

# Mobile diet and exercise apps for adolescent weight loss

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Innovative approaches can encourage healthy eating and activity in adolescents.

**MANY TEENS** with obesity go on to have obesity as adults. The ramifications of obesity are both physical and psychological, including metabolic conditions, sleep disorders, bullying, anxiety, depression, and low self-esteem. In addition, adolescents with obesity may experience increased school absenteeism and decreased scholastic performance. The result can be lower quality of life and limited life expectancy.

You can help your adolescent patients with obesity by encouraging a healthy diet and greater activity. (See *Help young patients lose weight.*) Engaging your patients in this effort may require some innovative interventions, including the use of technology.

## Adolescents and technology

Tools to help reduce childhood obesity are already in teens' hands in the form of smartphones and tablets: 73% of adolescents age 13 to 17 years have access to smartphones and 58% have downloaded applications (apps). Apps for weight loss provide an interactive tool for modifying behavior and documenting calorie intake and exercise, which contribute to successful weight management.

Peers and social media have a tremendous impact on teen use of mobile apps. Adolescents are more willing to try apps that friends or celebrities use, and social media sites, such as Facebook or Twitter, can be used to promote the apps and to showcase personal achievements, generate healthy competition, and provide support.

A study of adolescents' perceptions of mobile health apps found three common barriers and facilitators to their use. Barriers include:

- **Lack of awareness.** Teens said the apps aren't promoted well.
- **Low priority.** Teens don't think health and wellness are as important as other activities, such as play-



ing games or viewing social media.

- **Negative perception.** Teens believed that being seen using health apps would make them unpopular. Teens in the study indicated that these features made apps more enticing to use:
  - **Ease of use.** Teens said that they were more likely to use simple health apps with fun animation.
  - **Customization.** Many teens liked the idea of setting personal goals, having their data tracked, and receiving messaging tailored to their needs.
  - **Feedback.** Teens said that real-time feedback motivated and pushed them to reach their health and fitness goals.

## Make the right recommendation

One way you can help adolescent patients reach weight-loss goals is by teaching them about mobile apps that encourage caloric accountability and exercise. But before you start making recommendations, do some investigation. You want to recommend apps that are inexpensive and that have high user ratings for ease of use and dependability. Although no mobile apps for diet and exercise tracking have been developed solely for adolescents, some are appropriate for teens.

Mobile apps that approach physical activity like a game may encourage teens to be active. For example, *Zombies, Run!* ([zombiesrungame.com](http://zombiesrungame.com)) incorporates



## Help young patients lose weight

When working with adolescent patients who want to lose weight, take an empathetic, nonjudgmental approach. Emphasize healthy eating habits and physical activity.

Three meals a day that consist of nutrient-dense foods are the key to reducing weight without compromising nutrition. Encourage teens to reduce screen time to less than 2 hours per day and to increase physical activity; engaging in physical activity for an hour or more per day is imperative to healthy weight loss.

Caloric intake recommendations are based on gender, body size, growth rate, and activity level. For average teenage boys, those between the ages of

- 11 and 13 years need 1,800 to 2,600 calories daily
- 14 and 18 years need 2,200 to 3,200 calories daily.

Average teenage girls between the ages of

- 11 and 13 need 1,800 to 2,200 calories daily
- 14 and 18 need 1,800 to 2,400 calories daily.

stories that give the user 200 missions, including gathering supplies, outrunning the undead, and saving fellow humans. Users report increased motivation to continue their physical activity longer when compared to other apps. Burn Your Fat with Me!! ([nensho.net/nensho/index\\_en.html](https://nensho.net/nensho/index_en.html)) is an app that simulates an anime (popular Japanese animation) dating game. Users impress their anime dream dates by making simulated muscles. These muscles are made with coaching from a mobile trainer that encourages the user through a series of workouts. Superhero Workout ([bit.ly/2uTsh1C](https://bit.ly/2uTsh1C)) is a popular app in which the user protects the Earth against invasion. To save the planet, the user must complete a series of exercises to activate weapons, shields, and other “abilities.” This app also uses the smartphone camera as a motion tracker, which counts reps and helps measure calories that the user burns.

Adolescents who don’t want to be burdened with warding off zombies, wooing anime dates, or saving the planet can be encouraged to move with points awarded through the SWORKIT app ([sworkit.com](https://sworkit.com)),

which tracks movement. The more that the user moves, the more points he or she accrues; the points can be exchanged for real prizes from companies such as Sephora and CVS. Users can compete against friends, which appeals to many adolescents’ competitive natures and need for peer socialization.

### Supporting patients, encouraging adherence

You can help teens adhere to their weight-loss plan by educating them and their families about healthy eating and exercise. Counsel parents and guardians to make healthy choices themselves. Help the family develop goals that are time sensitive, regularly evaluated, and revised as needed.

Talk to the family about encouraging and supporting the teen to use the apps to facilitate adherence. For example, the family can devise a reward system for consistently using the app. And suggest that parents set aside time to listen to their teen’s weight-loss goals and concerns. You and the family can work together to support the adolescent who’s dealing with the stress of lifestyle change and empower him or her to solve problems and make appropriate decisions regarding weight-loss goals.

### Evolving technology

Although the use of mobile apps for dietary and exercise tracking is widespread, more research is needed to study their impact on obesity among adolescents. The clinical implications for practice remain undetermined, but technology will continue to evolve in new and exciting ways to help adolescents fight obesity. ★

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