



Special Olympics

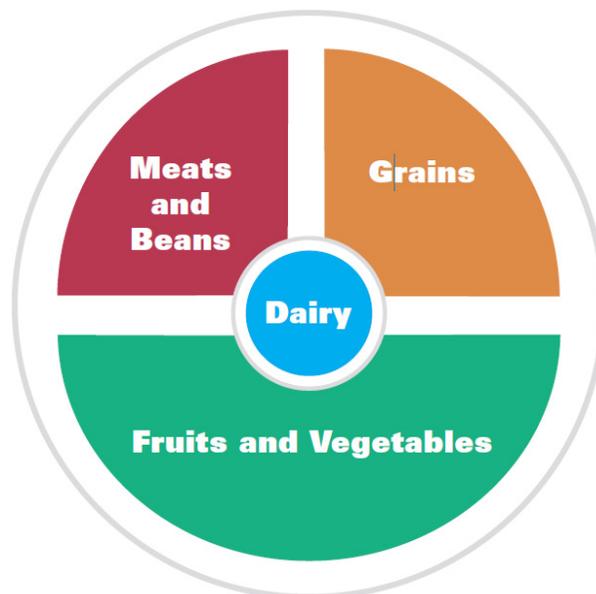
SPECIAL OLYMPICS SPORTS SCIENCES





***Special
Olympics***

**SPECIAL OLYMPICS SPORTS SCIENCES:
NUTRITION GUIDE FOR COACHES**



TRAIN Plate

Acknowledgements

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Advancing the public well-being through improved communication

Special Olympics would also like to thank the professionals, volunteers, coaches and athletes who helped in the production of the Special Olympics Sports Sciences. They have helped fulfill the mission of Special Olympics: to provide year-round sports training and athletic competition in a variety of Olympic-type sports for people 8 years of age and older with intellectual disabilities, giving them continuing opportunities to develop physical fitness, demonstrate courage, experience joy and participate in a sharing of gifts, skills and friendship with their families, other Special Olympics athletes and the community.

Special Olympics welcomes your ideas and comments for future revisions of this guide. We apologize if, for any reason, an acknowledgement has been inadvertently omitted.

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Special Olympics Sports Sciences: Nutrition Guide for Coaches

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Overview



Many factors contribute to the Special Olympics Team and individual athlete's success in sports performance. Athlete training, commitment, capabilities and injury avoidance all contribute to the individual athlete's success. The athlete's diet affects their performance, the foods they choose during training and event competition will impact their sports performance. Food gives the body the energy to walk, run, and play sports. Good nutrition is important for the athlete's everyday health. Eating a healthy diet will give energy to the body and allows it to be active in daily life.

A healthy diet also keeps the athlete focused while practicing or competing in an event, whether basketball, track, or soccer. Practicing good nutrition can help the athlete improve in the sport!

As a Special Olympics Coach you are responsible to ensure a safe environment for athletes. Promoting a healthy diet for your athletes is an important responsibility.

The Special Olympics Nutrition Guide is intended to provide Special Olympics Coaches with basic information on a healthy diet and sports including:

- ♦ An overview of the importance of nutrition
- ♦ Different food groups and what each particular group provides to the human body
- ♦ How to build a healthy diet based on the different food groups
- ♦ The role of carbohydrates, proteins, and fats in an athlete's diet
- ♦ Nutrition and water before, during, and after an event
- ♦ Tips on good nutrition when traveling
- ♦ Quick, healthy snacks to consume throughout the day or on the go
- ♦ Links to Special Olympics resources that support nutrition and sports
- ♦ Recommended resources from sports and nutrition authorities for more in-depth information on sports nutrition

Coaches are encouraged to partner with athletes, unified partners, ALPs and families as they implement nutrition recommendations for their teams. Input and recommendations from individuals participating in the Special Olympics experience is essential to success.

Special Olympics Sports Sciences: Nutrition Guide for Coaches

Hydration – Keeping Fluids in the Body

Hydration - Keeping Fluids in the Body

Adequate hydration and fluid replacement is one of the most important nutritional concerns for an athlete. Ensuring that all athletes are adequately hydrated is a critical responsibility for the coach. As small a loss as 4 percent of body weight (4 pounds in a 100 pound person) can seriously affect performance.



Adequate hydration is important throughout the athlete's participation in sport but particularly during the following times:

- ♦ Prior to practice and competition
- ♦ During practice and competition and
- ♦ After practice and competition

As the athlete trains and competes, fluid is lost through the skin through sweat and the lungs while breathing. If the lost fluid is not replaced during this time, it can lead to dehydration. Dehydration is entirely preventable. The coach should plan for adequate hydration of all athletes, regardless of age or gender.

Dehydration means the athlete has a decreased volume of blood circulating through the body, and results in:

- ♦ A decrease in the amount of blood pumped with each heart beat
- ♦ Exercising muscles do not receive enough oxygen
- ♦ Exhaustion sets in and the athlete's performance suffers

