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1 Learning to Eat Again:
2 Intuitive Eating Practices Among Retired Female Collegiate Athletes

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Abstract

The present study used an open-ended survey to collect information about current eating practices and coping strategies among 218 retired female athletes. An inductive and deductive thematic analysis revealed three themes relevant to the intuitive eating framework -- *Permission to eat*, *Recognising internal hunger and satiety cues*, and *Eating to meet physical and nutritional needs*. Athletes described feeling liberated with regards to their eating following retirement from sport, and for some this included an alleviation of disordered eating practices. These changes, however, required an effortful process of recalibration, during which athletes had to re-learn and reinterpret their body's physiological signals of hunger and satiety. Additional research is needed to understand just how this process unfolds and how retired athletes can be supported in developing a healthier and more adaptive approach to eating.

Keywords: sport, intuitive eating, female athletes, retirement; eating behaviour

Learning to Eat Again:

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Retirement from sport involves significant changes to daily routines, interpersonal relationships, and perceived identity (Taylor, Ogilvie, & Lavalley, 2005), but particularly to body shape, weight, and eating behaviours (Stephen, Torregrosa & Sanchez, 2007; Stirling, Cruz & Kerr, 2012). Qualitative research on retired athletes has noted an increase in disordered eating practices, including food restriction, laxative abuse, bingeing-purging and calorie counting (Lavalley & Robinson, 2007; Stirling et al., 2012; Warriner & Lavalley, 2008). However, this literature has focused exclusively on small samples of female gymnasts of varying ages and time since retirement. Thus, studies with larger, more nationally-representative samples are needed to examine how female athletes' eating behaviours, and their relation to food, changes upon retirement from sport.

Research exploring eating attitudes and behaviours among female athletes has focused predominantly on disordered eating, which is consistent with the weight and body pressures that exist in the sport environment (Reel, Petrie, SooHoo, & Anderson, 2013). However, this approach may be less salient for retired athletes who are no longer experiencing such pressures and may be relearning healthy ways to view and interact with food. Intuitive eating encapsulates healthy and adaptive eating practices (Tribole & Resch, 2012; Tylka, 2006) and offers a model for examining eating behaviours among retired athletes. Intuitive eating has been defined as a flexible and adaptive approach, whereby individuals eat mainly in response to physiological cues of hunger and satiety, in contrast to eating for emotional reasons or to fulfil an arbitrary diet (Tribole & Resch, 2012; Tylka, 2006). From this perspective, individuals successfully regulate their food intake by eating what and when they want and stopping when they are full. Intuitive eating has been associated with healthy weight maintenance, a more nutritious diet (Eneli, Crum & Tylka, 2008), and fewer disordered eating practices (Denny, Loth, Eisenberg & Neumark-Sztainer,

1 2013). Dietary restriction and classifying foods as forbidden are mechanisms by which innate,
2 intuitive eating practices can be overridden and disrupted (Moy, Petrie, Dockendorff, Greenleaf
3 & Martin, 2013), yet these are commonly occurring practices among active female athletes (e.g.,
4 Anderson & Petrie, 2012; Privitera & Dickinson, 2015). What is not yet known is if or how
5 athletes' eating practices change once they have retired and are no longer exposed to sport
6 pressures about food, eating, weight, and dieting. Therefore, we conducted a qualitative
7 exploration of female collegiate athletes' eating practices in the context of the intuitive eating
8 framework.

9 **Method**

10 **Participants**

11 Participants were 218 retired collegiate female athletes (gymnasts, $n = 144$;
12 swimmers/divers, $n = 74$) who participated in a six-year follow-up to Anderson, Petrie, and
13 Neumann (2012); response rate was 67.1%. $M_{\text{age}} = 25.72$ years ($SD = 1.19$); $M_{\text{BMI}} = 22.31$ Kg/m^2
14 ($SD = 2.72$). Athletes had been retired from their collegiate sports for 2-3 years ($n = 53$), 4 years
15 ($n = 52$), 5 years ($n = 61$), and 6 years ($n = 51$); 176 (76.6%) retired because they had completed
16 their National Collegiate Athletic Association (NCAA) eligibility. Most were
17 White/NonHispanic ($n = 192$; 88.1%) and married or in a romantic relationship ($n = 165$; 75.8%).

