

*Physical Therapy Annual Exam***Population:**

Adolescent female athletes who are at risk, currently have, or have previous had Female Athlete Triad.

**Introduction:**

Female Athlete Triad (FAT) is defined as the inter-relationship between energy availability, menstrual function, and bone mineral density<sup>1</sup>. Young females participating in sports have the potential for developing one or multiple parts of the triad. A recent systematic review reports that the prevalence of all three components in female high school and college athletes is between 0%-16%, that the prevalence of two components is 3% to 27%, and the prevalence of any single component ranges from 16% to 60%<sup>2</sup>. Literature cites that due to the interactive nature of the components, individuals with just one or two components are still at a high risk for health issues and are at an increased risk for developing all three<sup>1,2</sup>. Energy availability (energy intake minus exercise energy expended) is believed to be the cornerstone of the triad as complications from low energy availability span numerous bodily systems and can have secondary psychological implications<sup>1</sup>. Researchers propose that treatment and recognition of the triad requires a comprehensive multi-disciplinary approach. Physical therapists have the unique opportunity to have prolonged interactions with the athletes and young female patients they treat. The Guide to Physical Therapy Practice states the role of a physical therapist includes prevention and promotion of health, wellness, and fitness<sup>3</sup>. In working with young female athletes, prevention may be primary (preventing the condition in a target population), secondary (decreasing the severity of the condition), or tertiary (restoring function to patient dealing with the condition)<sup>1</sup>. Physical therapists typically can spend more time with patients than other clinicians involved in their care, making the profession especially suited for detecting FAT and providing proper interventions<sup>4</sup>. Physical therapists can detect the warning signs of disordered eating and the triad, as well as assess coping strategies an athlete may present with in regards to their injury.

There are numerous chronic or secondary conditions that can result from one or all aspects of FAT. Assessing each component individually, physical therapists can identify potential concerns and make proper referrals if needed. For the physical therapist, assessing energy expenditure or disordered eating is helpful in noting the magnitude of the problem and the implications on the young female. Recognizing the problem, providing early intervention, and understanding the motivation and impact of exercise training/rehabilitation are all within the role of physical therapy annual exams<sup>4</sup>. A disrupted caloric balance is associated with significant changes in physiology, including a cascade of neuroendocrine alterations that compromise health and performance<sup>4</sup>. Proper caloric intake is needed for menstruation, building and repairing muscle, healing, and proper growth<sup>4</sup>. Even a miniscule imbalance can initiate a cascade of neural and endocrine adaptations that may decrease performance, compromise healing, and increase the risk of fractures in otherwise healthy young athletes<sup>4</sup>. Young athletes have a higher rate of primary and secondary amenorrhea than

sedentary controls<sup>5</sup>. While there are numerous medical reasons for amenorrhea other than FAT, in all cases this can potentially be a serious medical condition that many young females may not recognize as an abnormal issue<sup>4</sup>. Therefore, physical therapists should regularly assess menstrual history, serving as an important intervention as young females are more likely to discuss these issues with healthcare providers they know well and trust<sup>4</sup>. The primary health and medical concerns of amenorrhea are decreased bone mineral density, increased fracture rates, and hypoestrogenemia<sup>4</sup>. Osteoporosis is associated with increased risk for fractures, particularly in the spine, hip, pelvis and femur<sup>4</sup>. Osteoporosis is often silent in the early stages of the condition, making early intervention and screening critical. Genetics, nutrition (especially calcium intake), hormones, weight bearing exercise, alcohol consumption, and cortisol levels play a role in determining bone mineral density<sup>4</sup>. Forty-eight percent of skeletal mass and 15% of adult height should be attained during adolescence, and peak bone mass is achieved around 20 to 25 years of age<sup>1</sup>. Decreased bone mineral density in young women is correlated with increased fracture rates, increased risk for scoliosis, and may be irreversible sometimes even with pharmacological intervention<sup>4</sup>. When physical therapist screen properly and understand bone homeostasis, they can assist in the accrual of bone mineral density in young athletes by advocating for proper nutrition (adequate calcium, vitamin D, and caloric intake), implementing weight-bearing exercises, and making referrals as needed<sup>3,2</sup>.

