Transcript for Eating Disorders, Disordered Eating Behaviors, and Body Image in Athletes

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la-shell_johnson@med.unc.edu: Good afternoon, everyone, thank you for joining us today for our monthly webinar.

la-shell_johnson@med.unc.edu: I will begin with a few things to note, as our presenter gets ready to join us via video.

la-shell_johnson@med.unc.edu: So, as I welcome you, the first thing I'd like to say is participants will be muted upon entry and all videos will be turned off. For technical assistance, we ask that you please use the chat box located on your screens.

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la-shell_johnson@med.unc.edu: I'll go ahead and introduce today's speaker.

la-shell_johnson@med.unc.edu: So our speaker today is Ms. Rachel Flatt, the 2010 Olympian, and a doctoral candidate in the Clinical Psychology program at UNC Chapel Hill under the mentorship of Dr. Cynthia Bulik. Prior to transitioning to UNC she served as the Program Director at the Center for M2Health and worked on several projects through both Stanford University and Palo Alto University.

la-shell_johnson@med.unc.edu: She graduated from Stanford University in June 2015 with a Bachelor's Degree in Biology and a minor in Psychology. She also placed seventh in the 2010 Olympic Winter Games in Ladies Figure Skating, and was the 2010 US National Champion, and the 2008 World Junior Champion.

la-shell_johnson@med.unc.edu: She retired from competitive skating in 2014 and continues to play an active role in the sports community as an athlete representative for the US Olympic and Paralympic Committee's Mental Health Task Force and Racial and Social Justice Council, US Figure Skating's Board of Directors, and as US Figure Skating's Chair of the Athletes Advisory Committee, among other positions. I will now turn things over to Ms. Rachael Flatt.

Rachael Flatt: Thanks La-Shell.

Rachael Flatt: Thanks everyone for joining um it's good to meet you and see you all virtually. I am super excited to be giving this talk on Eating Disorders and Disordered Eating and Body Image in athletes today, especially during mental health month, so perfect timing.

Rachael Flatt: Um before we get started, I usually like to begin my talks with a little bit of personal background, so that you have a just kind of a background and general understanding of my lens and why I care so deeply about these topics. So, in what feels kind of like a prior life I was a figure skater.

Rachael Flatt: Like La-Shell mentioned, I was on the 2010 Olympic Team for Ladies Figure Skating, and I was also a National Champion that year, but after 18 years I retired from competitive skating during my junior year of college and that was back in 2014. I have just wrapped up my third year in UNC Chapel Hill’s Clinical Psychology PhD program, so I am working my way through. During that time that I was competing though, I think myself and many other elite athletes that I trained alongside were really, I think dealing with poor body image, disordered eating behaviors and some you know, in some cases, full fledged eating disorders.

Rachael Flatt: And at that point in time, I think a lot of that felt very normalized if not to some extent, encouraged, given how many of us really experienced a lot of criticism on our weight in our physique from coaches, officials, judges, fans, you name it.

Rachael Flatt: And because of those experiences I feel really passionately about contributing to the research base and advocating for athletes safety and mental health and wellness to really ensure that sport participation is a positive experience, and I also really love helping to provide more educational opportunities like this. Because the more people who come into contact with athletes and who are well

versed in eating disorders and mental health, more broadly, the more likely we are to kind of change the culture around mental health and sports, so thank you for joining today and let's go ahead and dive in.

Rachael Flatt: I've included the course objectives here as a brief reminder and I hope, by the end of this you feel a little bit more comfortable and recognizing signs of poor body image disordered eating behaviors, and eating disorders and athletes, and identifying sport-specific risk factors. I also hope you'll be able to talk a little bit more about the considerations related to exercise and training for athletes with eating disorders. And maybe feel a little bit more comfortable in creating a supportive and educational environment to both prevent eating disorders, and to promote a more positive body image and self-esteem among your athletes that you work with.

Rachael Flatt: So here is our agenda for today, I formatted this talk to provide some really foundational and introductory information across a number of topics, without going too much into depth into any one of these things, but generally speaking we'll be talking about diagnostic and screening considerations.

Rachael Flatt: Risk factors, treatment considerations, and support strategies, all with a sport-specific lens so this won't cover everything there's a lot out there, but I hope this gives you a little bit of a taste of some of the research and some of the things that we're thinking about.

Rachael Flatt: Alrighty, so in case this is your first time talking about eating disorder diagnoses, or if you just need a little bit of a refresher, these are kind of the core three diagnoses that most people are familiar with so it's anorexia nervosa, bulimia nervosa, and binge eating disorder.

Rachael Flatt: So we'll start with anorexia nervosa.

Rachael Flatt: The diagnostic criteria really centers on restrictive energy intake leading to significantly low weight or failure to gain weight as someone grows.

Rachael Flatt: There's also really intense fear of gaining weight, and there's a distortion of understanding of one's body shape, or the seriousness of the illness, or kind of placing almost all of ones self-worth on their weight and body shape.

Rachael Flatt: Now, in terms of the restricted energy intake this usually occurs through one of two pathways. The first being caloric restriction, where folks really severely limit their intake, and this is called the restrictive subtype, or through binge and purge cycles, which is a binge purge subtype.

Rachael Flatt: And when we're talking about objective binge episodes this is when people are eating a large amount of food, typically in a short period of time with a complete loss of control over their eating.

Rachael Flatt: So for folks with anorexia and bulimia nervosa they also engage in compensatory behaviors to purge themselves of the food or the calories and usually folks do this through either a diet pill, diuretics, or fasting, or through acts of exercise.

Rachael Flatt: Now for bulimia nervosa, like I just mentioned, these folks tend to engage in binge and purge episodes at least once per week over the span of three months. And they often again, place, a lot of their self-worth on their weight or their body shape.

Rachael Flatt: And finally binge eating disorder is essentially where folks are engaging in objective binge episodes and there's a lot of distressing impairment surrounding the binges.