18 **Procedure**

19 After university Institutional Review Board approval, the 325 athletes from Anderson et
20 al. (2012) were contacted via email, phone or social media to solicit their participation in a larger
21 NCAA grant funded study on the physical and psychological health and well-being of retired
22 female collegiate athletes. Upon agreement to participate, we sent athletes standardized
23 instructions and the link to the web-based questionnaire. Athletes' responses were identified
24 solely by a unique code. Researchers answered athletes' questions throughout the data collection,
25 which took place in 2015. Each retired athlete received a \$25 gift-card for her participation.

1 As part of this larger study, participants provided current demographic information (e.g.,
2 age, weight) and then responded to the question “Has your eating (e.g., frequency, amount
3 consumed) changed since you retired from your sport and stopped competing/training as a
4 collegiate athlete? (YES or NO).” For athletes who responded “YES,” they answered two
5 additional, open-ended questions: (a) “*Please describe how your eating has changed since you*
6 *retired from your sport and how you have felt about these changes*”; and (b) “*Please describe*
7 *how you have coped with these changes in your eating*”. Open-ended questionnaires have
8 previously been used to glean important qualitative insights (e.g., Kerr, Bermann & De Souza,
9 2006).

10 **Data Analysis**

11 Braun and Clarke’s (2006) six stages for thematic analysis were followed to analyse the
12 qualitative comments, which totalled just over 7700 words. Familiarisation with the data was
13 achieved through multiple readings, and was followed by systematic labelling (‘coding’) of the
14 salient features of the text. These codes were then sorted into potential themes. Initial inductive
15 analysis revealed themes relevant to intuitive eating (Tribole & Resch, 2012; Tylka, 2006).
16 Subsequent deductive analysis was therefore conducted to explore the data more fully in the
17 context of this framework. Discussions took place within the research team throughout to
18 facilitate reflection upon the proposed themes, and to explore alternative interpretations of the
19 data (Smith, 2008).

20 **Results**

21 The majority of the sample (69%; $n = 149$) reported that the frequency and/or quantity of
22 their post-retirement eating behaviours had changed. These athletes’ responses to the open-ended
23 questions were organised into three broad themes, including *Permission to eat*, *Recognising*
24 *internal hunger and satiety signals*, and *Eating to meet physical and nutritional needs*.

25 **Permission to Eat**

1 The athletes described the relative freedom that they discovered with regards to their
2 dietary habits. Many athletes experienced considerable constraints around their food intake
3 whilst competing, which were either self-imposed or externally enforced by coaches. These
4 constraints included the avoidance of “unhealthy” foods, limited caloric intake, and rigid
5 eating schedules; behaviours they deemed necessary to improve athletic performance. The
6 alleviation of these constraints on retiring was associated with reduced anxiety and greater
7 freedom in eating, as one 24-year-old gymnast reported: *“I have become less paranoid about*
8 *eating the perfect meal at all times of the day.”* The reduced anxiety about food was related
9 to no longer being judged on appearance or worrying about the impact of food on
10 performance. One 26-year-old gymnast explained:

11 *“I am not as strict and conscientious about what I am eating, or how much I am*
12 *eating. It has been a relief to eat what I want and not feel pressure from coaches or*
13 *myself to eat a certain way.”*

14 A few athletes, however, did not feel as liberated in their eating, and reported increasing concerns
15 about food’s impact on their weight and shape, as one 27-year-old swimmer described: *“I used to*
16 *eat whatever I wanted when I swam... I wish I could eat the way I used to and not gain weight.”*
17 However, such concerns about weight gain often prompted a move towards healthier food
18 choices, which most athletes viewed positively. For example, another 27-year-old swimmer wrote:
19 *“I have started eating much healthier. I ate terribly when I was an athlete because I was young*
20 *and it didn't affect my body. The changes are great, they help me stay healthier.”*