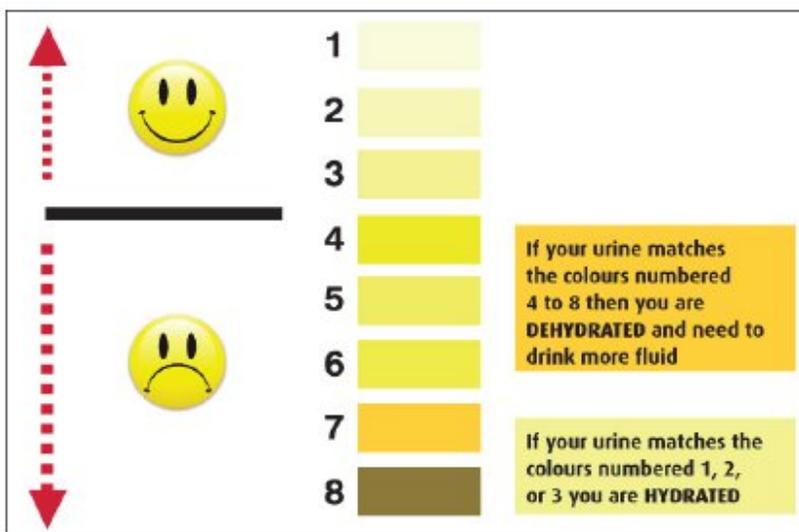
Symptoms of dehydration include: dry mouth, dizziness, inability to produce tears or saliva, inability to sweat or produce urine, a rapid heart rate, delirium, altered mental status, and loss of consciousness. In serious cases, dehydration can cause sudden cardiac arrest, seizures, kidney failure, hypovolemic shock, heat injury, cerebral edema and could ultimately result in death.

One very simple way to determine if an athlete is hydrating properly is to weigh them before exercise and after. If the athlete is hydrating properly, there will be very little difference between the weight of the athlete before and after exercise. If a scale is not available, checking the color of the athlete's urine is helpful. Urine that is dark gold in color indicates dehydration. Urine similar in color to pale lemonade or weak tea is a sign of a hydrated athlete.

Coaches should instruct athletes to check their urine color and let the coach know when the color is in the 4-8 zone colors.

Special Olympics Sports Sciences: Nutrition Guide for Coaches Hydration – Keeping Fluids in the Body

Urine Chart to Estimate need for additional fluid



McEnroe, John. "Urine Chart to Estimate Need for Additional Fluid." Chart. *JMTA Blog John McEnroe Tennis Academy*.N.p., 22 Apr. 2013.

Additional situations that will impact athlete hydration include the climate, altitude and temperature where the athlete practices and competes as well as the intensity of the sport. Special attention should *be paid to hydration in climates with extreme heat, prolonged cold and sports such as cycling, track and field.

Athlete Medications and Dehydration

Several serious medical conditions can occur from not having enough water. The following are examples of substances and drugs that may put the athlete at risk for dehydration:

1. Alcohol
2. Some asthma medications
3. Some blood pressure medications
4. Some psychotropic medications
5. Vitamin D derivatives.

The link: <http://www.rightdiagnosis.com/symptoms/dehydration/side-effects.htm>, lists prescription medications that can cause dehydration Coaches should be aware of any medications the athlete is taking. If the medications put the athlete at risk for dehydration, the coach should instruct the athlete to drink adequate amounts of water and monitor the athlete for potential dehydration.

The goal is to keep the athlete hydrated and not allow the athlete to become dehydrated. The easiest way is to create a simple, routine system that all your athletes follow:

- ♦ Drink plenty of fluids with your meals
- ♦ Always have water available before, during and after your event
- ♦ Don't wait until you are thirsty to drink

Special Olympics Sports Sciences: Nutrition Guide for Coaches

Hydration – Keeping Fluids in the Body

When to Drink Water	How Much Water to Drink
Night before practice or competition	Glass of water (8 oz./250ml)
Four hours before event	Glass of water (8 oz./250ml)
15 minutes before event	One-half glass of water (4 oz./125 ml)
During event of less than one hour	One water break
During event of more than one hour	One-half glass of water (4 oz./125 ml)
After event	Glass of water every three hours until next day

Athletes need to be instructed to “drink as much water as they want.” If you are practicing in warm environments, you may need to increase the frequency of water breaks. The best replacement for most events is plain water.

- ♦ Water
- ♦ Carbohydrate fluid replacement drinks (PowerAde, Gatorade) - should not be used frequently, they contain excess calories can contribute to unnecessary weight gain and dental caries. If used, they are more appropriate for the more intense sports such as cycling and track and field.
- ♦ **Note-** Energy drinks are NOT recommended; they contain stimulants (such as caffeine) and could impact the athlete’s health. In addition some medications the athletes take can be impacted by excessive caffeine.

Nutrition Overview

Carbohydrates, protein and fat are the three main nutrients in food that keep the body functioning every day.

1. **Carbohydrates:** Fuels the muscles and allow them to work for longer periods of time without getting tired. Sources of carbohydrates include whole grains, fruits, and vegetables.
2. **Proteins:** Builds and repairs muscles and body tissue. Athletes who participate in strength and endurance sports may have higher protein needs than athletes participating in other sports. Most athletes can meet their protein requirements through a healthy diet. Sources of protein include eggs, meat, fish, beans and legumes (pulses).
3. **Fats: Provides energy, helps the body absorb vitamins.** Small amounts of fat in the diet are necessary. Sources of fat include butter, oils salad dressing, mayonnaise, whole milk and yogurt and desserts.

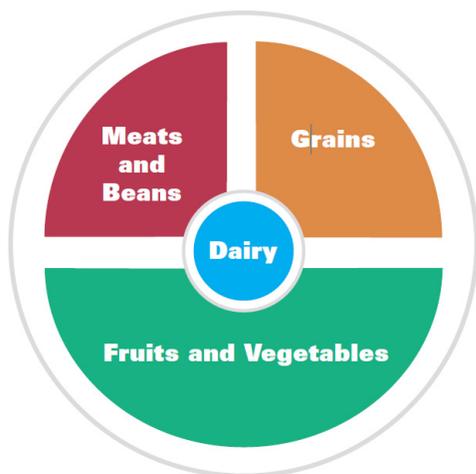
Vitamins and minerals do not provide energy, but are needed in very small amounts to enable the body to perform efficiently and effectively. The athlete should eat a variety of foods from each food group will help the body get all the **vitamins** and **minerals**, it needs to function. The next section describes the food groups and recommended foods to contribute to a healthy diet.