Physical therapists serve a crucial role in health promotion. Physical therapists can serve to increase health promotion by increasing participation and improving the holistic well-being of adults and children with neuromusculoskeletal disorders<sup>5,35</sup>. Engagement in physical activity can serve as a strong promotor of health and well-being in individuals with a multitude of conditions. Through encouragement of fitness and active living, providing early diagnosis, and by prescribing targeted interventions, physical therapists can support individuals in overcoming personal and environmental barriers to optimal health<sup>35</sup>. Through collaboration with interprofessional teams and an holistic approach to care, physical therapists can heavily contribute to improving the health outcomes of individuals and populations<sup>36</sup>.

**Annual exam: subjective/objective**

<b><u>Question/test</u></b>	<b><u>What testing</u></b>	<b><u>Positive finding</u></b>	<b><u>Clinical reasoning (Evidence if indicated)</u></b>
Supplemental Health History for the Female Athlete (Table 1) <sup>3,4</sup> .	These questions provide the framework for assessing the possibility of	A positive on any one question would not necessarily define the	When an athlete is found to be at risk for disordered eating, a more detailed assessment of eating habits and further exploration of risk factors and poor self-image should be conducted <sup>5</sup> . Any individual at risk for or experiencing disordered eating could be referred to a registered dietitian <sup>5</sup> . Research cites that females commonly begin to notice issues

<p>LEAF-Q<sup>31</sup></p>	<p>one or multiple parts of Female Athlete Triad. They would allow the therapist to understand eating habits, menstrual cycles, and family history related to BMD.</p>	<p>condition or an issue, but would provide the therapist with a pathway to further questions and items to consistently test. If a patient would respond with multiple “yes” or concerning results, this would guide the therapist to further referrals or likely tests/ questions to complete.</p>	<p>with the endocrine system around puberty, with the menstrual cycle being commonly impacted<sup>27</sup>. Proper referral for any signs or symptoms is then needed as misdiagnosis can lead to a downward spiral and further deficiency<sup>27</sup>. Primary or secondary amenorrhea can be caused by low energy expenditure and can be classified into three categories: weight loss-related, stress-related, and exercise-related amenorrhea<sup>5,27</sup>. Amenorrhea also impacts gonadotropin-releasing hormone and luteinizing hormone, which leads to estrogen deficiency<sup>5,27</sup>. Screening is vital because this can lead to further metabolic disturbances including infertility, low bone mineral density and fracture, coronary artery disease, anxiety, depression, and diabetes mellitus<sup>27</sup>.</p> <p>The LEAF-Q is a 25-item, self-report questionnaire that researchers recommend practitioners implement if there are any positive or concerning factors with initial questioning (as discussed above)<sup>31</sup>. This report cites a sensitivity of 78% and specificity of 90% for detecting low energy availability, menstrual dysfunction, and poor bone health<sup>31</sup>. The LEAF-Q does have to be purchased for use. That is why a table is not attached and the literature recommends clinicians start with general questioning before implementing<sup>31</sup>.</p>
<p>Eating Disorder Screen For Primary Care (ESP)<sup>17</sup> (Table 2)</p>	<p>1. Are you satisfied with your eating patterns? 2. Do you ever eat in secret? 3) Does your</p>	<p>Positive equals “no” to question 1 and “yes” to questions 2 through 5</p>	<p>Given this population, disordered eating behaviors are of the utmost concern. The prevalence of disordered eating is higher among female athletes and has been associated with higher rates of morbidity and mortality<sup>17</sup>. The literature cites several studies that showcase the importance of early detection to maintain not only the young females’ physical</p>