Rachael Flatt: Now DSM V also has unspecified feeding and eating disorders and we also have other specified feeding and eating disorders which I'll just briefly mention.

Rachael Flatt: The Other Specified Eating and eating disorders also included purging disorder, night eating syndrome, binge eating disorder, bulimia nervosa so where there's less frequent behaviors or shorter duration.

Rachael Flatt: And there's also atypical anorexia, which is essentially when folks meet all the criteria, except for the low weight, or significantly significant weight loss thresholds.

Rachael Flatt: Something to briefly note, that is common I think for athlete populations, is that for atypical anorexia nervosa, this might be a little bit more common than we might see in general populations, in that to the muscular turf that some athletes have or having to meet some of the weight classes like wrestling, for instance, they may not have that typically low weight benchmark that you might see in other anorexia nervosa cases. So just something to remember their presentation might appear akin a little bit more to anorexia without the significantly low weight, thus kind of meeting

criteria for atypical AN. So now let's talk about some considerations specific to disordered eating behaviors and athletes.

Rachael Flatt: When you're screening for these things there's a few things to kind of keep in mind, the first is the possible seasonality of these behaviors. So when you have athletes who have distinct competitive seasons and off-seasons.

Rachael Flatt: Sometimes there's an ebb and a flow to these behaviors so, for instance with the Olympics and the Paralympics coming up, which I hope you're all pretty excited about, I know I am. You might see athletes who are engaging in a lot more restriction, or more frequent excessive exercise episodes to cut as much weight as possible, kind of in the hopes of reducing their weight and improving their performance kind of leading up to trials or leading up to these big events. But after their seasons over you might see fewer purging behaviors, you might see more binge eating.

Rachael Flatt: You might see a less intense focus or scrutiny on their weight and shape, or athletes might stop engaging in these behaviors all together just to give their bodies, a little bit of a rest. So it's important to be screening for these behaviors routinely throughout a season. Just to see if there are patterns and to make sure that you're not missing these behaviors that might be occurring during the competitive season, but might not be occurring during the offseason, especially if that's the time when you're screening.

Rachael Flatt: In terms of objective binge episodes, I think most folks would probably consider eating a few burgers, two baskets of fries, and maybe a pint of ice cream in one sitting might be enough in terms of the quantity to qualify for an objective binge episode.

Rachael Flatt: However, the caloric demands on athletes who are training, you know, seven, eight, plus hours a day are much larger than the average person who is physically active from you know, maybe half hour to 60 minutes per day.

Rachael Flatt: So I mean, you can think about Michael Phelps, or you know football linebackers who might be consuming upwards of 10 to 12,000 calories a day just to keep up with training demands. So what I just described as possibly an objective binge episode solely in terms of quantity might actually be a typical meal for some of these athletes, just in order to retain their weight and their muscle.

Rachael Flatt: So when you're thinking about the quantity of an objective binge episode and athletes, it's really important to consider their total calorie consumption during a training day plus the amount of time that they're training and the intensity of that training. Just to gauge for whether it's more of a

subjective or objective binge episode, but again, the line here is a little bit blurry, so it's really important to rely on your clinical judgment and see what other symptoms are kind of circling around that.

Rachael Flatt: Another thing to consider is that a lot of athletes at an elite level are drug tested routinely. I even had drug testers come to my high school at one instance, because that was my designated timing frame, so it happens, a lot.

Rachael Flatt: So if those folks are if those athletes are using unapproved or unreported laxatives, or diuretics, or diet pills or really any other unapproved substance or unrecorded substances or supplements.

Rachael Flatt: This could result in a positive drug test, so it's feasible, that these athletes might not engage in these types of purging behaviors as frequently as we might expect compared to a general population and this would be particularly during the competitive season, if they're getting drug tested routinely.

Rachael Flatt: But, if you find out that an athlete is using any of these substances, especially as part of an eating disorder kind of presentation, it's really important to ask them if they are getting drug tested for their sport and to think through some potential consequences.

Rachael Flatt: Alright, so now let's talk a little bit about exercise, more specifically, since, as we all know, this is what athletes spend a lot of their time doing. There are a ton of different descriptions of some form of maladaptive or problematic exercise, so these descriptions include excessive or compulsive, or obligatory exercise, or it can also be described as exercise dependence or addiction and there are slightly different nuances to each of these descriptions, but generally speaking, the way we conceptualize these exercise behaviors is that there's a sense of feeling driven to exercise which generally helps alleviate some form of distress.

Rachael Flatt: So most athletes use exercise to modulate their affect. So, for instance, if they're feeling really negatively about their weight or their performance they might use excessive exercise to help mitigate some of those negative feelings of guilt or shame, or maybe frustration. They may also use exercise as a way to control their weight and shape or to purge themselves of calories much like other compensatory behaviors.

Rachael Flatt: Now back in the 80s, it was originally proposed that there was primary and secondary exercise dependence. So essentially what this means is that they were primary and secondary features to an eating disorder.

Rachael Flatt: So for primary exercise dependence this generally meant that these folks were presenting without eating disorder pathology. And for secondary exercise dependence, the primary concern is eating disorder pathology, but these folks also engaged in some form of maladaptive exercise.

Rachael Flatt: So when we have athletes who are screening positive for anorexia nervosa with a binge purge subtype or for bulimia nervosa, and they're engaging in excessive exercise these would typically be athletes with secondary exercise dependence, based on this kind of conceptualization.

Rachael Flatt: Although there are a lot of different ways to describe all kind of these maladaptive exercise behaviors.

Rachael Flatt: There are slight differences in the conceptualization like I said, but the most important takeaway is that the exercise is problematic. It's helping the athlete kind of mitigate some negative affect.

Rachael Flatt: And it's helping to control their weight and shape or purge themselves of calories. So a good example of this might be an athlete who is using exercise to kind of regulate their mood after you know, a bad training session and they go and use the elliptical for two hours when they feel really disgusted or ashamed of themselves.