Food Groups

All the foods that we eat fit into a food group. Each group helps fuel an athlete's body with different nutrients, so it is important for your athletes to eat foods from each group every day.

Keep the athlete's plate balanced between the food groups- this helps to ensure the athlete is meeting all nutrition recommendations. The TRAIN plate illustrates the balance between the food groups. While countries have their own nutrition guidelines, the TRAIN plate can be adapted to meet country guidelines.

Key Points



TRAIN Plate

- ♦ It is important to include at least three different food groups in each meal. Eating different foods allows the body to receive all the nutrients it needs.
- ♦ A good guide to use when eating is dividing a plate into three sections. Fruits and vegetables should take up one-half of the plate. Grains make up $\frac{1}{4}$ of the plate and meats, fish, eggs, legumes and beans (pulses) make up another $\frac{1}{4}$ of the plate. Dairy foods are shown as a circle in the middle of the plate. Dairy foods can be added to other food groups in meals or taken as a beverage.
- ♦ Healthy oils and fats like olive oil can be added as a salad dressing.

*oils are only needed in small amounts and are often added during cooking.

Special Olympics Sports Sciences: Nutrition Guide for Coaches

Nutrition Overview

My Country Guidelines for Nutrition

Daily Serving Food Groups

Food Groups	_____ Country Recommendations
Meats, Beans, Legumes, Pulses	
Grains, Breads, Starchy Foods	
Fruits and Vegetables	
Dairy	
Oils and Fats	

What is a Serving Size?

There are several good charts which illustrate a serving size for various food groups. For example a portion of meat is the size of a person's hand (medium size palm), baked potato size of a medium fist, The Resource section has links to serving size posters to print and use with your athletes.

Special Olympics Sports Sciences: Nutrition Guide for Coaches Nutrition Overview

Grains

- ♦ Give the body nutrients including vitamins, minerals, fiber and energy.
- ♦ Make half of the grains each day from whole grains.
- ♦ Whole grains are usually brown in color and have more vitamins.

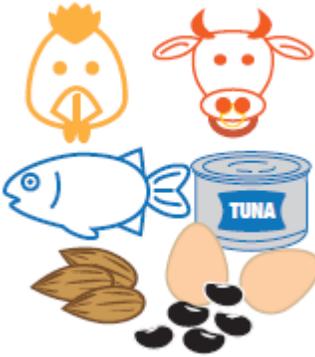
Foods to Include

	General Foods	My Region/Country Foods
	Brown, Wild, White Rice, Quinoa	
	Granola and Cereal Bars	
	Pasta	
	Popcorn –light prepared without oil or butter	
	Whole Grain Bread, pita bread, corn and whole grain tortillas	
	Whole Grain Cereal, oatmeal	
	Whole Grain Crackers	
	Graham Crackers	

Meat, fish, poultry, eggs, beans and peas

- ♦ Gives the body protein, vitamins and minerals and energy
- ♦ Include one serving for this group at every meal
- ♦ Choose less fattening meat like turkey, chicken, seafood and sirloin steak.

Foods to Include

	General Foods	My Country/Region
	Beans (kidney, black, pinto, or soy)	
	Chicken (no skin)	
	Eggs	
	Fish (frozen, fresh, or canned)	
	Ground Beef (80-90% lean)	
	Peanut Butter and other nuts	
	Tofu	
	Turkey, ham, pork, lamb	

Special Olympics Sports Sciences: Nutrition Guide for Coaches

Nutrition Overview

Vegetables and Fruits

Vegetables

- ♦ Give the body essential nutrients, including vitamins, fiber and energy
- ♦ Choose fresh, dried, canned or frozen
- ♦ Choose a rainbow - Eat a variety of colors

Foods to Include

	General Foods	My Country/Region
	Fresh- Asparagus, Broccoli, Carrots, Cauliflower	
	Green Beans, Red and Green Peppers	
	Any Dark Greens – Spinach, kale, collards, mustard greens	
	Cabbage-red or green	
	Lettuce- red leaf, romaine, iceberg, salad mix	
	Beets, parsnips, turnips	
	Potatoes/Sweet Potatoes	

Note- some countries include potatoes in the high carbohydrate (starchy) food group and limit the number of servings to ½ c. day.

Fruits

- ♦ Give the body essential nutrients including vitamins, fiber, and energy.
- ♦ Choose fresh, dried, frozen or canned
- ♦ Choose a rainbow - Eat a variety of colors

Foods to Include

	General Foods	My Country/Region
	Fresh- Apples, Bananas, Berries, Cantaloupe, Grapes, Kiwi, Oranges, Strawberries	
	Canned Fruit (in its own juice)	
	Frozen Fruits	
	Dried Fruit- Raisins, apricots, apples	
	Fruit Juice- limit to 4- 6 oz. or 150ml/day	

Special Olympics Sports Sciences: Nutrition Guide for Coaches

Nutrition Overview

Oils and fats



- ◆ Give the body energy.
- ◆ Fish, avocados and nuts are a great way to get healthy oils and fats in the diet
- ◆ Eating and cooking with canola, safflower and olive oils are better for your body.
- ◆ Healthy fats include olive oil, canola, safflower and corn oils
- ◆ Use in small amounts