	<p>weight affect the way you feel about yourself?          4. Have any members of your family suffered with an eating disorder?          5. Do you currently suffer with or have you ever suffered in Eating disorder</p>	<p>Any positive responses would indicate the need for further assessment and follow-up questions, as well as a possible referral.</p>	<p>activity, but more importantly the individual’s health and wellbeing<sup>17,18</sup>.</p>
<p>Rapid Eating Assessment for Participation (REAPS)<sup>19</sup> (Table 3)</p>	<p>Quick (less than five minute) survey that assesses food consumption in an average week using usually, sometimes, rarely, or does not apply to me categories<sup>19</sup>.</p>	<p>Primary positive responses for our target population would include answers to skipping breakfast, lack of fruit, vegetable, and protein consumption, and lack of whole grain products<sup>19</sup>.</p>	<p>Assessing specific eating habits is paramount in understanding an athletes risk for FAT or associated risks. Improper eating habits can result from a variety of sources and it is important for the psychological therapist to have a complete understanding<sup>21,22</sup>. This can allow a deeper dive and proper education into proper eating habits for the young female as well as proper referral if needed<sup>22</sup>. Johnston et al cites that the REAPS is a simple and quick measure that assess diet quality on a clinical level<sup>21</sup>.</p>

		<p>A positive finding would indicate further discussion of reasoning. Does the adolescent not have access to these foods or is it more of a personal choice? These findings could then lead to further discussions and proper referral sources<sup>19</sup>.</p>	
<p>Detailed Exercise History</p>	<p>1.What activities do you enjoy? Do you currently play any sports? If you do play organized sports, do you feel safe and supported by your coaches and teammates?</p>	<p>Any indications of positives would be unhealthy or abnormal exercise habits.</p>	<p>Exercise habits are a key component to FAT and assessing any young female. Having a solid understanding of the individuals exercise regimen provides insight to whether they are achieving a healthy level of activity or possibly overtraining, which has been identified as a key element in the possibility of FAT<sup>29</sup>. Physical therapist need to be able to explore the type of activity, the intensity to which it is being performed, and how long the activities last<sup>29</sup>. For individuals who are involved in sports, it is important to understand the individual’s emotional response to both her teammates and coaches. Any indication of undo pressure or fear associated with the activity would be a red flag and warrant further questioning<sup>29</sup>.</p>

	<p>2.Are there any activities you would like to be able to do?</p> <p>3.How many days per a week are you participating in vigorous activity?</p> <p>4.How many minutes per a day are you active?</p> <p>5.How many hours per a week are you inactive?</p> <p>6.Do participate in strength training? If so, how often?</p> <p>7.What does a typical school day look like for you?</p> <p>8.What does a typical weekend look like for you?</p>		
<p>History of Further Musculoskeletal</p>	<p>What, if any, are your past and current</p>	<p>Any current or past injury/condition</p>	<p>Knowledge of any previous or current injury and/or surgery is vital for clinical reasoning and may support the need for a more in-depth evaluation of the impacted area<sup>7</sup>. These</p>

<p>Injuries or Conditions</p>	<p>medical conditions or injuries? Do you have any upcoming or previous surgeries? Have you ever experienced a concussion? Have you ever had to sit out of sports due to an injury or condition?</p>	<p>would constitute a positive finding. This would be important to keep in mind as you continue with the exam and consider further testing or referral.</p>	<p>questions provide the therapist with background information about the athletes past musculoskeletal history and attempts to detect any underlying condition that might predispose the athlete to injury, furthering guiding more in-depth questioning as needed<sup>8</sup>.</p>
<p>Bowl and Bladder Health<sup>27,28</sup></p>	<p>1.Do you go to the bathroom &gt;8 times a day? 2.Do you ever have any trouble not making it to the bathroom on time? 3.Do you ever lose stool or urine because you are unable to make it to the bathroom on time? 4. Do you ever lose stool or</p>	<p>A positive would be “yes” to any question and would indicate further questioning and possible referral to a pelvic health specialist<sup>27,28</sup>.</p>	<p>During this period of increased social and emotional stress as well as increased development, the GI system can become sluggish which may add more stress to the females sympathetic state<sup>27,28</sup>. Lifestyle habits can also promote unintentional disordered eating which can impact a plethora of body systems including hormone levels<sup>27</sup>.</p>