Rachael Flatt: Now, their example might be an athlete who feels like they just cannot afford to miss a day of practice, to the point where they consistently train through fatigue, illness, and injury, and to the point where they're really missing other important aspects of their life.

Rachael Flatt: So if you are concerned, concerned about an athlete's exercise, or if you're looking to use a measure in your research, here a few measures that you can check out.

Rachael Flatt: The Athletes’ Relationship to Training sky Scale (or the ART) was specifically designed for athletes. And the other measures that I have listed here have all been used in other athlete populations, even if they weren't necessarily designed for them.

Rachael Flatt: But using measures like these can be really helpful to understand what the athletes relationship with exercise is and if and how they modulate their use of exercise to kind of modulate their

their mood and if their training regimen also as well, is becoming negatively impacted by the additional exercise. For instance, if they're using outside of their regular training.

Rachael Flatt: So, for instance, if a patient is coming in to an inpatient or hospital setting and they're medically unstable because of extremely low weight and malnutrition.

Rachael Flatt: It's really important to know whether that athlete actually has some form of problematic exercise behaviors, or if it's really not an issue for them.

Rachael Flatt: There's actually some initial research, and this is, you know very low level or very preliminary research, I should say, showing that very small amounts in a really controlled environment with a lot of supervision, physical activity can actually be helpful, especially as an athlete is rebuilding their relationship to exercise. Now again, this requires a lot of psycho education and retraining.

Rachael Flatt: And if you think about it, this might be the best place for them to kind of start their re-learning process, simply because of the amount and high level of supervision.

Rachael Flatt: Instead of cutting off all access to any form of physical activity until they're completely done with inpatient and outpatient treatment, we don't want to cut them off entirely and then send them back out into the world not having provided some education and support for relearning how to exercise and train appropriately.

Rachael Flatt: So I'm certainly not saying that athletes who are medically compromised should be allowed to train regularly. Obviously, through different levels of care and eating disorder presentations, constraints on exercise are going to vary a lot.

Rachael Flatt: And when an athlete is depending on their sports career for scholarships, or funding, or sponsorships. There might be a little room for some flexibility to not pull support from their life entirely, especially if it's something that really aligns with their values and identity. So, those are just some things to kind of keep in mind as you're screening for these things.

Rachael Flatt: So if you don't happen to have some of these measures offhand here are a few things to look for both in terms of the quantitative aspect and the qualitative aspect. So you definitely want to look at the total number of hours that they are exercising, and if and how time is spent outside of training doing some additional exercise. And you also kind of want to look for whether it's

cardiovascular training, or if it's weightlifting. For instance, if you have athletes who are engaging in a lot of cardiovascular training, it might be in service of helping them to lose weight, whereas if they might be weightlifting it might be used to help kind of tone their bodies or increase muscularity.

Rachael Flatt: So, for instance in male athletes, you might see a little bit more weightlifting as a form of compensatory exercise.

Rachael Flatt: And then you definitely want to look at the qualitative aspects of exercise. So here, you might be looking for feelings of guilt or anxiety. If they're unable to exercise, you definitely want to look for whether they have kind of obsessive or intrusive thoughts.

Rachael Flatt: For instance, if you're familiar with how patients with an eating disorder, really almost focus obsessively on food or weight or shape, you might also see some folks who have that same level of focus and scrutiny, with their exercise. And generally, there are a couple types of that we see clinically. So folks who either vigorously exercise, I think about athletes who might be spending hours on an elliptical really exercising hard.

Rachael Flatt: Folks who had kind of a marked increase in daily movement as part of the eating disorder, so they went from you know kind of exercising a normal amount to really kicking up their level and intensity of exercise. Or you might have folks who have what's called kind of motor restlessness, where they just can't sit still they're constantly fidgeting, or bouncing their knees and it's really not a part of another illness, for instance, like ADHD.

Rachael Flatt: To help with some anxiety now sometimes, and I think this is a bit rare, you will see athletes who don't actually present with engagement in the exercise itself. But they have the same obsession with physical activity, so you might see this in an athlete who, for instance, is injured and can't exercise. But, is still actively restricting their intake and just cannot stop thinking about exercise, not just because they missed the sport, but because it's really tied to their weight and shape concerns or the distress that they're experiencing.

Rachael Flatt: And then, of course, you might see athletes who are training and competing through illness and injury and this goes above and beyond, I think what most athletes have experienced at some point in their lifetime, this is consistently training through. You might see athletes who are reporting a high number of stress fractures, for instance, and still training through that and exercising in spite of those injuries.

Rachael Flatt: And then finally you definitely want to look at the impact on quality of life. So elite athletes have to make a lot of sacrifices and I, you know I certainly think about my career where you know I didn't have the most so interesting social life as a high school student, especially when I was in a full academic load. And I, you know, I was training seven plus hours a day, and that was the year that I went to the Olympics.

Rachael Flatt : You know I still went to school dances on occasion and hung out with friends, but if you have an athlete whose social life or their daily function overall is really suffering because of their relationship with exercise and, above and beyond training that's definitely a red flag.

Rachael Flatt: So as one final example before we move on. The nature of eating disorders, is that folks often become really secretive so it's not uncommon for providers or family members to not recognize these behaviors right off the bat.

Rachael Flatt: And they can kind of disguise themselves as kind of being over achievers in the sport, by going above and beyond their usual training. So it's probably not so worrisome if an athlete you know, for instance, is cross training with another sport and you know they are getting supervision from a strength and conditioning coach. But, if they're hiding additional exercise outside of their regular training times and they're recording discomfort with rest or periods of inactivity that might be another indicator of problematic relationship with exercise.

Rachael Flatt: So I want to briefly touch on two aspects kind of adjacent to eating disorders that are not recognized as eating disorders within the DSM V but are often talked about in the context of sport. The first being orthorexia so essentially what orthorexia boils down to is kind of an obsession with healthy eating so signs and symptoms kind of include, only having a small group of foods that are allowed, and those are typically called safe foods. Spending large amounts of time thinking about food and meals, maybe some compulsive checking of nutrition labels and ingredient lists distress when safe foods aren't available, weight and shape concerns may or may not be present.