Dairy

- ◆ Give the body calcium, vitamins and energy.
- ◆ Keeps your bones and teeth strong.
- ◆ Include one serving of dairy at every meal
- ◆ Choose dairy sources that are low fat or fat free

Foods to Include

	General Foods	My Country/Region
	Low -fat or Skim Milk	
	Low -fat Yogurt	
	Low-fat Cottage Cheese	
	Low- fat Cheese (cubed cheese, cheese slices, or string cheese)	
	Dairy Dessert	

Special Olympics Sports Sciences: Nutrition Guide for Coaches

Nutrition and Sport

Nutrition and Sport

Eating well on a regular basis will keep the body healthy and in top shape for participating in sports. To fuel the body for each workout the athlete has to focus on what he or she is eating at three specific times: before, during and after exercising. This will help the body build up the energy it needs to perform the workout, keep the energy while working out, and recover from the workout. Remember, the athlete should eat foods that are familiar to the mat any of these times

Before an event	During the event	After an event
<p>Day before the event</p> <ul style="list-style-type: none"> ◆ The night before get a healthy dinner to start building energy, focus on eating grains, lean meats, fruits, and vegetables to get plenty of carbohydrates. ◆ Drink water to be ready for the next day. <p>Day of the event</p> <ul style="list-style-type: none"> ◆ 3 or 4 hours before the event eat a meal which includes a serving from each food group and drink water. ◆ Avoid foods high in fat, these can take a long time to digest and make you feel tired ◆ If there is an event or practice early in the morning the athlete may not have time to eat a full meal beforehand. In that situation they should eat a good meal the night before and in the morning of the event, eat a small meal or snack an hour before it begins. ◆ 1 hour before the event, eat a small snack (like a cereal bar or piece of fruit) and drink water 	<p>Food for</p> <ul style="list-style-type: none"> ◆ Events or practices shorter than 60 minutes, it is not necessary to eat to maintain energy. ◆ Events or practices longer than 60 minutes, the athlete should eat small amount for energy. ◆ Any event- fruits, granola and cereal bars, can give a boost of energy during workout or sport event. <p>Water should be consumed:</p> <ul style="list-style-type: none"> ◆ Every 15 minutes, and at breaks while exercising. ◆ At high intensity sports or events/ practices longer than 60 minutes. Could consider a sports drink during high intensity sports. 	<p>Snack</p> <ul style="list-style-type: none"> ◆ 15- 30 minutes after: Eat a small snack to begin to regain the energy. <p>Meal</p> <ul style="list-style-type: none"> ◆ One to two hours after: Eat a meal with all the food groups. Give the body back all the energy it lost by eating a healthy meal which includes a serving from each food group.

Special Olympics Sports Sciences: Nutrition Guide for Coaches

Nutrition and Sport

Snacking

Snacking is a great way to help the athlete meet their nutrition needs and maintain energy during practice and sports events. Some tips:

- ♦ **Get more, eat less!** – Choose foods that have lots of nutrients such as fruits, vegetables, and whole grains.
- ♦ **Keep it small!** – Use small bowls and plates when preparing snacks. This will keep athletes from overeating.
- ♦ **Plan Ahead!** – Have healthy snacks available during practice, travel and competition. This will make athletes less likely to eat junk food.

Choose Healthy Foods and Beverages- Coaches fill in choices from your country

Foods/Beverages	Choose this	Instead of this
Milk	Low fat, fat free milk	Whole milk

Special Olympics Sports Sciences: Nutrition Guide for Coaches

Nutrition and Sport

Healthy Eating While Traveling

Many athletes and teams travel to sports events within their country, region and globally. It is important to maintain good nutrition and hydration while traveling to an event, before, during and after the competition. The coach should plan with the team what foods to take while traveling and what foods and beverages to take to the competition site. The coach should check with the athlete's family or care giver on food preferences and special diet needs.

Travel Snacks

- ◆ Dried fruit, nuts, seeds
- ◆ Fresh/canned fruit, vegetables
- ◆ Water, fruit juice
- ◆ Bagel, pita bread, ready to eat cereals, cereal bar, crackers
- ◆ Yogurt, string cheese, humus (may need refrigeration)
- ◆ Peanut and other nut butters

Pack a travel healthy food/snack bag for the team or have each athlete bring their foods.

Coach's planning for Healthy Eating on the Road

- ◆ Confirm any food allergies or special diet needs with the athlete, athlete family or care giver and Head of Delegation.
- ◆ Review the menus and share with team
- ◆ Have healthy snacks and beverages available for athletes

Eating Out During Travel

- ◆ Review restaurant menu with team, discuss healthy choices before going to the meal
- ◆ Choose baked, grilled or broiled foods instead of fried
- ◆ Ask for toppings and dressings on the side
- ◆ Water to drink

Eating on the Go

Airplane Travel

Be sure to drink plenty of water when traveling by airplane, it is very easy to become dehydrated on long plane trips. Athletes should ask for two beverages with your meal, always make one of the beverages water. Have the athletes bring a bottle of water on the plane (fill the water bottle or purchase a bottle after security checks).

Restaurant Meals

Going out to restaurants is fun and convenient; however, it is not always easy to eat healthy at a restaurant. Here are some tips for coaches and athletes that can make choosing healthy foods fun and easy for athletes.