	<p>urine when exercising, coughing, or sneezing?                      5. Do you wake-up greater than two times a night to use the restroom?                      6. Do you have fewer than two bowel movements per a week?                      7. Do you frequently have hard or painful bowel movements?                      8. Do you commonly have abdominal pain or bloating not associated with another condition?</p>		
<p>Visual Analog Scale (VAS)<sup>25</sup>                      (Table 4)</p>	<p>Provides a numeric value to acute and/or chronic pain</p>	<p>Positive would be indicated by any score over 0 or a change in</p>	<p>Pain can serve as an indicator to past or present injury. It would be important for the physical therapist to acknowledge and further dissect any pain the individual may be having<sup>24</sup>.</p>

		score from a past exam	
Vital Signs	Blood Pressure (supine and standing), Heart Rate, and Respiratory Rate  Weight and Height	BP: <120/<80 HR: 60-100bpm RR: 12-16bpm  All of these values indicate the average range <sup>9</sup> .  There are no specific positive values for weight and height, it would be very dependent upon the specific individual and their past values <sup>30</sup> .	These standardized measures can provide baseline information about the individual's cardiovascular status, and can aid in screening for undiagnosed pathologies. The literature cites the following values as reasons for concern and possible referral: 40>HR >130, >200 SBP, >110 DBP, 5>RR>40 <sup>10</sup> . Depending upon findings, communication with the individuals physician may be warranted for referral or further discussion about specific parameters for rest and exercise. While large emphasis should not be placed on weight or height, these are important values to track over time to ensure proper growth and to be able to assess any large changes <sup>30</sup> . Weight loss has also been cited as one manifestation of FAT, making it an essential number to track <sup>30</sup> .
Demographics	1.Date of Birth 2.Primary caregiver/ who do you currently live with? 3.Ethnicity and Race	Positives would be lack of positive living situation or limited access to healthcare.	These baseline questions provide a good entry way into the examination. They allow the physical therapist to gain insight to the most basic aspects of the patient's life, assessing their living conditions, school situation, and access to healthcare. The primary objectives of screenings for this young female population include screening for any condition or situation that may be detrimental to the individuals health as well as

	<p>4.Current grade level and school</p> <p>5.Access to healthcare (insured, underinsured, uninsured)</p>	<p>Further questioning or referral to social work would then be indicated.</p>	<p>screening for any condition that may predispose the individual to injury or further illness<sup>12</sup>.</p>
Sleep Habits	<p>1.How much sleep do you get in a typical night?</p> <p>2.Do you feel well rested when you wake up?</p> <p>3.Is there anything that is currently impacting your sleep?</p> <p>4.Do you have trouble falling or staying asleep?</p>	<p>A positive result would be any answer that indicates the individual has difficulty with healthy sleep habits or patterns.</p>	<p>Cites how adolescent females have their sleep habits drastically impacted by pressures of external validation, the possibility of not receiving enough fuel at breakfast and lunch, poor ability to communicate emotions, and not receiving the recommended duration of nine hours of sleep each night. It is further recommended that adolescent girls need this amount of time of sleep due to the extreme growth and development that is occurring during this period of time.</p>
Medical History	<p>1.Illnesses or allergies?</p> <p>2.Current medications?</p> <p>3.Family history of medical problems.</p> <p>4.Any documentation</p>	<p>A positive would be constituted by any abnormal finding that might dictate what further tests or interventions</p>	<p>Research reports that 65-75% of problems can be identified through medical history taking alone<sup>11</sup>. The medical history information can aid the physical therapist in determining any present or future medical problems and make clinical reasoning choices from that information<sup>11</sup>. It is important to be aware of and understand the side effects of any medication a patient is taking. Side effects can include a multitude of musculoskeletal, psychological, and/or emotional changes<sup>22</sup>. For this specific population, it is important to</p>

