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living for
all ages

InMotion

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There's an App for Your Summer Fun

By Joe Siebelts

The world of technology is often treated as the bad guy when it comes to lacking activity levels, decreased focus on health, and a rising obesity rate in the United States. While some kids could benefit from putting down the video game controller, numerous digital applications can also serve as great resources for families in search of easy, fun ways to keep moving.

Whether you are looking for a Sunday recreational activity for the whole family, or a more focused workout to get ready for the summer months, these smartphone apps have a number of ideas to kick-start your plan:

Fitness Buddy

This multi-platform app provides a more extensive selection of exercise suggestions, including workout plans for all ranges of activity levels. Fitness Buddy is also searchable for those who are looking to target a specific area of the body.

Let's Move It! From the Cleveland Clinic

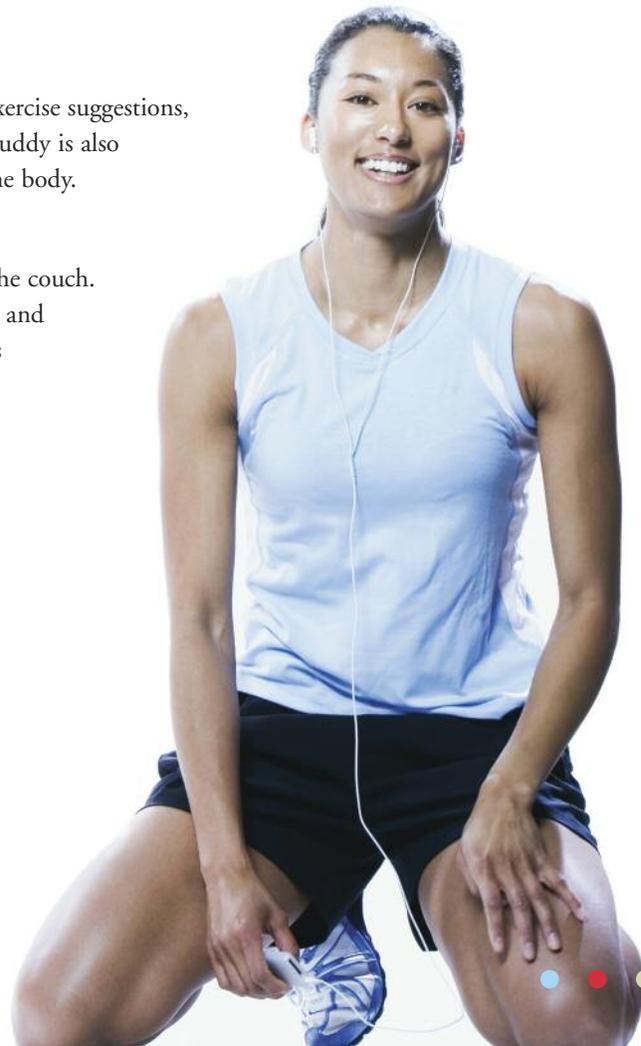
Sometimes embracing the healthy life is as simple as getting off the couch. The Let's Move It! app from the Cleveland Clinic makes walking and running fun by providing real-life comparisons to the progress its users make.

NatureFind

What better way to get the family active this summer than by spending time in the great outdoors? The NatureFind app from the National Wildlife Federation suggests outdoor activities near your location—from hiking paths to recreational sporting events.

PE Games

Getting kids on the move can be fun, and PE Games has the resources to show you how. Whether you are a physical education teacher or a parent looking for some summer activities, this app provides various themed games with descriptions to make the job a bit easier.



Rock Climbing Injuries 101

By Robert H. Brophy, MD,
and Kevin G. Shea, MD



Rock climbing is an increasingly popular sport in the U.S., with upwards of nine million participants.¹ Although it is a non-contact and non-impact sport, it is not without risk of injury. Up to 50–80 percent of regular participants report a rock climbing injury per year,^{2,3} with the types of injury varying by the type and level of climbing.

Elite climbers are most at risk for injuries to the fingers while less experienced climbers have a wider range of injuries. Hand and wrist injuries have been thought of as contributing up to three quarters of rock climbing injuries, with tendon and ligament injuries, and other fractures among the most common types of injury.⁴ Climbers are also at risk for shoulder injuries, including SLAP tears.

Different hand grips or holds can place significant demands on the hands and fingers.⁵ The cling grip and pocket grip place very high demands on tendons. To reduce the stress on fingers, climbers may use finger tape. Many climbers will train, or climb on routes that require the use of one or two fingers on a hold. This can lead to chronic overuse or acute ruptures of tendons. Crack climbing can also be a high-risk maneuver, as the finger(s) are wedged into cracks in the rock. If the climber falls or slips while crack climbing,

this can result in significant injury, including ligament tears.