Drinks	Low fat milk and water are best choices
Salads	Salads with lots of vegetables and less cheese are good choices. Order toppings and dressings on the side
Main dish	Foods that have been grilled, baked, or broiled are best. Avoid foods that have been fried. Check out the vegetarian items, they often have protein rich beans, peas and legumes. Recommended meats include turkey, chicken, seafood, and lean beef. When ordering pasta, stick to red sauces instead of white and cream sauces, to reduce the fat.
Side Dishes	Baked potato, steamed vegetables, salad or fresh fruit in place of French fries are healthy choices
Dessert	Fresh fruit is always a great option to order for dessert. Frozen yogurt is a healthy choice
Grains	Whole grain breads, rolls and crackers, brown or wild rice are healthy choices

Special Olympics Sport Sciences: Nutrition Guide for Coaches Resources

Resources

Special Olympics

Choose to Change Cards

The "I Choose to Change!" cards were developed designed to be given to athletes as the leave Health Promotion screening. The cards can be used by Special Olympics Coaches to teach and reinforce healthy habits to their athletes. They provide visual cues and first steps to positive behavior changes for health and improved sports performance. The following Choose to Change cards are important for nutrition and hydration in Special Olympics sports.

- ♦ Strong Bones
- ♦ Fruits and Vegetables
- ♦ Hydration

The cards are available in English, Spanish, Arabic, Portuguese, Chinese, French and Korean.

The cards can be downloaded from the Health Promotion Resource site at:

http://resources.specialolympics.org/Topics/Healthy_Athletes/Healthy_Athletes_Choose_to_Change.aspx

A lesson plan describing how to print and use the Choose to Change cards can be found at:

http://resources.specialolympics.org/uploadedFiles/Lesson%20Plan%201_Choose_to_Change.pdf

I choose to change!

I choose to have strong bones.

Here are things I can choose to do:

- Drink a glass of milk instead of a soda.
- Keep working on my sport!
- Choose not to smoke.
- Eat foods that build my bones:
 - Broccoli
 - Dark leafy lettuce
 - Yogurt
 - Almonds
- Take a vitamin pill with Calcium and Vitamin D.

Food images © 2004 Strengthen Multimedia. Used with permission.

Personal Health Card

Today we measured two things that tell about your health.

1. How strong your bones are (BMD).
2. How much body fat you have (BMI)

Your BMI is: _____ Your BMD score is: _____

<input type="checkbox"/> You are at a healthy weight for your height.	<input type="checkbox"/> Your bones are healthy.
<input type="checkbox"/> You may want to lose some weight to feel healthy.	<input type="checkbox"/> Your bones may not be as strong as you want.
<input type="checkbox"/> Your weight may be getting in the way of your sport. Show this card to your Doctor and ask for help losing weight.	<input type="checkbox"/> Show your Doctor this card. Ask your Doctor how to help your bones be stronger.

Choose to Change Card (front and back) Healthy Bones

Special Olympics Sports Sciences: Nutrition Guide for Coaches Resources

Health Promotion Lesson Plans

- ♦ The Health Promotion Lesson Plans were developed to offer interactive education to athletes on short topics. Coaches, ALPS, athletes, unified partners and volunteers could offer lessons on a variety of topics such as: Fruits and Vegetables- Mystery Game- athletes learn about new fruits and vegetables to try
- ♦ Hand washing- review the proper hand washing technique with athletes
- ♦ Sun Safety and UV Bracelet- provides important information on Sun Safety for athletes

Lesson Plans can be found at:

http://resources.specialolympics.org/Topics/Healthy_Athletes/Disciplines/Health_Promotion.aspx

TRAIN Resources

Testing Recreational Activities and Improving Nutrition (TRAIN) is an assessment program developed to test Special Olympics athletes' sports skills in specific areas. The TRAIN nutrition materials were designed to complement the sports assessment program. The materials provide key nutrition education and food group information for Special Olympics athletes. Coaches may wish to use TRAIN nutrition materials as a part of their sport introduction and training. TRAIN materials can be found at:

- ♦ TRAIN Placemat- Athletes can record on a daily basis, physical activity and nutrition goals
<http://media.specialolympics.org/soi/files/resources/StriveAndTrain/TRAINPlacemat.pdf>
- ♦ TRAIN@School- Lesson plans to teach key nutrition concepts to Special Olympics athletes
<http://resources.specialolympics.org/TRAIN-Downloads2.aspx>
- ♦ TRAIN@ Home Nutrition Guide
http://media.specialolympics.org/soi/files/resources/StriveAndTrain/TRAINHome_Nutrition.pdf

NOTE: TRAIN Nutrition materials are available in a variety of languages including.

Special Olympics Ireland Health Promotion Lessons

The Health Promotion Toolkit includes all the tools needed to deliver a health promotion program for a Special Olympics group. It is divided into 15 workshops, each focusing on a different aspect of health. The workshops are designed to provide athletes with the knowledge and information to make healthier choices in their lives. The toolkit includes posters and games. The toolkit can be found at:

<http://www.specialolympics.ie/WHATWEDO/HEALTHSERVICES/HEALTHRESOURCES.aspx>

Special Olympics Ontario, Canada Physical Activity Healthy Living (PAHL)

PAHL is a project created to promote healthy active living to Special Olympics athletes and students across Ontario. PAHL resources include a Nutrition Guide- TRAIN adaptation. It includes sample menus and recipes.