	<p>of childhood conditions? 5. Have you ever been hospitalized and if so, please explain? 6. Do you currently or have you ever smoked or consumed alcohol?</p>	<p>can be applied. A positive might also indicate referral to another provider.</p>	<p>understand if the individual is taking oral contraceptive pills. While the relationship between decreased bone mineral density and birth control pills is widely debated and still unclear, there is some research to suggest the association<sup>23</sup>. Given this concept, it would be another factor to consider in screening for FAT.</p>
<p>Mental Health Screen<sup>13</sup> (Table 5)</p>	<p>6-Item Kutcher Adolescent Depression Scale</p>	<p>Total scores at or above 6 suggest possible depression and a need for more thorough examination</p>	<p>This scale is designed specifically to assess the severity of adolescent depression<sup>13</sup>. Used with a cut-off score of 6, the KADS reports sensitivity and specificity rates of 92% and 71% respectively<sup>13</sup>. The six-item KADS has been shown as an efficient and effective means of ruling out a major depressive episode in adolescents. Through implementing a mental health assessment with this specific population, it also provides an opportunity to initiate discussion on health-related topics<sup>12</sup>.</p>
<p>Musculoskeletal Examination</p>	<p>Gait assessment, upper extremity and lower extremity range of motion and manual muscle test evaluation, basic reflex testing, quick screen through</p>	<p>For gait assessment<sup>14</sup>, we would be looking deeper into: foot strike pattern, foot inclination angle, extended tibial angle in loading</p>	<p>Sanders and Nemeth cite that range of motion testing should be completed for the low back, quadriceps, hamstrings, gastrocnemius, iliotibial band, shoulder internal and external rotation, forearm pronation and supination, and wrist flexion and extension<sup>11</sup>. Measurements may initially be taken in a gross manner; however, if warranted standard goniometric measurements for each joint should be implemented<sup>11</sup>. Observations of standing postural alignment is vital for this population. Decreased bone mineral density and weight loss may lead to various postural malalignments and possibly even scoliosis; therefore, this component should be carefully</p>

	<p>myotomes and dermatomes (unless more in-depth screen is warranted due to patient history or exam findings), postural alignment, and balance</p>	<p>response, limited or excessive knee flexion during stance, hip extension range during stance, trunk posturing, stride length and cadence</p> <p>In assessing range of motion, positive findings would be indicted through hyper or hypomobile segments<sup>11</sup></p> <p>Positive findings for manual muscle testing would include any discrepancy in side comparison or extreme strength loss</p>	<p>screened<sup>3,5,11</sup>. Single-leg squat or single-limb balance is recommended to allow side to side comparison and to track any balance deficits overtime<sup>10,11</sup>.</p>
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		<p>in any segment (&gt;4/5)<sup>15</sup></p> <p>Reflex, myotome, and dermatome testing would indicate a positive in no response or a hyper response was noted<sup>16</sup></p>	
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**Resources/referrals:**

<b>Test item</b>	<b>Resource/referral</b>	<b>Reasoning</b>
<p>Supplemental Health History for the Female Athlete (Table 1)<sup>3,4</sup>.</p> <p>LEAF-Q<sup>31</sup></p>	<p>Registered dietician, endocrinologist, and/or primary care provider</p>	<p>If an individual is presenting with either all or one sign of FAT, this needs to be explored further. Depending upon the positive answers, the physical therapist would then use clinical reasoning as to which referral would be most appropriate. If the concern was with energy consumption, a registered dietician would be appropriate for further testing and education<sup>30</sup>. If the concern includes bone mineral density and/or abnormalities with mensuration, than an endocrinologist or primary care provider would be indicated. Further testing could possibly include lab values, pelvic examination, or DEXA scans<sup>32</sup>.</p> <p>Systemic involvement can result from any component of FAT and the manifestations of this can include: weight loss, chronic fatigue, fractures, decreased immune system, decreased ability to recover from injury, depression, anxiety, constipation, changes in thyroid function, increased risk</p>