Rachael Flatt: They might be cutting out an increasing number of food groups, all together, so, for instance, all sugar, all carbs, all dairy, all meat, all animal products, and it's really not due to a specific medical concern. And sometimes folks describe this as an inability to eat anything but a narrow group of foods that are kind of deemed healthy or pure.

Rachael Flatt: So this is especially prevalent in athletes, because there is this combination of kind of diet culture in our society generally. And the added magnification on fueling your body appropriately with the best possible food to get the best performance. There was a recent study that was conducted, I think, by Clifford and Blyth in that they found in a sample of student athletes in the UK almost, or was

actually just over three quarters of the sample reported symptoms of orthorexia and the actual prevalence was around 30%. But still, I think it's really goes to show how common, this is in athletes and athletes in the sport culture, more broadly.

Rachael Flatt: Alright, so the final thing I'll mention before we move on is the Relative Energy Deficiency in Sport, which most people either referred to as RED-S or REDS.

Rachael Flatt: This originally stemmed from the female athlete triad which was conceptualized as disordered eating kind of leading to menstrual dysfunction, poor bone health, and low energy availability. And this model was kind of expanded, so that it didn't simply focus on women and was more inclusive because clinicians we're really seeing the same issues across athletes from all walks of life.

Rachael Flatt: So the underlying problem with RED-S is inadequacy of energy to support the range of body functions involved in optimal health and performance. So usually, this means that athletes are burning too many calories or not taking enough to support their daily functions and training, or could be a combination of both.

Rachael Flatt: So, I put up the spoken wheel model from Mountjoy, et al., International Olympic Committee consensus statement.

Rachael Flatt: And because of the low energy availability, you might see a variety of health consequences associated with RED-S for athletes.

Rachael Flatt: So these include negative effects, not only just on menstrual function and bone health, as in the female athlete triad originally when it was proposed. But you might also see an endocrine, metabolic, hematological, cardiovascular, gastrointestinal, and immunological systems or systems, you might also see negative effects on psychological health and growth and development and, later on, I listed some specific consequences that we'll talk a little bit more about.

Rachael Flatt: But again, this is not an eating disorder, specifically, this is just kind of a constellation of symptoms that you might see or some consequences that would highly recommend checking out the 2014 IOC consensus statement and the 2018 update on this, because it's great, great, body of literature.

Rachael Flatt: Alright, so now that we've talked about some athlete specific considerations for diagnoses and disordered eating behaviors, I've listed a few brief screening tools that were designed and validated in athletes and generally these aren't full blown diagnostic tools.

Rachael Flatt: So you won't get an output of oh this athlete has my criteria, specifically for anorexia binge purge subtype. But you'll get an idea as to whether these athletes are endorsing features of an eating disorder or disordered eating behaviors or if they're at risk.

Rachael Flatt: And one thing I'll point out, too, is that the brief eating disorders screen for athletes or the BEDA was actually included as part of the IOC sport mental health recognition tool or the SMHAT.

Rachael Flatt: So if you are using one of these screening tools and you aren't trained on eating disorder treatment or assessment and it's really best to refer out and get a full diagnostic screen completed if you see any form of risk or any behaviors or any psychopathology kind of popping up.

Rachael Flatt: So let's spend a second talking about prevalence. I know most research out there, suggest that athletes actually demonstrate a higher prevalence of eating disorders, compared to non-athletes.

Rachael Flatt: So Bratland-Sanda & Sundgot-Borgen's 2013 paper illustrated that the prevalence of eating disorders was up to 9% in male athletes and up to 33% in female athletes, with up to nearly 45% endorsing some disordered eating behaviors.

Rachael Flatt: Now, take a second to compare that to the one to 5% and then general population in larger epidemiological studies.

Rachael Flatt: So, I think some of you might be wondering why there is such a large range. That certainly depends on a lot of things, including the research design and the measures and all sorts of good stuff. But, competing in a reasonably high level in leanness sports maybe one of the larger contributing factors to the much higher prevalence that we're seeing and these are sports that athletes kind of perceived to have a competitive advantage, if you are thinner and leaner. So these are sports that focus on aesthetics like figure skating and gymnastics, weight class sports like wrestling, or lightweight rowing, or endurance sports like long distance running, and cycling, or flight sports like ski jumping and that's just to name a few that certainly not an exhaustive list.

Rachael Flatt: We'll also talk a little bit more about sport-specific risk factors that may be contributing to the elevated prevalence in just a second, but there are some initial kind of research studies that suggest the high prevalence may actually extend into the first five years of retirement. And so you might see athletes, whose risk actually decreases, for instance, if you have athletes who are in a really negative coaching environment. Whose coaches negative comments are starting or kind of maintaining the eating disorder and when they transition out of the sport they're no longer kind of exposed to that same environment, and so, for those folks that might be actually beneficial and might actually reduce their risk and may help them recover from their eating disorder.

Rachael Flatt: On the flip side you might have athletes who are retiring and given that they're no longer training, seven, eight hours a day and they continue eating in the same way, they might put on weight, or their shape might change.

Rachael Flatt: And those might kind of trigger some intense weight and shape concerns and that may evolve into some disordered eating behaviors. So, you know, there may be a little bit of crossover for some folks.

Rachael Flatt: But again there's a lot more research that needs to be done for athletes, in terms of their retirement. And I think the kicker here is that keep in mind that athletes, often under report their symptoms or don't realize that what they're experiencing is a legitimate issue so again that might be contributing to some of the, the range and prevalence. But, we also know that athletes are really good at hiding injuries, as well as mental health concerns.

Rachael Flatt: So, it's really important to kind of keep that as a caveat in your mind when you're assessing and when you're thinking about prevalence.

Rachael Flatt: One note we have extremely limited data or pretty much no data on athletes who also have marginalized identities, including BIPOC athletes, trans-athletes, or athletes with any other marginalized identity.

