

# Body Image, Media, and Eating Disorders—a 10-Year Update

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More than 10 years after its publication in 2006, our media column “Body Image, Media, and Eating Disorders” [1] consistently remains a popular download from *Academic Psychiatry*. No doubt, interest in body image and eating disorders continues to be strong. Our previous column focused largely on the role of body image in more traditional media, e.g., television and films. However, in the digital age, our daily media diet has shifted dramatically to computers and handheld digital devices. In the time that has passed, the latest trends in fashion, diet, and exercise have changed, and our reliance on Internet-mediated activities has skyrocketed. While some progress has been made in terms of body positivity and acceptance, concerns about eating disorders remain. In this update, we will focus largely on the sweeping impact of the Internet and digital media on body image and eating disorders.

Probably the most noteworthy change in the last 10 years has been the impact of ubiquitous Internet access and mobile smartphones. Having immediate access to information and communication with friends and family is associated with both challenges and opportunities. Cell phones have allowed parents to contact their children at any time (and vice versa), and for kids, the instant access to communicate with friends is highly valued. On the other hand, many youngsters also are stressed and frustrated by the awesome ability of others to post commentary, photos, and criticism. At worst, peers can block each other, resulting in widespread ostracism and shame. Digital media has taken on, for many youth, the role of an

ongoing “reality tv” show, fostering perpetual drama and, for some, creating more stress than comfort and connection.

Digital media, particularly those using images, such as Instagram or Snapchat, raises in many more concerns about how they “appear” to others, and may well foster greater concerns and self-consciousness about body image. The constant availability of relatively sophisticated cameras and photo editing software has led to the development of “selfie” culture. Individuals experiment with snapping multiple photos from the most flattering angles and poses, as well as using filters, selfie sticks, cropping, and photo shopping to capture a flawless image for posting. This obsession with perfection has further increased the focus on ideal body image, including pressure to conform to the young, thin ideal, which continues to be valued in our society. For those who are vulnerable to comparing their bodies to others, this may trigger body dissatisfaction, increased drive for thinness, and the development of disordered eating. However, the research on this is mixed—some studies suggest a correlation between media exposure and body image [2–5], while others do not [6]. It is possible that media does not solely influence the thin ideal; rather, the images seen in photos and videos reflect what society and peers have already idealized [6]. Alternately, it is reasonable to consider a bidirectional relationship in which society and media affect each other equally.

Social media are forms of electronic communication, typically apps and websites, used to create online communities to share content such as information, ideas, blogs, personal messages, photos, articles, and videos. They include sites like Facebook, Instagram, YouTube, Snapchat, Vine, Twitter, Tumblr, and Google +. As the Internet has become more prominent in our lives, these sites have proliferated and are widely used across age groups, although they are officially restricted to those older than 13 years. Seventy-one percent of 13–17-year-olds surveyed by the Pew Research Center in

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2015 reported using Facebook, with most acknowledging the use of a “portfolio” of several additional social networking sites each day [7]. The average college student uses Facebook approximately 100 min per day [3].

People spend hours curating their online lives, with strategic posts highlighting everything from mundane daily activities and meals to vacations and major life events. Photos document time spent with family and friends, and individuals have the ability to post links to articles and memes about their interests, hobbies, and even political and religious beliefs. Friends and acquaintances may “like” posts or comment on the photo, link, or activity; it is tempting for users to begin to equate the number of online friends, followers, likes, and comments with popularity and self-worth. While social media give the opportunity to keep in touch with people in unprecedented ways, they also may encourage unhelpful, and at times unhealthy, comparisons. Most people are careful to post the positives about their lives, yet it may be challenging for the average person to remember that while comparing the nuances of their own lives to those carefully edited versions. Photos of group outings and parties can make those who were not included feel increasingly disconnected and lonely. Research has been mixed, with studies suggesting that social media use can be helpful if focused on building community and promoting supportive social interactions [5]. However, when used to compare to others, and to engage online followers in negative ways, the frequency of social media use has been linked to increasing rates of depression, anxiety, negative body image, and disordered eating behaviors [8].

The Internet remains the major source of health information for the vast majority of people, yet that information is not always accurate or regulated. Independent websites as well as social media platforms abound with self-proclaimed gurus touting the latest weight loss and exercise gimmicks. To be fair, many of these social media personalities are well-intentioned, and provide nutrition and activity recommendations that may be completely reasonable when followed in a balanced manner. Other, more blatantly pro-eating disorder messages and communities have found homes in the constantly evolving social media landscape that makes it challenging for parents, educators, and clinicians to keep up with the sheer volume and content, much less monitor young people’s access [9]. Web browsers have had some success filtering pro-anorexia websites, but, despite their best efforts at doing so, new social media platforms have been less successful at preventing the proliferation of pro-eating disorder visual images, tips and tricks, and interactive forums. As of 2016, Facebook and Instagram filter pro-eating disorder content. However, Twitter does not [10]. Difficulty policing social media pro-eating disorder content is largely related to how quickly things can change online; community members can “get around” filters by changing the spelling of a term or replacing letters with numbers or other characters (e.g., Thin\$po).