		for atherosclerosis, slowed growth, impaired muscle mass, and vaginal dryness <sup>30</sup> . Due to the multitude of complicating factors, physical therapist should use clinical reasoning as to which provider would be most appropriate for referral or further recommendations.
Eating Disorder Screen For Primary Care (ESP) <sup>17</sup> (Table 2)	Registered dietician, psychologist, or primary care provider	While physical therapists are able to provide basic nutritional education, it is not within our scope of practice to provide specific interventions or conduct in-depth testing <sup>17</sup> . If positives are found within the exam, referral to a registered dietician would be warranted. A PCP or psychologist would be indicated if the disordered eating habits stem from an emotional response to food <sup>17</sup> .
Rapid Eating Assessment for Participation (REAPS) <sup>19</sup> (Table 3)	Registered dietician	As with the ESP screen, positive results would indicate referral to a registered dietician for further nutritional care. The difference between the two exams is that the ESP screens for disordered eating habits, while the REAPS assumes a more in-depth assessment as to what foods and how regularly the individual is consuming nutrients <sup>19</sup> .
Vital Signs	Primary Care Provider	Any abnormal findings that the individual reports their PCP is not aware of might necessitate referral. Abnormal findings in blood pressure, heart rate, or respiratory rate could indicate further cardiopulmonary conditions and should be evaluate by a trained healthcare professional <sup>33</sup> .
Mental Health Screen <sup>13</sup> (below) (Table 5)	Psychologist, psychiatrist, or counselor	While physical therapists are often health care providers patients feel comfortable talking and sharing information with, they are not trained to treat (the mental health aspect, not for neuromusculoskeletal conditions) or diagnosis individuals with mental health conditions <sup>34</sup> . If there are positive findings from the Mental Health Screen, further questioning can be applied and then referral to the proper clinician to help address the condition <sup>13,34</sup> .
Bowl and Bladder Health <sup>27,28</sup>	Pelvic floor specialist	If an individual has positive findings to bowel and/or bladder screenings, proper referral is needed as this could indicate a further neurological, endourological, or gastrointestinal issue <sup>27,28</sup> . This referral could include a physical therapist with pelvic floor specialization, gastroenterologist, primary care provider, or urologist.

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**Appendix (if indicated):**

*Table 1:*

**Supplemental Health History Questions for the Female Athlete**

1. How old were you when you had your first menstrual period?
2. How many periods have you had in the past 12 months?
3. Have you ever gone more than two months without a menstrual period?
4. How long do your periods last?
5. When was your last menstrual period?
6. Do you take birth control pills or hormones?
7. Have you ever been treated for anemia?
8. What have you eaten in the last 24 hours?
9. Are there certain foods or food groups you refuse to eat?
10. Are you happy with your present weight? What would you like to weigh?
11. Have you ever tried to control your weight with: Fasting? Vomiting? Laxatives? Diuretics? Diet Pills?
12. Have you ever been told you have a stress fracture?
13. Have you or anyone in your family been told you/ they have osteoporosis or low bone mineral density?
14. Have you ever taken any type of steroid?
15. Do you have any questions about healthy ways to control weight?
16. Do you have any further health questions or concerns?

*Table 2:*

Client Name: \_\_\_\_\_ Client DOB: \_\_\_\_\_

## Eating Disorder Screen for Primary Care (ESP)<sup>1</sup>

	YES	NO
1. Are you satisfied with your eating patterns?		
2. Do you ever eat in secret?		
3. Does your weight affect the way you feel about yourself?		
4. Have any members of your family suffered with an eating disorder?		
5. Do you currently suffer with or have you ever suffered in the past with an eating disorder?		

\* A “no” to question 1 is considered an abnormal response.

\*\* A “yes” to questions 2-5 are considered abnormal responses.

Any abnormal response indicates that client needs further assessment.

Please contact:

Casey Becker, LMHC  
 Mended Wing Counseling, LLC  
 930 E. Brainerd St.  
 Pensacola FL 32503  
[www.mendedwingcounseling.com](http://www.mendedwingcounseling.com)  
 (617)797-7949  
[mendedwingcounseling@gmail.com](mailto:mendedwingcounseling@gmail.com)

Client referred by : \_\_\_\_\_ Contact number: \_\_\_\_\_

[Four Simple Questions Can Help Screen for Eating Disorders](#). M Cotton, C Ball, P Robinson. J Gen Intern Med. 2003 January; 18(1): 53-56. doi: 10.1046/j.1525-1497.2003.20374.x

Table 3:

**REAPS (Rapid Eating Assessment for Participants - Shortened Version)**  
CJSegal-Isaacson, EdD RD, Judy-Wylie-Rosett, EdD RD, Kim Gans, PhD, MPH