While overuse injuries of the hand/wrist and upper extremity are very common, acute traumatic injuries to the foot and ankle are also very common, especially in outdoor settings. The appropriate use of padded landing pad for outdoor climbers, can dramatically reduce the risk of these injuries when the climber falls from relatively low height.

Climbing gyms and indoor climbing walls are increasingly used throughout the U.S. and Europe. These gyms allow for year-round training, and provide an opportunity for novices to learn more about the sport under controlled circumstances. Most climbers believe that injury risk is much lower in a climbing gym, due to the use of padded landing

sites, crash pads, and well trained spotters or belay partners. These spotters or belay partners allow the climbers to practice difficult moves with appropriate backup.

All in all, rock climbing can be a fun and engaging summer activity with a few safety precautions and practice.

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Up to 80% of regular participants report a rock climbing injury per year.

SLAP Tears Common and Treatable

By Kevin W. Farmer, MD

Shoulder injuries are commonly encountered by athletes who perform frequent overhead or throwing motions such as divers, basketball players, or pitchers. One of the most common shoulder injuries is a SLAP (superior labrum anterior to posterior) tear or injury to the area that encircles the shoulder socket, and serves as the attachment site for the ligaments that stabilize the shoulder, as well as the biceps.¹

SLAP tears can have a wide array of symptoms which makes diagnosis difficult at times. Some common symptoms are:

- Deep seated shoulder pain with activity
- Clicking, catching, or popping of the shoulder
- The feeling of the shoulder “slipping”
- Stabbing-type pain with lifting objects
- Shoulder weakness
- Pain or loss of velocity during throwing

If a SLAP tear is considered following an appropriate history and physical, advanced imaging is often the next step. Plain X-rays are typically normal. MRI with contrast dye placed into the joint (MR arthrogram) has been shown to be more accurate in the diagnosis of a SLAP tear.²

The treatment of a SLAP tear depends on a variety of factors. Often, a trial of non-operative treatment is the first step, including rest, anti-inflammatories, activity modification, and physical therapy. In throwers, a complete 6-week rest period along with physical therapy, followed by a graduated throwing program is typically undertaken. Occasionally, a cortisone injection may be utilized to minimize pain.

In situations where non-operative options don't work, arthroscopic surgical options can be used. Arthroscopic SLAP repair can be performed with a few small incisions and minimal soft-tissue trauma. Complications from this procedure are rare, but include infection, bleeding, injuries to vital structures, and failure of repair.

Post-operatively, patients are often in a sling for up to six weeks. Physical therapy is started early on. The focus of therapy includes normalizing range of motion and strength while protecting the repair. Return to sports or a throwing program is typically around 4–6 months.

Outcomes from isolated SLAP repairs are often very good. Outcomes are worse with a simultaneous injury, especially one of the rotator cuff. Most studies report improvement in pain and function following SLAP repairs, with greater than 80 percent of throwing athletes returning to their previous level of activities.³ Older age has been associated with worse outcomes following repair.⁴

In conclusion, SLAP tears are a common injury in athletes. Treatment usually is non-operative at first. Outcomes following arthroscopic surgery are often very good, but worse with older age. Return to sport following repair is typically 4–6 months.

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About AOSSM and *In Motion*

As a world leader in sports medicine education, the American Orthopaedic Society for Sports Medicine (AOSSM), we have designed the publication to highlight relevant information for multiple age groups from exercise and rehabilitation to nutrition and psychology.

This important educational tool is published quarterly and distributed electronically.

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What are Shin Splints?

By Brett D. Owens, MD

Shin splints are an extremely common ailment in runners. Other common names are soleus syndrome and tibial periostitis, but the proper medical terminology is medial tibial stress syndrome. As this name suggests, this condition involves overload (stress) of the medial (inner border) part of the tibia (shin bone).

This overuse condition is usually associated with abrupt changes in training routines. The bone experiences increased stresses and begins to remodel to adapt to this environment but often needs more time to adapt than the runner allows.

Runners with suspected shin splints should seek an evaluation by a sports medicine professional to rule out other diagnoses such as a stress fracture, posterior tibial tendon disease, and exercise-induced exertional compartment syndrome.

The diagnosis is typically made by physical examination, with tenderness along the inside area of the leg. Plain X-rays usually do not show any changes.

Advanced imaging, such as bone scan and MRI can sometimes be performed and help confirm the diagnosis, but is usually not necessary.

The mainstay of treatment is rest (or a change in training, such as cross training) to allow the tibial bone to heal. Other treatments that may help include:

- **Orthotics** (specifically those with arch support)
- **Non-steroidal anti-inflammatory drugs**
- **Ice**
- **Neoprene sleeves**

However, there is no clear evidence that any of these have significant benefit besides rest. To help avoid shin splints, runners should be vigilant in allowing adequate time to increase training demands, as well as run in a properly-fitted, well-cushioned running shoe. So, keep on running and don't let your shins slow you down.

