

HYPOTHALAMIC AMENORRHEA: RETHINKING THE CLINICAL PRESENTATION IN THE MODERN ERA AND NOVEL SCREENING TOOL “STAFF”

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Background: Traditional medical teaching about functional hypothalamic amenorrhea included seeing the condition in female athletes, patients suffering from anorexia or those with an underweight BMI. More subtle patterns of restriction and compensatory exercise are likely at play and contribute to development of hypothalamic dysfunction. Reproductive aged women are more likely to be influenced by social media, and average daily time spent on the social media has nearly doubled in the last 10 years¹. Research has found a link between social media use and disordered eating, with 51.7% of adolescent girls with a social media account reporting severe changes to their eating routines, like skipping meals or over-exercising². Social media not only can contribute to unrealistic body image ideals, it can be a source of spreading restrictive behavior³.

Objective: The aim of this study was to characterize the lifestyle choices that are resulting in FHA in order to provide an updated view of FHA, improve screening for the condition and increase diagnosis of patients by family practitioners and Ob/Gyn generalists. Due to the associated complications of a prolonged hypoestrogenic state, we aim to provide a tool that can increase diagnosis of FHA and referral to reproductive endocrinology when indicated.

Material and Methods: Using a cross-sectional, mixed-methods design, an anonymous online survey using Qualtrics was developed. Participants were recruited through social media, online support groups and professional email listservs. Inclusion criteria were self-identifying as currently or previously having FHA and having primary or secondary amenorrhea > 6 months.

Results: There were 1067 respondents who started the survey and 1008 respondents who met inclusion criteria. Most respondents had seen a medical provider for missing periods or FHA (88.51%, n=878). Participants were most likely to first learn about FHA from the internet (34.66%, n = 409), Instagram (23.05%, n=272), Physician (14.75%, n=174), other health care provider (3.05%, n=36), Facebook (2.64%, n= 31), other social media (3.39%, n=410). 71.2% (n=718) of participants with FHA reported tracking calories while amenorrheic. Among those who tracked caloric intake, 6.25% (n=45) consumed less than 1000 kcal/day and 15.22% (n=1090) between 1000-1200 kcal/day while amenorrheic. The majority of patients who were tracking intake reported to be consuming 1500-2000 kcal/day (38.41%, n=275). The majority of respondents reported to have certain food rules such as only eating certain fruits, drinking only diet beverages, not eating certain food groups, or not eating processed food. (83.94%, n=758). Many participants also reports restrictions around times they eat: not eating before a certain time of day (30.14%, n=305), no snacking in between meals (25.79%, n=261), not eating after a certain time of day (23.32%, n=236), and having a minimum time between meals (20.75%, n=210).

Conclusions: This is the largest study on women with FHA to date. The findings of this study were used to create the “STAFF” screening tool which focuses on time restricted eating and exercise. This screening tool can be used by family practitioners and OBGYNs to identify patients missing periods at risk for FHA to increase timely diagnosis and referral to RE.

STAFF Screening Tool

Patients with primary amenorrhea (never menstruated) or secondary amenorrhea (no menses for > 6 months) who engage in one or more of the following should be considered at risk for functional hypothalamic amenorrhea and evaluated further by measuring gonadotropins or referral to reproductive endocrinologist.

S: Do you have certain times you **S**tart or **S**top eating in a day?

T: Do you **T**rack calories?

A: Do you intentionally **A**void eating between meals or have a minimum time that must pass between eating?

F: Do you have food rules? Examples are only eating certain fruits, drinking only diet beverages, not eating certain food groups, or not eating processed food.

F: Do you exercise fasted?

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