Online communities may appeal to individuals with eating disorders who feel isolated from friends and derive a sense of community and acceptance from their online activities. Individuals who are vulnerable to overly restrictive eating and exercise habits may be adversely influenced by posts prescribing particular meal plans and daily workouts. They may also be triggered by fitness and “thinspiration” photos (often achieved by posing in flattering positions) that glorify unrealistically lean, muscled, or frankly emaciated bodies. Recent posted Internet trends have increased the desire for such previously unrecognized characteristics as a “thigh gap” (inner thighs should not touch) or “bikini bridge” (hip bones protrude such that the material from a swimwear bottom stretches over them with a gap underneath) [10]. The A4 paper challenge, which has gained traction in Asia within the past year, suggests that one’s torso should be no wider than an A4 size standard sheet of printer paper held vertically [11].

Despite (or perhaps secondary to) an unrealistic thin ideal, obesity remains a major public health concern. According to the most recent data brief from the Centers for Disease Control (CDC) in 2015, the prevalence of obesity in adults was 36%, and 17% in youth. While rates in both children and adults increased from 1999 to 2014, there was no increase in prevalence of obesity in youth from 2003 to 2014, and there was a non-significant change in adults from 2011 to 2014 [12]. While it is impossible to imply causation, it may be reasonable to suggest that recent efforts to increase healthy eating and exercise may be having a positive effect. Michelle Obama’s Let’s Move! campaign trends toward organic, vegan and gluten free diets, and fast food chains increasing the availability of healthier offering such as salads may be conferring some benefit. Social media pressure to be healthy, while potentially competitive, may also encourage some healthier behaviors.

At the same time, rates of eating disorders such as anorexia nervosa, bulimia nervosa, and binge eating disorder have appeared to remain constant [14]. Anecdotally, is not uncommon for children, adolescents, and young adults diagnosed with eating disorders to cite concerns about becoming obese as the impetus for their initial focus on healthy eating and exercise. Unfortunately, even educated and thoughtful attempts at improving health can spiral into problematic behaviors in vulnerable individuals. Many are triggered by online research, reading or viewing documentaries, or being given assignments to calculate their body mass index, monitor macronutrient intake, or increase their daily activity for a health, biology, or gym class. Additional pressures are imposed by online monitors, such as Fitbit, and apps that monitor caloric intake, steps, and miles run daily. Still others develop unhealthy patterns of dietary restriction and over exercise (that can result in any of the eating disorders, not just anorexia) in the setting of well-intentioned warnings from their pediatrician or other medical providers.

While many individuals can benefit from gentle reminders about the importance of balanced nutrition and healthy activity, a significant proportion of the population is vulnerable to developing eating disorders. Teachers, coaches, physicians, therapists, and parents need to be conscious of this and need to be sure that comments and concerns are delivered in a thoughtful way, with close follow-up to ensure that the young person does not fall into unhealthy patterns. It should be noted that we are not suggesting that the content or process of digital media use causes eating disorders. We know that the etiology is the “perfect storm” of biopsychosocial factors. Our point is that the digital world complicates and perhaps compounds the social-environmental variable.

The diet and exercise industry remain strong, spurred on by health concerns and the ever-present pressure of the thin ideal. The general population is bombarded by conflicting messages from physicians, dietitians, and self-proclaimed experts on nutrition. When even the experts cannot agree, how can we expect the average person to be well-informed? The digital world has fostered this phenomenon and is at the heart of “fake” vs. true news. Many individuals get their news and information from social media and the internet, not knowing if evidence supports the promoted claims. Sugar is demonized in one blog, and fat in the next, yet another tells us that balance and moderation are key. Still others espouse the wonders of “going vegan” or “going Paleo.” It has become almost fashionable to eliminate gluten, dairy, legumes, nightshades, and any other potentially inflammatory agents from one’s diet. The popularity of “clean eating” has led some vulnerable individuals to develop such extreme dietary rules and restrictions that they have become malnourished and in need of treatment despite the fact that they lack the body image concerns and drive for thinness typically associated with anorexia nervosa. This has led some in the industry to coin the term *orthorexia nervosa*. Trends in exercise have been similarly confusing, with devotees swearing by the latest and greatest cardio, weights, and mind-body workouts. Boutique cycling studios compete with outdoor boot camps, yoga, Pilates, barre, CrossFit, and high intensity interval training classes. While it is definitely important to pay attention to nutrition and exercise, it seems that many focus on the extremes of behavior—either sedentary and overeating, or over-exercising and under-eating. The vast majority of us are best served by an approach that teaches people to listen to hunger cues, to avoid deprivation, and to maintain an adequate balance of macronutrients to fuel the body for healthy activity.

