

## David S. Edwards, M.D.

What are the most common physical demands on band members especially during marching season?

0:06

You know, marching band members qualify under the broad category of marching performers, and they tend to have overuse injuries, particularly in the lower extremities, so foot and ankle injuries, shin splints, hip tendonitis, and even back problems. So lumbar sprains, lumbar strains, can all be problems for the marching performing athlete.

How does the physical exertion of band members differ from other athletes in terms of intensity and duration?

0:36

The intensity and duration involved in the typical marching performance, not only the performance itself, but the practice can be significant and very demanding in terms of intensity and in duration. Practices can last anywhere from two to four hours. Sometimes there are multiple practices in a given day, and practices are oftentimes outside, on, you know, parking lot or black asphalt, so a lot of potential for heat illness and excessive heat exposure. The Academy of dietetics and nutrition and the program for the athletes and the performing arts tell us that the average marching performer can burn up to 5000 calories per day. The average performer can march up to nine miles in the course of a day, and can lose approximately seven pounds over the course of a marching season. So these are significant demands on the body, and there's a high potential for injury.

How can band members stay in shape and prevent injury during the rest of the year?

1:46

You know, fitness is really a daily process and evolves over time. Dr Andrew Huberman, who is a neurobiologist at Stanford and a fitness expert, tells us that fitness is really a daily series of activities that lead toward persistent well being. And so as part of that, it's physical activity. As part of that, it's healthy eating and getting enough sleep, and also emotional well being. So staying attuned to those areas in life as a matter of habit will lead to the best outcomes.

How can other students who may not have worked out in a while ease back in to exercise to avoid injury?

2:25

You know, not everyone can just jump into exercise, especially if it's vigorous exercise, like joining a weightlifting class or playing, you know, intramural sports that involve contact and collision. So it's really important for people to gradually ease into exercise, if they've been sedentary or not really exercising much over the last couple of months, it's really important for people to seek counsel with a healthcare clinician, especially if they already have some baseline aches and pains in major joints, and especially if they are a little bit older, meaning age greater

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than 45 in men, or age greater than 55 in women, or if they have other signs and symptoms at baseline. So in addition to aches and pains, we would include shortness of breath at rest, episodes of chest pain, poor exercise tolerance in general. The other concern would be presence of other medical conditions like high blood pressure, diabetes, chronic conditions that are not well controlled. So all of those would be indications to seek out advice from a healthcare provider before jumping right into exercise.

### What are some signs of overexertion?

3:42

Overexertion really can manifest in several ways. Sometimes it's shortness of breath that isn't getting better as someone you know scales back on the intensity of their workout, sometimes it's aches and pains during the exercise itself. It could be chest heaviness or chest pressure, for example, feeling like an elephant is squeezing or sitting on the chest. And it can be a rapid heart rate and a rapid heart rate that isn't getting better after resting for a minute or two. So those are all signs, signs of heat. Illness could include nausea. It could include headache while being outdoors. It could also include muscle cramping. So those are all issues for us to think about.

### What is the importance of rest and recovery?

4:31

Rest and recovery are key, and those processes really need to start within the first 45 to 60 minutes of the exercise or the workout itself. So it's important for us to Refuel and rehydrate as soon as possible after that workout. It's important to get some caloric intake, preferably with a low fat, quality protein source, and some carbs to help. The muscles replenish and refuel. It's also necessary to focus on sleep. The American Academy of Sleep Medicine advises at least seven hours of sleep in a 24 hour period. Now, for people who are marching performers or exercising vigorously, whether it's in the gym or at work, those people probably need closer to eight hours of sleep per night in order to rebuild and recover. It's important to build recovery as a rest day into the week, at least one day a week, and if possible, two days a week. And it's also important after that workout to stretch, to do some dynamic stretching as part of that recovery process, many people find benefit from using a foam roller for sore muscles or achy muscles, as they especially increase the intensity and duration of their workouts.

### Anything else to add?

5:59

The American College of Sports Medicine tells us that exercise is medicine, and currently we live in a national epidemic of loneliness, a national epidemic of mental health problems, and so there's great evidence that exercise and physical activity help with those conditions. They help reduce anxiety, they help decrease depression, and they help improve overall emotional well being and sleep. So it's important for people to consider exercise, consider physical activity as a really key tenet of their overall fitness, which again would be physical activity, healthy eating and emotional well being. So I'd encourage people to set goals and work towards those goals with a positive growth mindset, readjusting things as needed and really trying to get involved in

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exercise in a group setting, whether it's joining a class at the Rec, whether it's joining an intramural team or just going on a walk with a friend and really trying to maintain consistency over time for the best results.