Rachael Flatt: But, I think we can imagine that, given the combination of these identities, plus the added kind of sport-specific risk factors we might see some increased risk here as well.

Rachael Flatt: So, why might athletes be afraid of risk of developing an eating disorder?

Rachael Flatt: Now these are some general aspects about a person and their environment that might increase their risk of developing an eating disorder. So, I have these kind of grouped into genetic and biological risk factors, psychological risk factors, and environmental and behavioral risk factors.

Rachael Flatt: Now these are pretty well documented in the literature, at this point so you might see some.

Rachael Flatt: Risk factors related to gender. For instance females are much more likely to develop an eating disorder than men, or you might see age or certain personality traits like perfectionism.

Rachael Flatt: Poor body image and lots of social comparison is definitely something that we see a lot of the time for general risk factors, and then you might also see some peer, and a family and coaching teammate pressures. You might also see some social media exposure that might be contributing to eating disorder risk. There's lots of things here that might be contributing, but when we think about sport-specific risk factors, there's a slightly different kind of added factor to this when we think about why some of these athletes might be a greater risk of developing an eating disorder.

Rachael Flatt: So, like I mentioned already, we certainly have participation in sports that emphasize leanness, and we also see athletes tend to be at greater risk of developing an eating disorder if they're specializing in sports early on, or in one sport in particular.

Rachael Flatt: Now we also will see personality traits commonly found in elite athletes and those with eating disorders. So, if you think about athletes who tend to be really compliant with their training or they're very perfectionistic, where they have very high expectations of themselves or really good attention to detail. Like my advisor likes to say, a really good athlete also may tend to be someone who also makes a really good eating disorder patient because they are so focused on their body image. They're really perfectionistic, they have great attention to detail. So, we tend to see a lot of overlap in personality characteristics with elite athletes and folks who eventually go on to develop eating disorders.

Rachael Flatt: Now, interestingly, another factor that has contributed to some risk in terms of eating disorders is traumatic injuries. And there's not a whole lot of data there yet, but that's something to be mindful of. Now a biggie, of course, is when athletes are required to wear revealing attire, uniforms, or sports gear, and I think this you know intuitively makes a lot of sense, given the focus on athlete bodies, when you have to wear you know, a small revealing Leotard or swimsuit.

Rachael Flatt: Now anecdotally, a lot of athletic departments talk about how the folks who actually order uniforms are often some of the first to notice a significant weight loss in an athlete prior to the season, because they see the orders for uniforms have actually drastically changed, for instance, from a large to an extra small in a short period of time. So, it's just kind of something to be mindful of.

Rachael Flatt: And then there is an athlete identity, so this is really how much an athlete resonate or how much a person really resonates with being an athlete and how important that is to their value system.

Rachael Flatt: So, if you think about athletes who, for instance, who were in the weight of gold, they often talk about how important is or was to them, and that was really the most important thing in their life.

Rachael Flatt: And so, when they transition out of sports or if they're having some difficulty with their sport that may make them more prone to developing any sort of mental health concern, but really specifically an eating disorder in this case.

Rachael Flatt: And then there are certainly negative coaching comments and behaviors I think so many athletes can name comments that have stuck with them over the years.

Rachael Flatt: And as a provider, I think we really don't want to contribute to that as well, so avoiding kind of those cursory or judgmental comments about weight and shape and diet, are extremely important.

Rachael Flatt: Especially because athletes look up to people like coaches, parents, and health care providers as role models in those people were just trying to help them become better athletes.

Rachael Flatt: So they often hold our comments in really high regard. So, that's just something to be really mindful of as you're talking about weight and shape or as you're talking about their eating and dietary patterns.

Rachael Flatt: Next, there is pervasive body shaming and diet culture messages, and I think we're all probably familiar with this, both in terms of our larger society, but I think this is really magnified, especially for elite athletes you know. And they're kind of dealing with the media and commentators making negative comments about their weight and shape.

Rachael Flatt: So those are some things that I think really unfortunately contribute to risk factors that are somewhat unique to sports and again tied right with that is kind of the sexualization and objectification of athlete bodies.

Rachael Flatt: Now these are certainly not the entire group of risk factors. There's a lot that may serve to increase risk and maintain eating disorders, that are unique to sports, but these are some of the big ones that have been well researched at this point.

Rachael Flatt: So, as you can see, for many of the risk factors, a lot of them have to do with kind of an intense focus and scrutiny on an athlete's body. So let's briefly talk about body image.

Rachael Flatt: Body image is a collection of thoughts, feelings, and behaviors related to how individuals view their body.

Rachael Flatt: So poor body image of course, kind of refers to this negative and unrealistic viewpoint, which often manifests as negative and disparaging thoughts and feelings about themselves. So part of eating disorders, is certainly poor body image and I think we talked about this a ton in sports, but we don't really do so in a productive way, especially because athlete bodies are so often idealized in our society more generally.

Rachael Flatt: And I think, unfortunately, if you ask most athletes it's probably safe to say they've struggled with poor body image, at one point or another, whether due to their own concerns or because someone else may have negative comments about their body.

Rachael Flatt: So what does the body with poor body image look like in athletes?

Rachael Flatt: Well, looks pretty similar to what we would typically expect to see and folks who have eating disorders or disordered eating behaviors and generally.

Rachael Flatt: So we often see a lot of body checking or self-scrutiny or their appearance, so you might see folks kind of pinching and pulling at their waistline or you know just kind of generally at their body to see if and how their body might look if they were to lose weight, or possibly put on more muscle.

Rachael Flatt: They might be avoiding mirrors or photographs, all together, or spending large amounts of time in front of the mirrors to kind of scrutinize their body.

Rachael Flatt: There's a lot of self-criticism about shape, weight, and appearance, so I think a lot of folks are probably familiar with locker room talk where athletes will say, "Oh gosh I'm feeling so fat today, or I'm feeling so bloated today." And those types of comments can you know just be thrown out in a cursory fashion, but they could actually be kind of representative of more underlying kind of poor body image and possibly more psychopathology there.