While the increased role of media in our lives brings some challenges, it also presents some amazing opportunities. This is especially true in the realm of innovative psychotherapy delivery for eating disorders. Many youth, and Millennials in particular, have come to rely on and expect the immediacy of digital media. It is not a great leap for them to desire to use it for purposes of therapy, coaching, and monitoring their diet,

exercise, and issues around body image. And this may be particularly important for those struggling with eating disorders, who are overall extremely sensitive to the shame of discussing their problems. While therapists may worry about data safety and clinical privacy, as well as the effects of using technology on the therapeutic relationship, patients are quite clear that they want the flexibility associated with technological advances, just as they expect it in their daily interactions with friends, parents, teachers, and others in their personal and professional life. Encrypted Internet-enabled telemedicine equipment has allowed people in remote areas to be able to take advantage of live therapy services that they would not otherwise be able to access [14]. Tregarthen et al. developed Recovery Record, a smartphone app that allows users to discretely record meals and snacks in real time for self-monitoring purposes in cognitive behavioral therapy. In addition to recording meals, snacks, binges, and purge episodes, patients can also access coping strategies, reach out to other users for supportive comments, and may enable a Therapist Connect feature that allows their clinician to access data in real time for use in future therapy sessions [15].

Engineers and researchers are currently building and testing apps and guided self-help websites to allow people to use computer-based therapy services in the privacy of their own homes, and at times that are convenient for them. Many young people, especially those with anorexia or bulimia nervosa, prefer to handle problems alone, and seek treatment only when a source is trusted. While there may be a role for digital media in the treatment of eating disorders, there is no substitute for a face-to-face therapeutic relationship. The anonymity associated with online groups may allow users to slowly acknowledge and articulate problems at a pace that feels comfortable to them. A study investigating an online, moderated eating disorder forum for patients ages 10–19 found that comments were appropriate and recovery focused [16]. Another looked at Facebook group use in patients who have received eating disorder treatment in a group setting and found that positive and supportive interactions are helpful. Not surprisingly, competitive comparisons can thwart recovery [17]. However, this kind of interpersonal competition is also present in live groups. Hence, moderators online need to be aware of the impact of competition. Further, as it has been an important part of group therapy to set the guidelines for contact outside the group, it may be even more important to make the rules for using digital media in a group therapy setting clear. Group members should not be posting any information about other members of the group in social media, and must be diligent about the importance of confidentiality in media that could potentially compromise confidentiality.

Despite the fact that the thin ideal remains firmly entrenched and internalized by many as the standard to strive for, there have been improvements in body acceptance and body positivity in recent years. Dove has launched a number

of poignant videos as part of its Real Beauty and Self-esteem Project campaigns [18] that have drawn attention to photoshopping in advertising and have encouraged women to embrace and celebrate their natural beauty. After the high profile deaths of a number of runway fashion models, governments in France and Israel, and local governments in Milan and Madrid passed legislation that introduced healthy weight and measurement standards (BMI > 18 for models > 18 years) [19, 20]. The Health at Every Size (HAES) movement, which maintains a robust online presence, including a webinar curriculum and a blog, [21] encourages individuals to reject dieting while practicing body acceptance and building self-confidence. This is achieved by promoting healthy lifestyles to minimize health risks associated with obesity and anti-discrimination efforts aimed at protecting people living in larger bodies. Given that dieting often results in regaining weight or developing disordered eating, HAES advocates focusing on healthy eating and activity, with an emphasis on building strength rather than striving for thinness.

Along the same lines, a 2016 article in the journal *Obesity* [22] that followed 16 contestants on the popular NBC television show *The Biggest Loser* showed that extreme and rapid weight loss such as that encouraged on the show is associated with substantially lower resting metabolic rate and metabolic adaption, as well as significant weight regain, 6 years after the initial weight loss. This has resulted in significant public outrage and concern about the long-term health effects of extreme weight loss. These findings, in combination with allegations that contestants were encouraged to engage in unhealthy weight loss behaviors during the show, have resulted in widespread speculation online and in print media that the 17th season of the show will not be returning this fall [23].

