# Youth Injury Prevention

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## Nutrition

Children grow and need to continue growing. They need energy to help them grow. How do they get energy? Through food! If your child is being active on a regular basis, then more food needs to be consumed to keep up with the energy given off during activity.

Energy expenditure depends on the size of the child, the weather, the intensity of the activity, the skill of the performer and so on. Here is a general guideline for energy expenditure for one hour of activity.

| Activity or Sport based on competition | 85lbs | 110lbs | 130lbs | 155lbs |
|---|---|---|---|---|
| Football | 210 calories | 240 calories | 270 calories | 305 calories |
| Basketball | 415 calories | 480 calories | 545 calories | 610 calories |
| Baseball / Softball | 185 calories | 220 calories | 250 calories | 285 calories |
| Gymnastics | 230 calories | 255 calories | 280 calories | 315 calories |
| Soccer | 370 calories | 430 calories | 490 calories | 550 calories |


If your child is exercising regularly, be sure they are eating as many calories as they are using with exercise.

Eating the right foods is just as important as eating the correct amount of calories. Here are some examples of some foods your child may enjoy and help muscles recover after a long workout.

- Peanut butter is high in protein. It can be combined with apples, bananas, or whole wheat pretzels.
- Chocolate milk is high in protein and calcium
- Smoothies are yummy and filling. You can make a smoothie with yogurt, any fruit, peanut butter, and ice.

### HYDRATE! HYDRATE! HYDRATE!

Staying hydrated before, after and during physical activity is very important for your body to function properly. Here are some ways to know if your child is drinking enough water: drinking as much water as your child is sweating; urination color should be as close to clear as possible and not bright yellow; your child's weight should not change from before activity to after activity.

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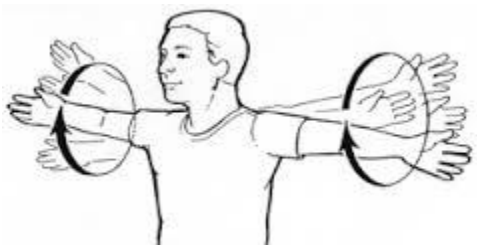
## Proper Dynamic Warm-up

Dynamic warm-up improves performance before sporting activities by practicing good body control and reducing the risk of injury. It does this by getting blood flow to the muscles (warming them up).

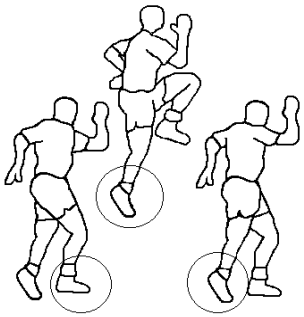
A dynamic warm-up should be about 10-20 minutes long. The child can do these even before the team begins to warm-up.

-Begin with slow and controlled movements: walking lunges; small & large arm circles forward and backward; walking while bringing knee to chest and straight leg kicks. These are done 3 sets of 10 reps on both sides!

-Progress to moderate speed: butt kicks; high knees; high knee skipping. These can be done 3 sets of 10 reps with 20-30s breaks between each set on both sides!





-Progress to full speed of activity near the end of the warm-up: running, sprints, grapevine, performing sport specific activities. These can be performed for 50-100ft 3-5 times until child is at full speed of activity.


# Youth Injury Prevention

## Proper Static Cool-down

A static cool-down consists of static stretching. Static stretching is holding a position for longer than a few seconds and up to a minute or longer. It is very important for muscle soreness and decreasing a child's heart rate back to a normal resting level after a sporting activity. Children 1-10 years old should have a resting heart rate at 85-90 beats per minute. As children get older, their resting heart rate will decrease to 60-100 beats per minute. These types of stretches should not be performed before sporting activities, because they have been shown to decrease speed, power and strength. However, sports needing increased muscle flexibility throughout the activity such as gymnastics may require some static stretching in a warm-up.

All stretches should be held for 30 seconds and be performed 3-5 times on both sides!

### Hamstring Stretch

### Quadriceps Stretch

### Arm Stretch

### Trunk Stretch

### Calf / Gastrocnemius Stretch

### Piriformis Stretch

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## Pre-Season Back to Sport Regime

Children who take time away from regular activity need to slowly get back into playing sports. They will not be able to jump back into the bodily stressing sport without a proper gradual increase. Below is a recommendation for children who will begin preseason after an extended period of time away from playing the sport.

- Start being active every other day for 1 hour
- Build up to 2 days on and 1 day off
- Build up to 3 days on and 2 days off
- Build up to 4 days on and 2 days off
- Finally up to 5 days on and 2 days off

*5 days on and 2 days off is a typical high school athlete's schedule.


| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Week 1 | 1 hour active | OFF | 1 hour active | OFF | 1 hour active | OFF | 1 hour active |
| Week 2 | 1.5 hours active | OFF | 1.5 hours active | 1.5 hours active | OFF | 1.5 hours active | 1.5 hours active |
| Week 3 | 1.5 hours active | OFF | OFF | 2 hours active | 2 hours active | 2 hours active | OFF |
| Week 4 | OFF | 2 hours active | 2 hours active | 2 hours active | 2 hours active | OFF | OFF |
| Week 5 | 2-3 hours active | 2-3 hours active | 2-3 hours active | 2-3 hours active | 2-3 hours active | OFF | OFF |