Rachael Flatt: They also might have a belief that something is wrong with their appearance, so they might be commenting, for instance, when they're watching videos of themselves in terms of their technique and they might say, "Oh gosh, this video is just making my bum look huge right now, and there's no way that my body looks like that." So there might be some comments that are made in that kind of capacity.

Rachael Flatt: There's also a lot of comparison to others, whether that's fellow athletes, celebrities, friends, social media, etc. I think this is extremely common in sports. And it might not just be about thinness and might be about their muscularity, it might be about how someone's physique might be able to allow them to do certain skills that that athlete can't do, but it's also hard to not compare with a ton of websites.

Rachael Flatt: If even we can look at this on Google, a lot of websites list an athletes weight. So, I've actually seen athletes go and look up another famous athlete's weight and use that as a goal to get down to in order to be successful.

Rachael Flatt: And then finally, you've got folks who are feeling self-conscious or down about their appearance. So an example that I used to see all the time in skating, is that athletes would feel self-conscious about their costumes or even in their training clothes. So even when they're you know really getting hot and sweaty during their training, they would stay completely bundled up so as to not show their body or their physique.

Rachael Flatt: So let's talk a little bit about treatment considerations. Now I think most of us are probably fairly familiar with general barriers to treatment like high cost, the perception that mental health problems don't need treatment, minimal access, and low availability of providers. There's a number of pretty substantial barriers to treatment.

Rachael Flatt: But in terms of various treatment for athletes we actually know that athletes tend to seek mental health treatment at a lower rate than the general population. So, why don't they get in the door?

Rachael Flatt: Well there's a multitude of reasons, it could be due to lack of time and rigorous training schedules. I mean when I was competing as an elite athlete, I was usually waking up around 5:30 in the morning going right to the rink. And then spending a whole day at school, from like 8am until two or 3pm, then immediately going back to the rink and training from like 2 or 3 o'clock until 5, 6, 7, sometimes 8 or 9 o'clock in the evenings. And then I'd have to go home and go do homework and immediately go to bed. So there was very little time for me to spend time with a mental health care provider and it fell pretty low on my list sometimes.

Rachael Flatt: There's also frequent travel for events. For instance, I missed two and a half months of school during my Olympic season. Just to give you an idea of how often some of these athletes might be might be traveling. So, that certainly makes it really difficult to set up routine appointments with any mental health care provider.

Rachael Flatt: There's also a much higher stigma surrounding mental health in athletes compared to non-athletes. So, I think that's something that is working to be addressed in a lot of spaces, right now. But, we just have to continue to talk about eating disorders and mental health more broadly, so as to help and facilitate some of these athletes to go seek treatment. Sometimes athletes have negative interactions with health care providers or fearing that they might be perceived as weak if they seek treatment.

Rachael Flatt: In addition to this, there are very few providers out there with a combined eating disorder and sport specialties and there are very few treatment centers that focus specifically on athletes. So if an athlete for instance, is hospitalized with an eating disorder that usually means, any and all physical activity and their relationship with their sport is totally gone for an extended period of time. So, if you are an athlete who depends on their sport for a variety of things that doesn't sound too good. So, I think there could be some really negative career consequences as a result of seeking treatment. For instance, folks could lose their sports scholarship or they could lose funding, if they were to seek treatment just because of the stigma, just because of the time constraints. So there are a lot of things that we can be doing to help alleviate and reduce some of those barriers.

Rachael Flatt: I think we have to make time in their schedules. We have to promote the importance of seeking treatment, we have to keep the conversations going about mental health, to help to decrease the stigma and change the message around perceived weakness.

Rachael Flatt: And we can increase training and education of providers and athlete facing staff—trainers, coaches, etc. I think we just have to continue getting the message out, that we're really prioritizing their health and wellness as a human and not just an athlete.

Rachael Flatt: So, once you get athletes in the door, how do we increase their buy in so they aren't so treatment resistant?

Rachael Flatt: With the mental health model and sports, we know that better mental health leads to better, better performance. So, we can kind of package this as a performance issue. And I think, a lot of athletes are entirely focused on getting back to their sport so sometimes a message that we really care for their health as a human being and that we care about their long term wellness doesn't quite resonate.

Rachael Flatt: So presenting treatment and reaching treatment benchmarks as a way to get back to sport and, most importantly, to have a better experience in sport, might be a way to get them more engaged.

Rachael Flatt: So as a part of getting buy-in you can certainly talk about the short term impacts of eating disorders and these include electrolyte imbalance, breakdown of muscle, slow heart rate, low metabolic rate, and blood pressure, stomach pain and bloating, constipation, difficulties concentrating, muscle cramps, fainting and dizziness. Again, this is not an exhaustive list, but these really target the immediate negative impacts on performance in training and competition.

Rachael Flatt: So you know, if I were to think about and then I don't know about you, but if I were to think about training and if I was dealing with stomach pain and bloating or dizziness when I was spinning all the time, usually didn't end well.

Rachael Flatt: Then you can also focus on the long term consequences. So again, you can you can read through this list on the left side. Of note,

Rachael Flatt: I think it's really important as a provider to be able to mention the fact that, especially for athletes who are presenting with kind of long term or severe and enduring anorexia.

Rachael Flatt: It actually has the second highest mortality rate of any psychiatric illness and it's only second to the opioid, opioid addiction crisis. So again, if athletes really want to have these long. They

really want to have longevity in their career, and you know if they want to be kind of the next Simone Biles, and they also want to be an engineer in their lifetime; engaging in treatment and recovering is going to be the best way forward.

Rachael Flatt : Again, this is another spoken wheel model from Mountjoy and colleagues on the IOC RED-S statement, but again it's talking about the potential performance consequences of RED-S. So lots of similar things to what I just said.