<http://pahl.specialolympicsontario.ca/home>

Portion Control Charts

- ♦ Dairy Council of California- portion sizes using a hand
<http://www.healthyeating.org/Portals/0/Gallery/Album/Healthy%20Eating/portion%20size%20hand.JPG>
- ♦ Portion Serving Size Chart- Web MD- wallet size portion guide
<http://www.webmd.com/diet/printable/portion-control-size-guide>
- ♦ Eat well Plate- British National Health Service Recommendations for Healthy Eating
<http://www.nhs.uk/Livewell/Goodfood/Documents/Eatwellplate.pdf>

Special Olympics Sport Sciences: Nutrition Guide for Coaches Resources

Sports and other organizations

- ♦ International Association of Athletics Federations- Practical Guide to Nutrition
<http://www.iaaf.org/about-iaaf/documents/medical#nutrition-in-athletics>
Available in multiple languages
- ♦ Sports, Cardiovascular Nutrition Dietetic Practice Group of the Academy of Nutrition and Dietetics- Sports Nutrition Fact Sheets
<http://www.scandpq.org/sports-nutrition/sports-nutrition-fact-sheets/>
- ♦ Federation International Football Association (FIFA) Nutrition for Football FIFA
http://www.fifa.com/mm/document/footballdevelopment/medical/51/55/15/nutritionbooklet_nue2010.pdf
<http://www.fifa.com/aboutfifa/footballdevelopment/medical/playershealth/food/index.html>
- ♦ American College of Sports Medicine
<http://www.acsm.org/>
- ♦ U.S. Antidoping Agency
<http://www.usada.org/>
- ♦ International Olympic Committee
http://www.olympic.org/Documents/Reports/EN/en_report_833.pdf
- ♦ My Plate- U.S. Dietary Guidelines
http://resources.specialolympics.org/Topics/Healthy_Athletes/Disciplines/Health_Promotion.aspx



***Special
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**SPECIAL OLYMPICS SPORTS SCIENCES:
SPORTS INJURY GUIDE FOR COACHES**

Special Olympics Sports Sciences: Sports Injury Guide for Coaches

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Introduction

The following guide is meant to be an aid Special Olympics coaches. Special Olympics athletes are just as likely to experience injuries related to sports activities as any other athlete. In some cases, Special Olympics athletes may even be at greater risk. While this guide should in no way substitute for the assistance of trained medical personnel, it is recognized that such personnel are not always immediately available when such injuries occur. While the vast majority of sports injuries are minor, there are instances when every second counts. In these instances, a coach who is familiar with the various types of injuries and how to best respond to them may spare an injured athlete from significant injury or even death. It is our hope that as a Special Olympics coach, you will familiarize yourself with these various types of injuries, so that you may be better able to respond to them appropriately.

As you read this guide you will learn some specific methods to assess and manage athletes that have sustained various types of injuries, however, in general it is good to remember the following principles when responding to any injury situation:

1. Remain calm, which will also serve to keep the athlete and others calm.
2. Assess the situation as quickly as possible after an incident has occurred.
3. Quickly survey the athlete's airway, breathing, circulation and consciousness.
4. Then, survey the seriousness of all other injuries.
5. Assess the incident right where it occurred to determine whether the athlete can be safely moved.
6. Know the athlete's baseline personality and capabilities before an injury occurs.
7. Listen to the athlete describe what happened.
8. Ask simple, clarifying questions.
9. Observe the athlete's face and eyes while talking.
10. Observe for any asymmetry, trauma, general body alignment and functional abilities.
11. Survey the area where the injury occurred for any unsafe articles or terrain.
12. If no medical personnel are available, the coach may need to be prepared to take action alone.
13. When in doubt, do not put the athlete back into play.
14. Always refer to a health care professional for additional follow up.

Keep in mind, as you read this guide that the vast majority of sports injuries are minor and will heal on their own. The types of injury that are explored in this guide range from the minor and mundane to the relatively rare and severe. Some risk factors that are described here are often not considered in non-disabled athletes, but are quite significant and unique to Special Olympics athletes. Even if you are an experienced coach, athletic trainer, or physician, we hope you will learn something about sports injuries and people with intellectual disabilities that you didn't know before.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches

Neurodevelopmental Disorders and Intellectual Disabilities

Neurodevelopmental Disorders and Intellectual Disabilities

While many Special Olympics athletes share common interests and life goals, many of them also share common health concerns. One characteristic that all Special Olympics athletes share is intellectual disability (ID). Intellectual disability is characterized by an IQ of less than 70 with significant limitations in both intellectual functioning and adaptive behavior as expressed in conceptual, social, and practical skills and originates before the age of 18. According to current neurobiological theory, all intellectual disability is a result of some kind of underlying biological process that disrupts the expected neurological development of the individual in question. These biological processes, as a group, are called neurodevelopmental disorders.

A neurodevelopmental disorder is a genetic or acquired biological process that occurs before adulthood and disrupts one or more of the expected functions of the brain, resulting in one or more common complications. The five most common complications of a neurodevelopmental disorder include: 1) intellectual disability, 2) neuromotor dysfunction, 3) sensory impairment, 4) seizure disorder, and 5) abnormal behavior. Neurodevelopmental disorders, depending upon their cause, can be associated with various syndrome-specific conditions, for example, cardiac or spinal abnormalities. Both the common complications and syndrome specific conditions can, and often do, lead to secondary health consequences. These secondary health consequences are often preventable with the proper health screening and preventive care.

So, while it is true that all Special Olympics athletes have intellectual disability, it can also be said that all Special Olympics have a neurodevelopmental disorder and, because of this, it is more likely that they will also have neuromotor impairment, sensory impairment, epilepsy and/or behavioral concerns. As a general rule of thumb, an athlete with intellectual disability has about a 25% chance of having at least one of these other four characteristics.

There are, literally, thousands of neurodevelopmental disorders and causes of ID. While many Special Olympics athletes may not know what the cause of their intellectual disability is, there are some medical diagnoses that are very commonly found in Special Olympics athletes. The six most common medical diagnoses found in Special Olympics athletes are: 1) Down syndrome, 2) Fragile X syndrome, 3) Fetal alcohol syndrome, 4) Autism, 5) Cerebral palsy and 6) Epilepsy. There are many other medical diagnoses that are common to Special Olympics athletes such as asthma and high blood pressure, but these tend to occur independently of ID, whereas the six diagnoses mentioned above are often, though not always, associated with ID.