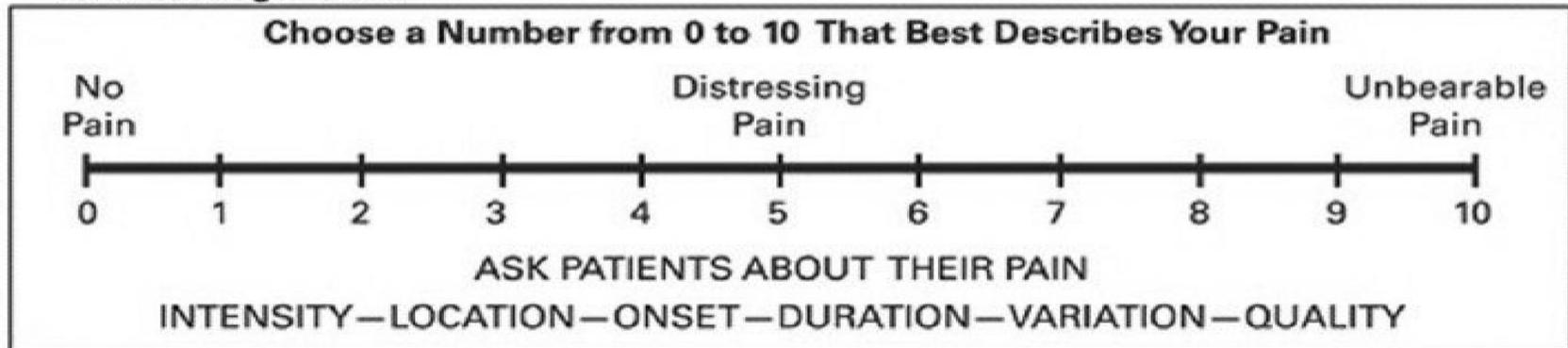
In an average week, how often do you:	Usually/ Often	Sometimes	Rarely/ Never	Does not apply to me	
1. Skip breakfast?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
2. Eat <u>4 or more</u> meals from sit-down or take out restaurants?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
3. Eat <u>less than 2 servings</u> of whole grain products or high fiber starches a day? <b>Serving</b> = 1 slice of 100% whole grain bread; 1 cup whole grain cereal like Shredded Wheat, Wheaties, Grape Nuts, high fiber cereals, oatmeal, 3-4 whole grain crackers, ½ cup brown rice or whole wheat pasta, boiled or baked potatoes, yuca, yams or plantain.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
4. Eat <u>less than 2 servings</u> of fruit a day? <b>Serving</b> = ½ cup or 1 med. fruit or ¾ cup 100% fruit juice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
5. Eat <u>less than 2 servings</u> of vegetables a day? <b>Serving</b> = ½ cup vegetables, or 1 cup leafy raw vegetables.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
6. Eat or drink <u>less than 2 servings</u> of milk, yogurt, or cheese a day? <b>Serving</b> = 1 cup milk or yogurt; 1½ - 2 ounces cheese.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
7. Eat <u>more than 8 ounces</u> (see sizes below) of meat, chicken, turkey or fish <u>per day</u> ? <i>Note: 3 ounces of meat or chicken is the size of a deck of cards or ONE of the following: 1 regular hamburger, 1 chicken breast or leg (thigh and drumstick), or 1 pork chop.</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Rarely eat meat, chicken, turkey or fish  align="center"> <input type="radio"/>	
8. Use <u>regular processed meats</u> (like bologna, salami, corned beef, hotdogs, sausage or bacon) instead of low fat processed meats (like roast beef, turkey, lean ham; low-fat cold cuts/hotdogs)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Rarely eat processed meats  align="center"> <input type="radio"/>	
9. Eat <u>fried foods</u> such as fried chicken, fried fish, French fries, fried plantains, tostones or fried yuca?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
10. Eat <u>regular potato chips, nacho chips, corn chips, crackers, regular popcorn, nuts</u> instead of pretzels, low-fat chips or low-fat crackers, air-popped popcorn?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Rarely eat these snack foods  align="center"> <input type="radio"/>	
11. <u>Add butter, margarine or oil</u> to bread, potatoes, rice or vegetables at the table?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
12. Eat <u>sweets</u> like cake, cookies, pastries, donuts, muffins, chocolate and candies more than 2 times per day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
13. <u>Drink 16 ounces or more</u> of non-diet soda, fruit drink/punch or Kool-Aid a day? <i>Note: 1 can of soda = 12 ounces</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
	YES			NO	
14. You or a member of your family usually shops and cooks rather than eating sit-down or take-out restaurant food?		<input type="radio"/>		<input type="radio"/>	
15. Usually feel well enough to shop or cook.		<input type="radio"/>		<input type="radio"/>	
16. How willing are you to make changes in your eating habits in order to be healthier?	1 Very willing	2	3	4	5 Not at all willing