Rachael Flatt: And two things that I'll kind of point out here is that it can actually result in impaired judgment.

Rachael Flatt: So if you, for instance, are a tennis player, and you're trying to decide on your serve strategy to win your match point, like your judgment and may not be totally on point.

Rachael Flatt: It's also associated with other psychiatric co-morbidities like anxiety and depression. So, if you have some of these concerns, the athlete isn't just wrangling with one diagnosis. And clinically, I think it's pretty rare that we actually see an athlete only with an isolated instance of just an eating disorder or disordered eating behavior. Usually we see kind of a constellation of psychiatric illnesses.

Rachael Flatt: So again, we're really not trying to scare the athlete, but it's really important to emphasize.

Rachael Flatt: Intervening early and ensuring the athletes get the help they need from professionals and being able to list some of these potential consequences as they may be some reasons why you might want to engage in treatment, so that you have a long term and successful and healthy sports career and you can go on to do other incredible things in your life.

Rachael Flatt: When you have the opportunity, I really recommend trying to work directly with the sports medicine team. It’s comprised of a lot of folks. Having everyone on board with a treatment plan actually reduces the chances that an athlete is kind of going to slip through the cracks or gets mixed messages that might be confusing from different people on their support team.

Rachael Flatt: Same thing here with coaches and trainers who aren't necessarily part of the core treatment team. So keeping coaches and trainers informed as needed with the athletes consent is really important, and I can't stress that last part enough.

Rachael Flatt: Because I think for folks, especially for folks who work in some of these integrated athletics departments or athletic settings it's really easy to inadvertently share some information about an athlete. And then, you know the coach might go share that information to the athlete directly and the athletes like what I didn't share that.

Rachael Flatt: or I shared that information confidentially, and I didn't want my coach to know or my teammates to know that I was in eating disorder treatment.

Rachael Flatt: So again, making sure that you get that consent from the athlete first. It is really important to make sure they're on board with having the remainder of their team kind of have a good understanding of what's going on, so that there's really kind of this catch all concept.

Rachael Flatt: And then another option here, is to create a specific exercise plan and an eating disorder return to play plan. So kind of considering all the things that I've mentioned before about exercise. I think it's really important to come up with a training plan.

Rachael Flatt: And when it's safe to kind of incrementally increase training and to get the athlete on board with meeting certain treatment benchmarks.

Rachael Flatt: So for a lot of folks who are on sports medicine teams you're probably pretty familiar with return to play plans for injuries? Which essentially outline treatment steps and benchmarks in order for an athlete to return to full training and competition. You can do the exact same thing here with eating disorder treatment I think it's really important, particularly for outpatient care as well, that you put these together. Because you really don't want an athlete going from you know, a really high level of care and patient level, to a stepping down all the way to outpatient treatment without having any kind of plan in place for after they, they finish their treatment. And I think, when you consider that transition out of treatment and back into full sport.

Rachael Flatt: It's really important to think about whether or not having these kinds of discussions with a multi-disciplinary team or with their teammates could potentially be triggering, especially for some of their other teammates who might be dealing with some of these issues as well. So couple things to consider there.

Rachael Flatt: Now quickly before we wrap up let's talk about support strategies so if you are hesitant to talk about eating disorders and mental health.

Rachael Flatt: Let me tell you, you are not the only one.

Rachael Flatt: These are super tough topics to navigate and it is especially hard when there is so much discussion in sports about an athlete's eating habits and their body, which was just inherently a part of the sports culture.

Rachael Flatt: If you are concerned about an athlete possibly having an eating disorder or engaging in some disordered eating behaviors, I've included some good starting questions here from Joy, Kussman, & Nattiv on the left hand side.

Rachael Flatt: And if there's one thing that you kind of take away from this presentation, I hope it's, I hope it's what I have on this slide here. And regardless of your career or your interactions with athletes, I think it's pretty evident with all I've described today that eating disorders are extremely complex and that's probably an understatement.

Rachael Flatt: So when you're talking to anyone, let alone athletes about your concerns really try to avoid some simplistic comments like, if you're talking about an athlete who identifies as a man or non-binary please don't say, “Well eating disorders are kind of a female disorder”.

Rachael Flatt: Well it's true that eating disorders are more common in women eating disorders, absolutely impact people from all walks of life.

Rachael Flatt: It's also really important to express your concern and to be clear about the observations you've made.

Rachael Flatt: So do so in a really neutral and caring way by using I statements, so an example of this is, you know finding a private place to say, “Hey I'm really concerned about some comments I overheard you say about your body image in the last practice. My top priority is your health and safety, so I'm wondering if we can talk about it. And I'm wondering if you would be willing to schedule an appointment with your primary care provider or with a mental health care professional”.

Rachael Flatt: Again, give clear guidance on how to schedule these evaluations with an experienced provider, who has eating disorder expertise. And make sure that when you approach that conversation, you have that list ready to go, and please be sure to follow up with the athletes or their parents kind of depending on who you're having that conversation with.

Rachael Flatt: And finally, I think we can all be a part of creating a healthy training environment, so you can do so by encouraging intuitive eating, mindful movement, and body positivity.

Rachael Flatt: If you are eating for some reason, eating with athletes like if you're a team physician and you're on an international event with them and you're all sitting in the dining hall together, try to eat healthfully in front of them, and don't make comments about what the athlete is eating.

Rachael Flatt: I can't tell you how many times I've had this happen, where I've had coaches or officials come up to me in dining hall say, you shouldn't be eating those carbs or you shouldn't be eating that one spoonful of frozen yogurt that you just got, even though it's like 90 degrees and sunny today.

Rachael Flatt: Um, I think it's also really important to emphasize strength and ability and overall health and wellness rather than fitness.

Rachael Flatt: Again, this is a really common message, especially in some of those leanness sports to focus on thinness or being as lean as possible.

Rachael Flatt: And so, being able to speak to their abilities as an athlete, and also they're like who they are, as a person, more generally, is really important.