What you need to know

Special Olympics athletes have intellectual disabilities and are also likely to have neuromotor dysfunction, sensory impairment, seizure disorders, abnormal behaviors and syndrome specific physical conditions. The most common diagnoses associated with (and sometimes confused with) intellectual disabilities include Down syndrome, Fragile X syndrome, Fetal Alcohol syndrome, Autism, Cerebral Palsy and Epilepsy.

Coaching an Athlete with Intellectual Disability

In essence, the term intellectual disability means that someone learns more slowly than other people their same age. While there are some additional medical concerns that might be more prevalent in people with intellectual disabilities, the most important thing to know as a coach in Special Olympics is that the athletes are individuals, and coaching them is just like coaching any other youth or community sports team. There are many more similarities than differences in teaching and coaching athletes with and without intellectual disabilities. Athletes are athletes; coaching is coaching; teaching is teaching and learning is learning.

When it comes to instructing athletes with ID, no single strategy works for every learner. An often-utilized strategy, however, is to "tell, show, help and remind". Some athletes learn best through visual cues, some through hearing instructions, and yet others may need to feel what it is like to do something before they can truly learn it. Regardless of the teaching method, it is proven that repetition is an effective strategy for everyone, including Special Olympics athletes. Additionally, everyone learns faster when they want to, so it is important to keep athletes motivated.

Regardless of the type of skill being taught, the basic levels of instruction are: verbal presentation, physical demonstration, physical prompting and physical assistance. Athletes may require a single method or a combination of these methods to learn a new skill. It is important to identify the methods that work best for individual athletes. For example, one athlete may require only verbal instruction to learn skills; another athlete may require both demonstration and physical assistance.

- ♦ **Verbal Presentation:** Coaches should explain very clearly to athletes the skills they are to be learning and the language should be clear and consistent throughout the lesson. Using simple words is essential, be clear, concise, consistent and command-oriented.
- ♦ **Physical Demonstration:** It is generally considered true that 80% of learning takes place through what it is seen. The basic visual methods in teaching simple skills are imitation and demonstration. Basically, athletes copy what you show them. If the imitation is accurate, immediate and positive feedback is a good way to confirm this to the athlete. This level of teaching is universal and can be used by the coach to assist with the verbal presentation of a skill. When a skill becomes too difficult for the athlete to verbally comprehend, demonstration should be used. For new skills, linking demonstration with verbal presentation is most effective.
- ♦ **Physical prompting:** is best used when verbal and demonstration methods are not working. Guidance by touch to prompt an athlete into proper position is an example of a physical prompt. Verbal presentation and physical demonstration are also good to use during physical prompting.
- ♦ **Physical assistance:** is used when all other levels of instruction have been exhausted. This level requires the coach to physically move the athlete into position and to physically assist the athlete to complete the skill. This method should be used with caution, especially if the athlete functions at a lower level and/or does not like to be touched.

What you need to know

Athletes with ID are capable of learning and integrating new information, though it is often necessary to present the information in simple terms, demonstrate it, and repeat the information periodically until the athlete has a firm grasp of the information. When presenting new information or skills to athletes often a combination of different techniques such as visual presentation, physical demonstration, physical prompting and physical assistance should be used. These techniques can be used in coaching sports skills and in teaching athletes about their health.

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Preparation for Prevention

Preparation for Prevention

The best type of sports injury is the sports injury that has been prevented from occurring. While not all sports injuries are preventable, preparation of coaches, athletes and the playing environment can drastically reduce the amount of and severity of sports injuries that occur.

Coach Preparation

It is the coach's job to maintain as safe an environment as possible. It is strongly recommended that coaches have certification in CPR and First Aid or that volunteers be recruited who already have first-aid training, medical athletic training or emergency care certification.

A coach should always know if an automatic electronic defibrillator (AED) is available at the sports venue. AEDs are becoming more and more common. If one exists at the sports venue, the coach should note its location prior to practice and make sure that there are no temporary or permanent obstacles that could slow down the retrieval of the AED. This knowledge should be in the coach's head and communicated to their assistants prior to commencement of practice in preparation for the unlikely event of an athletic cardiac arrest.

Athlete medical forms should be reviewed prior to the start of practice and available at all training and competitions. This information could be invaluable to emergency medical personnel in the event of an emergency.

Using the Coach's Safety Checklist will help to prevent injury by assuring adequate supervision, equipment, facility, warm-up and stretching. Coaches should also familiarize themselves with the most common and most severe types of sports injuries and there should be an emergency action plan for how to deal with each type of injury. When an injury does occur, stay calm, and administer basic first aid. When in doubt, or when more care is needed, consult the athlete's family and a physician.