Table 4:

Scale document down

**Figures: Tools Commonly Used to Rate Pain**

**Visual Analogue Scale**



**"Faces" Pain Rating Scale**

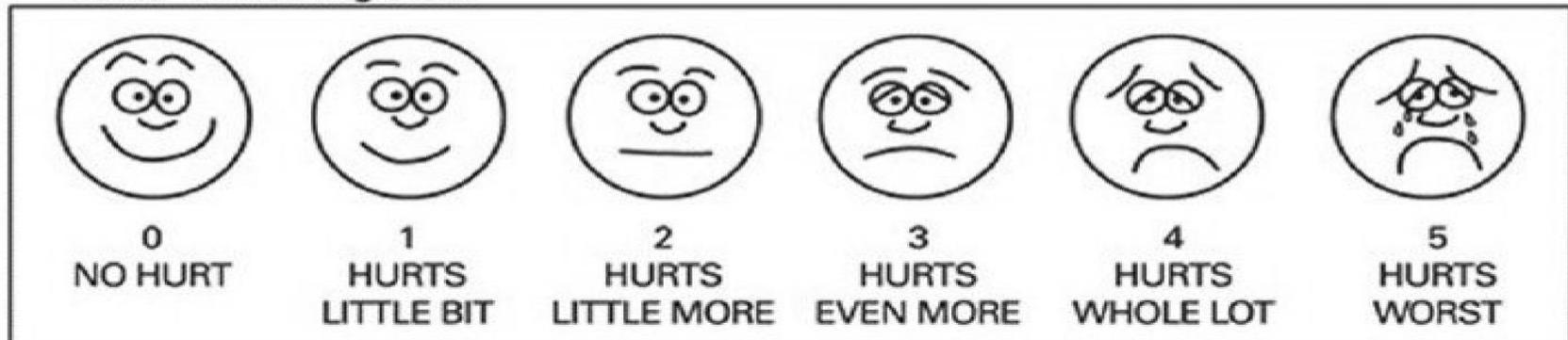


Table 5:

## 6-ITEM Kutcher Adolescent Depression Scale: KADS

NAME : \_\_\_\_\_

DATE : \_\_\_\_\_

OVER THE LAST WEEK, HOW HAVE YOU BEEN "ON AVERAGE" OR "USUALLY" REGARDING THE FOLLOWING

1. Low mood, sadness, feeling blah or down, depressed, just can't be bothered.

a) Hardly Ever

b) Much of the time

c) Most of the time

d) All of the time

2. Feelings of worthlessness, hopelessness, letting people down, not being a good person.

a) Hardly Ever

b) Much of the time

c) Most of the time

d) All of the time

3. Feeling tired, feeling fatigued, low in energy, hard to get motivated, have to push to get things done, want to rest or lie down a lot

a) Hardly Ever

b) Much of the time

c) Most of the time

d) All of the time

4. Feeling that life is not very much fun, not feeling good when usually would feel good, not getting as much pleasure from fun things as usual.

a) Hardly Ever

b) Much of the time

c) Most of the time

d) All of the time

5. Feeling worried, nervous, panicky, tense, keyed up, anxious.

a) Hardly Ever

b) Much of the time

c) Most of the time

d) All of the time

6. Thoughts, plans or actions about suicide or self-harm.

a) Hardly Ever

b) Much of the time

c) Most of the time

d) All of the time

TOTAL SCORE: \_\_\_\_\_