Rachael Flatt: Again, avoid fat talk, so when kind of talking about your own body image concerns or avoid making kind of cursory comments about your own weight and shape or engaging in fat talk about other athletes.

Rachael Flatt: Because, if you are discussing athletes weight or shape with your athletes, it really encourages social comparison and it really makes your athlete kind of wonder what other kinds of things you might be saying about them.

Rachael Flatt : So, on the whole there's a number of things that you can kind of engage in just off the bat even if you aren't an eating disorder professional there, these are just some general things that you can do to help improve the overall sports environment.

Rachael Flatt: So, lastly, here are some highlights.

Rachael Flatt: I hope, at the end of this hour you feel is that you have a slightly better understanding of some of the considerations around eating disorders, disordered eating behaviors, and body image and their associated risk factors and athletes. And, especially in terms of how they may present clinically.

Rachael Flatt: I also hope you feel like you have a slightly better understanding of some of the treatment considerations and basic support strategies.

Rachael Flatt: And I know we spent a lot of time talking about exercise, so I really encourage you to start weaving in some questions about both the quality and the quantity of exercise athletes are engaging in.

Rachael Flatt : So here are my references.

Rachael Flatt : Um that's all I have for today, I sincerely hope you were able to take something new away from this presentation. And, with this being mental health month I'm very appreciative that you all spent a little bit of time with me on a Friday, so thank you very much. And, with that I will turn it over for questions and the last five minutes.

la-shell_johnson@med.unc.edu: Thank you so much Rachael, great presentation! As a reminder, I just want you to know that you will be receiving an email as a participant after this with the evaluation and handouts of today's presentation. I'll now address questions that have been asked by the participants.

la-shell_johnson@med.unc.edu: So Rachael our first question is, "Are there any good references of ED/DE after coach comments?" They would also like to know about the orthorexia study reference if possible.

Rachael Flatt: Absolutely, so I can definitely send out the orthorexia sites or citations after this presentation so I'll make a note of that to include that. But in terms of some, I may have misunderstood this but in terms of the kind of the comments that coaches might make in terms of either disordered eating behaviors or eating disorders, I think sometimes coaches will say I mean I can there's many examples that I can pull from offhand. But, there were some, some coaches, in the past, who I remember talking about athletes who were losing weight and we're talking about how they would never be thin enough unless they looked like they had just walked out of concentration camps. Which was horribly insensitive and horrible to hear, but these are the types of conversations that are somewhat normal and is done in this in you know, in the sports community.

Rachael Flatt: So you know I guess that really speaks to the fact that people were you know, focusing on restricting intake as much as possible and focusing on you know as much compensatory behaviors to reach those goal weights and again, certainly not all coaches are like that or have those perspectives. But, again, I think, in sports, at least for the last several years there's starting to be some changes around how coaches, in particular, are kind of approaching their athletes and what they understand this okay to say and what is not okay so again, I was on the very extreme end. But yeah there's definitely a lot of a lot of things that coaches, I can immediately think of that were that were said to me over the years and other athletes that.

Rachael Flatt: You know, could be contributing to the eating disorder or disordered eating behaviors.

la-shell_johnson@med.unc.edu: Thank you for that Rachael. The next question says, "I studied neuroscience relating to eating disorders, do you think that there's benefit in educating athletes about the underlying biology of eating disorders?" This is also from a former figure skater.

Rachael Flatt : Go former figure skaters! Yes, absolutely I think one of the most common things I say when I'm doing interviews about mental health, is that it is essential to provide the psycho education to any eating disorder patient that there are under, but there are biological underpinnings to the disorder itself.

Rachael Flatt: And, I think that really helps to alleviate some of the blame and shame and guilt and problems around self-worth when there are conversations about mental health. So, I completely support that, which is something that I know I didn't cover in this presentation, because we don't have really any athlete specific neuroscience research and relation to eating disorder. So that's definitely a space that I think is a great opportunity to talk about just in terms of the general science. And I am hugely supportive of having those types of conversations with the athletes that you work with.

la-shell_johnson@med.unc.edu: Thank you. I'll go ahead and do one last question with the limited time we have the remaining. Unanswered questions will be sent in an email with responses from Ms. Flatt within a week.

la-shell_johnson@med.unc.edu: The next question is, "In your experience, are there any cons to the coach or athlete acknowledging that the eating disorder is happening or is it always a good thing?"

Rachael Flatt: So I think, in most cases, it is a good thing. However, I think you have to do a lot of assessment up front to make sure that the coach isn't a contributing factor to the maintenance of the eating disorder.

Rachael Flatt : So, for instance, when you have coaches, who are making a lot of negative comments about an athlete's weight or shape. That might not be an instance where you immediately want to go tell the coach right, you might need to have a conversation with the athlete and say, “Hey you know that we're in an athletics department, and I understand that your coach is making some negative comments about your weight and shape and that's contributing to the eating disorder. Let’s you know, would it be possible, or would you be willing for me to go talk to that coach, provide them with some psycho education, so that they are helping make this a safer and healthier environment for you and a much less triggering environment?”

Rachael Flatt: So, I think you know you really have to do your due diligence and making sure you understand what that relationship is, but I think, generally speaking, it's good to get that information out there again with the athletes consent.

Rachael Flatt: But again, just doing a little bit of digging doing your homework, making sure you understand what's going on there and that relationship can be really essential to coming up with a treatment plan and an educational plan and kind of a conversation around that, so I hope that's helpful.

la-shell_johnson@med.unc.edu: Thank you so much Rachael. I just wanted to thank you all as participants for attending today's webinar.

la-shell_johnson@med.unc.edu: I think everyone enjoyed it. As a reminder, you will receive an email shortly after this webinar with the evaluation and the references presented today by Ms. Flatt along with the handouts. Within one week from today, you will also receive responses to all of your unanswered questions. Thank you once again for attending and we hope to see you next month at our next webinar. Thank you so much Ms. Flatt.

Rachael Flatt: Thanks everyone.