Developing an Emergency Management Plan

It is important for all coaches to have an emergency management plan that can be activated when an athlete injury or emergency has occurred. After reading the rest of this injury prevention guide, considering the various types of injuries in it and thinking about the recommended responses to them, coaches should revisit this section and construct for themselves a plan that utilizes the resources known to them. The following are questions to consider when developing that plan:

- ♦ Who are the members of the Emergency Management Team?
 - ♦ Coach, physician, emergency medical technician, athletic trainer, physical therapist, etc.
- ♦ Who can quickly provide athletes' medical forms and any special instructions to medical personnel?
- ♦ How can the coaching staff manage different injuries until appropriate medical personnel are available?
- ♦ In the event of an emergency what are the roles of each member of the team in terms of:
 - ♦ Coordinating the response to the emergency
 - ♦ Contacting medical personnel
 - ♦ Assessing and attending to the athlete's injuries (including CPR and finding an AED)
 - ♦ Communicating to parents or caregivers
 - ♦ Communicating with and managing the other players on the team during the emergency

Establishing the roles and responsibilities of the various members of the emergency management team before a serious injury occurs will not only ensure that your team is as well prepared as it can be, it will also significantly decrease the time the athlete will face between the occurrence of their injury and the initiation of treatment.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Preparation for Prevention

Athlete's Medical Alert Card

Each athlete will have completed a Medical Release Form, in which it will be noted if there are any restrictions on activity, medications that may affect performance or unique situations. Based on this, each Coach must carry a Medical Alert Card for each of the athletes with the First Aid Kit, in which is included all the medical conditions the Athlete may have, such as allergies or others found in the Medical Release form, in order for the team to act effectively in a life-threatening situation.

Medical Alert Icons

The back of athletes' credentials may contain icons that note specific medical conditions that may need to be known in an emergency. Coaches should memorize the medical alert icons and check their athletes' badges for accuracy.

Medical icons for the back of the Athlete Credential

1. Wheelchair

Wheelchair in Chinese



2. Cardiac

Cardiac in Chinese



3. Seizures

Seizures in Chinese



4. Hearing Impaired

Hearing Impaired In Chinese



5. Visual Impairment

Visual Impairment in Chinese



6. Diabetes

Diabetes in Chinese



7. Asthma

Asthma in Chinese



8. Allergies Food

Allergies Food in Chinese



9. Allergies Medicine

Allergies Medicine in Chinese



Special Olympics Sports Sciences: Sports Injury Guide for Coaches

Preparation for Prevention

Athlete Preparation

While most athletes will regulate the intensity of their activity naturally to avoid injury, athletes with ID are still athletes. They are competitive by nature and they want to win. The drive to win may overpower an athlete's natural self-protective abilities and cause them to ignore warning signs of potential injury. Moreover, many medications that Special Olympics athletes take may mask warning signs such that they are not readily apparent to the athlete until they have become more serious. The most serious warning signs to consider are as follows:

- ♦ Chest pain
- ♦ Shortness of breath or difficulty breathing
- ♦ Dizziness or lightheadedness
- ♦ Headache
- ♦ Fatigue
- ♦ Pain
- ♦ Rash
- ♦ Muscle soreness
- ♦ Itchiness
- ♦ Numbness
- ♦ Tingling
- ♦ Weakness
- ♦ Changes in coordination

Coaches should, to the greatest extent possible, ensure that athletes know what these warning signs are. In all situations, if an athlete experiences any of these warning signs, they should stop what they are doing and tell the coach immediately. In some situations, such as in an open-water swim, the athlete may not be able to completely stop their activity. In such cases, the athlete should reduce their activity to the greatest extent possible and communicate their concerns to the nearest available person who can help them. Coaches should periodically review these and other physical warning signs with their athletes.

Field Preparation

The field of play should be checked before and after all practices and events for any obstacles. An indoor court should be clear of any obstacles or obstructions surrounding the out-of-bounds areas. The actual playing surface should be clear, safe and dry. All lines should be clearly visible. Any indoor facility must have proper ventilation, especially in warm climates.

Outdoor facilities should be checked for uneven playing surfaces, including holes, uneven grade, or moisture. The playing area should be also checked for additional obstacles. Out-of-bounds areas should be clear of obstructions. All boundaries should be clearly marked.

Other areas being used by players, such as locker rooms and showers, should be reviewed for safety and accessibility. Floors should be properly drained and have nonslip surfaces.

Areas utilized by spectators, families and other nonparticipating players should be assessed for safety and accessibility.

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Preparation for Prevention

First Aid Kit

The Special Olympics teams must have access to the First Aid Kit at all competitions, trainings, clinics and other sporting functions. The Coach must be responsible for the content and usage of the First Aid Kit, as they are the ones that understand better the medical condition of the Athlete. Coaches must be trained in the usage of the different prescribed medications, as they may be the first response for the Athlete when an incident has occurred or in a life-threatening situation.

All first-aid kits should include the following items.

Contents of a First Aid Kit

- ♦ Acetaminophen
- ♦ Alcohol wipes
- ♦ Asthma Inhaler (if prescribed by a doctor for a specific athlete)
- ♦ Athletic tape
- ♦ Band-Aids
- ♦ Compression Bandages
- ♦ Epi-Pen (if prescribed by a doctor for a specific athlete)
- ♦ Ibuprofen
- ♦ Imodium
- ♦ Liquid diphenhydramine
- ♦ Other medications if prescribed by a physician
- ♦ Powdered Sports Drink
- ♦ Rectal Diazepam (if prescribed by a doctor for a specific athlete)
- ♦ Scissors
- ♦ Sugar pouches
- ♦ Sun Screen
- ♦ Thermometer

What you need to know

Proper preparation is the key to injury prevention. In order to prevent injuries, coaches, athletes and the playing environment should be as prepared as possible. Coaches should be trained in CPR and be familiar with basic first aid. Coaches should also have immediate access to athlete medical information and should have an emergency management plan. Coaches should periodically review physical warning signs with athletes and what to do if those physical signs occur. Coaches should familiarize themselves with the athlete medical alert icons and check to make sure that the icons on their athletes' badges are correct. Prior to competition or practice, a coach should check the field of play and sports equipment for safety. Additionally, the coach should have access to a well-stocked first-aid kit.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches

