment these are determined for specific combinations of sites, and specific populations.
 - j) Population Specificity: the attempt to make prediction calculation (equations) on representative subjects from specific groups of individuals, the results of which are intended to be applied to a similar, larger population. In skin-fold assessment for body composition the important specific factors are sex, age, national origin, maturation and hydration.
 - k) Biological Variability: variation that will contribute to error due to such factors as hydration and deposition sites.
 - l) Technical Variability: variability that will contribute to error due to such factors as lack of standardization of procedures among assessors.
 - m) Reliability: reproducibility, the consistency and dependability of a measure. $>.9$ with experienced assessors. Increases with fewer sites and monitored practice.
 - n) Validity: degree to which an assessor obtains an accurate measure. How well the group being assessed matches the group from which the regression equation was obtained and is dependent upon: age, activity level, population specific, and body composition status.
- F) Physician's Clearance for Excessively lean Wrestlers
- 1) Any wrestler who naturally is below the 7%/12% minimum measurement must have a signed physician's clearance on the form provided in this material.

NUTRITION EDUCATION

While it is not required, it is highly recommended that each school participate in a nutrition education program with their student-athletes and incur all costs of the program. Many times, wrestlers are making decisions regarding weight management and weight reduction that would be different if there were better educating as to the long-term consequences. The National Wrestling Coaches Association has an excellent nutritional model available for a nominal cost per school.

WRESTLING WEIGHT MANAGEMENT COMPETITION RULES

A. Weight Management, Certification and Control

- 1) All athletes shall meet eligibility requirements including the development of a set minimum body weight. Only competitors whose minimum weight has been determined using the NWCA online weight management system (including all recording and tracking) are eligible to compete. Athletes without a minimum weight determination may not wrestle in competition or in practice after the first date for competition during the regular season.
- 2) The minimum weight class for each wrestler shall be determined using the National Wrestling Coaches Association (NWCA) online system between October 15 and the first regular season match.
- 3) The Head Coach of the team is responsible for maintaining a signed copy of the Alpha Report as the wrestling permission form. Each athlete subject to the sub-7% (sub-12% for females) physician permission shall have a properly completed form processed, and the Head Coach shall send a copy of that form to the KHSAA prior to the first competition. Once properly received, the KHSAA will authorize the wrestler to compete using the online system and until such is done, the wrestler may not compete.
- 4) A wrestler may not compete on the day of the minimum body weight testing.
- 5) A wrestler desiring to appeal the original minimum weight certification results shall complete the hydrostatic weight appeal within two (2) weeks of the original test.
- 6) A wrestler may never be certified into a class which is below the minimum body weight determined by the wrestler, his/her parents, his/her coach and his/her doctor and verified by using the proper calculation forms.

B) Weight Classes, Weigh-ins and Records

- 1) Competition shall be divided into weight classes for regular and postseason competition as defined in the NFHS Wrestling Rules Book..
- 2) The two-pound growth allowance will be added to each class boundary on December 25, thereby shifting the bounds of the class. The individual wrestler does not "receive" two pounds, the class weight limit is simply increased by two pounds..
- 3) For each round of the KHSAA postseason tournament, the two pound weight / growth allowance provisions from the National Federation Rules shall be used as such shall be added on December 25.

- 4) A certified scale shall be used to verify weight at all matches (regular and postseason). Scales which do not display current certification or for which current documentation is not available shall not count toward the wrestler's weigh-in requirements but shall count as though the wrestler weighed 288.
- 5) If an athlete competes in a match where no certified scale was available, the weigh-in counts as a "miss" in all fourteen weight classes with respect to achieving a desired weight class weigh-in.
- 6) A member school representative may not compete in any match where a weigh-in is not conducted and recorded.
- 7) The Head Coach of each team shall be responsible for entering the complete competition schedule of the team prior to the first competition date, using the NWCA online system and shall maintain the accuracy of that schedule throughout the season.
- 8) The Head Coach of each team shall provide, for each competition weigh-in, a match weigh-in form produced by the NWCA online system showing the lowest applicable weight for each competing wrestler on the actual date of competition. Local event managers should have in place an option to produce such listing in the event that the competing coach does not produce this report at weigh-ins.
Any coach failing to produce this report shall have the weigh-ins recorded on an alternate form, and such shall be provided, by an opposing coach, to the KHSAA for review.
Repeated failure to produce these required weigh-in reports shall be cause for suspension of the Head Coach from regular or post season competition or other penalty contained in KHSAA Bylaw 33 and may subject the team to ineligibility to enter the regional wrestling tournament.
- 9) Following each match, and prior to the next competition for the squad, each coach shall enter the actual scale weights of each wrestler who weighed in for the competition, using the NWCA online system. For multiple day competition within the same event, only the first day weigh-in is to be recorded.
Repeated failure to enter scale weights prior to the next competition shall be cause for suspension of the Head Coach from regular or post season competition or other penalty contained in KHSAA Bylaw 33 and may subject the team to ineligibility to enter the regional wrestling tournament.

C) Certification into a Weight Class

- 1) A wrestler is certified into a particular weight class at any regularly scheduled match or tournament any time on or prior to the Saturday of NFHS week 30 by making base weight (including growth allowance after December 25) at an official weigh-in on a certified scale as long as that certified weight is not below the documented minimum weight and is at a time allowed by the minimum weight calculations. A wrestler weighing in on or prior to the Saturday of NFHS week 30 is continually certifying at the weigh-in weight.
- 2) Once a wrestler is certified into a particular weight class as of the Saturday of NFHS week 30, he/she may weigh-in only in that class and one class above. He/she is automatically re-certified into a higher weight class after the Saturday of NFHS week 30 by weighing in and qualifying for that class, but never into a lower weight class. After the Saturday of NFHS week 30, making base weight (including growth) two classes above any previously certified weight class automatically renders that wrestler ineligible for the remainder of the year to wrestle in the lower weight class (previous certified weight).
- 3) Please note that this rule is for weigh-ins, not matches. It is possible that a wrestler weighed in at a certain class weight for a match, but wrestled up during that match. That weigh-in would count for the lower, weigh-in class.

D) Weight Control

All coaches are cautioned that rapid reduction in weight can endanger the health of the student athlete and coaches are encouraged to keep current with all research in this area. The manager of each meet is to have each participant weighed and it is highly recommended that a physician examine each participant.

FUTURE CONSIDERATIONS

The KHSAA Wrestling Weight Control Program will continue to develop over the next few years with several enhancements planned. Education continues to be a key element in the success and understanding of the weight control program. It is hoped that through continued education and dedicated efforts among our wrestling community, we work toward creating a safer sport and healthier environment.