21 **Recognising Internal Hunger and Satiety Signals**

22 The second theme related to changes in the experience of hunger (i.e., decreases) and
23 satiety (i.e., increases). One 26-year-old gymnast described feeling a greater sense of equilibrium
24 and an increased awareness of her body’s needs:

1 *“Not being an athlete and working out all the time has allowed me the ability to better listen*
2 *to my body. I have a better sense of how much food I need and/or crave. When I was an*
3 *athlete I would be on a rollercoaster of hunger and cravings.”*

4 Athletes reported that these changes did not occur automatically. Many of the athletes
5 referred to a process of bodily retraining and recalibration that was challenging and required an
6 extended period for adjustment. However, focusing on and listening to internal cues was
7 identified as a critical part of the process:

8 *“It is a constant focus of retraining my brain to listen to my stomach. I definitely cannot eat*
9 *nearly as much as I used to before I get full. But it took a while for my brain to understand*
10 *that. Now I eat about normal servings and I feel good where I am now”* (26-year-old
11 swimmer).

12 A small number of athletes stated such retraining helped them to move away from disordered
13 eating practices such as binge eating, as another 26-year-old swimmer described:

14 *“I used to feel very out of control about my eating, and would often binge eat. I ate too*
15 *much, even though I was training. Now, I pretty much eat when I am hungry and stop when I*
16 *am full. I still eat a balanced diet. The biggest change is that my life doesn’t revolve around*
17 *food anymore. I used to think about food and my weight constantly.”*

18 **Eating to Meet Physical and Nutritional Needs**

19 The retired athletes reported relearning how to eat in a healthy manner to fuel their bodies
20 for physical activity, and how they experienced fewer negative emotions around food and eating.
21 As one 26-year-old gymnast wrote:

22 *“Occasionally I’ll binge eat fast food products and feel extreme guilt after, but this is no*
23 *comparison to when I was an athlete. I would binge eat ‘guilty pleasure’ foods then do*
24 *extreme workouts or fasting to counteract poor food choices.”*

1 Indeed food was no longer to be feared or avoided, but rather enjoyed and appreciated. As
2 another 26-year-old gymnast explained: *“I see food as fuel these days. When I eat food that
3 makes my energy levels feel good, it’s a win!”* More positive outlooks towards food were
4 common among athletes who had embraced new fitness challenges. For example, one 24-year-old
5 gymnast reflected on how involvement in a new sport (weightlifting) had changed her attitudes
6 towards food and eating:

7 *“Monitoring my food intake and focusing on nutrition has helped me to develop healthier
8 eating habits and a healthier body image than I had when I participated in college
9 athletics. Having performance goals instead of aesthetic goals has helped me to develop
10 more confidence in how my body looks.”*

11 **Discussion**

12 Our study is the first to explore qualitatively, from an adaptive eating framework, the
13 eating practices and experiences of a large sample of retired female collegiate athletes. Intuitive
14 eating served as a useful model for organizing and interpreting the athletes’ comments about how
15 their eating behaviours and relation to food have changed since retirement. In contrast with
16 previous literature (e.g., Lavalley & Robinson, 2007; Stirling et al., 2012), our findings did not
17 suggest an increase in disordered eating practices among retired collegiate athletes. In fact, upon
18 leaving the ubiquitous weight and body pressures of the sport environment (Reel et al., 2013),
19 many athletes were liberated, feeling less constrained by diets and coaches’ expectations and
20 more able to eat what they wanted. With this freedom came the realization that their eating
21 practices were healthier, and that pathogenic behaviours, like binge eating, had lessened. These
22 features represent the central facets of intuitive eating (Tribole & Resch, 2012; Tylka, 2006).

23 Athletes also experienced a renaissance of internal hunger and satiety cues, yet
24 acknowledged that this process required an effortful recalibration of their minds and bodies. They
25 had to relearn and reinterpret their body’s physiological signals of when they were hungry and
26 when they were full so they could eat in a more adaptive manner, fuelling their bodies with

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