Sadly, after 10 years, there is not yet a magic intervention to definitively reduce eating disorders, and to encourage healthy balance and realistic expectations of beauty. But, there are things that we (as parents, physicians, teachers, and coaches) can do to encourage people to be savvy media consumers, and to promote body positivity, healthy body image, and balanced nutrition and exercise. We have written the following recommendations using our clinical expertise and literature review, as well as incorporating guidelines from a number of sources, including the American Academy of Pediatrics [7, 24, 25], the US Department of Health and Human Services Office on Women's Health [26]:

- Model and help children and adolescents develop a positive and healthy relationship with food. This can be accomplished by serving and eating a variety of healthy meals and snacks at regular intervals; avoid skipping meals. Food should not be used as a reward.
- Do not force kids to eat when they are not hungry (“Clean Plate Club”) or restrict foods when they are hungry, as this

can lead to secretive overeating. Encourage healthy reliance on hunger and satiety cues.

- Encourage family meals whenever possible, and strongly encourage children and adolescents to eat breakfast. Young people should be sure to get adequate sleep each night (8–12 h, depending on age) and about 1 h of physical activity per day.
- Model healthy activity that is a natural part of the environment—take hikes, ride bikes, walk up stairs instead of using the elevator. Encourage kids to participate in organized sports and fun activities that encourage movement, and limit sedentary media activities like social media use, video games, and television watching. Balance media use with other sedentary, yet enriching, activities like homework and creative hobbies such as art, music, and writing.
- Be willing to talk about unrealistic expectations of beauty and ways in which the media uses digital techniques to modify images that are presented to the public. The Dove beauty campaign is a good resource for a number of instructive and motivational videos on the subject [18].
- Model acceptance of different body types and discourage fat talk and excessive appearance-related discussions. And when talking about appearance, focus on a beautiful smile, good eye contact, and other features of one's appearance rather than on shape and thinness. Instead, focus on emotional and intellectual qualities that foster good communication and sound relationships between people. Remind kids that asking questions such as “What are you interested in, what are you reading, what activities do you enjoy?” conveys a real respect and appreciation for whom the person is and not simply what they look like. When thinking about physical characteristics, shift focus to strength, style, presentation, and function rather than thin appearance.
- Families can develop a Family Media Use Plan ([www.healthychildren.org/MediaUsePlan](http://www.healthychildren.org/MediaUsePlan)) to set expectations for media use and monitoring. This would include appreciating proper and improper use of social media; where to get good news and information; when, how, and to whom to send posts, etc. Healthy media literacy is extremely important, particularly around social activities. Parents should model healthy use of media as well. Encourage media-free zones or times at home (e.g., no media in bedrooms after bedtime, no media at meal times or an hour before bedtime, depending on the age and developmental level of the child or adolescent).
- Children younger than 18–24 months should use video chatting only. Eighteen- to 24-month-olds should have adult supervised access to high quality programs and should never use media alone. Two- to 5-year-olds should be limited to an hour of high-quality media per day, and should also watch with an adult. Families should work with their pediatrician to determine age and

developmentally appropriate expectations and limitations on media use in older children and teenagers.

- Parents should know what their children and adolescents are watching and what video games they are playing. While there is no substitute for watching and playing with them, adults may become more media literate by accessing the content and reviews of online media through sound organizations such as [www.common sense media.org](http://www.common sense media.org)
- Avoid exclusively using screens to soothe children, as this can lead to behavioral difficulties and an inability to self-regulate in the future.
- School-aged children may need to use media more frequently as part of school assignments. They should not also use entertainment media while completing homework.
- Talk regularly about the importance of appropriate, safe, and kind online behavior. Topics of discussion should include sexting, cyberbullying, interactions with strangers, and not sharing personal or financial information online.
- Watch online media with your children and teenagers, and have discussions about advertisements for diet control and weight loss. Ask them what they think about these ads. Use this as a way to reinforce healthy eating and exercise, and not simply controlling weight by pills, or pre-packaged dietary plans. In addition, ask them what they think about characters on tv, in movies, and online in terms of what makes them appealing or not. Focus your discussion on all aspects of what is appealing or not, including presentation, clothes, communication styles, reasoning, as well as fashion.

In summary, advances in digital media have had a profound effect on how we communicate with others, and may be complicating certain aspects of our lives. The ability to document and immediately disseminate photos, information, and video is convenient, but may also be stressful. While the past few years have seen advances in body acceptance and positivity, the thin ideal remains, and digital media may promote perfectionism that may lead to negative body image and disordered eating. Despite the downsides, digital media also brings with it exciting opportunities for promoting supportive social communities, optimizing eating disorder treatment, and engaging youth in pro-health behaviors using a platform that they value. Adults can model healthy media use, decrease the focus on thin bodies as the ideal, as well as balanced exercise and nutrition, that encourage youth to develop healthy habits and a realistic view of what it means to be attractive.

#### Compliance with Ethical Standards

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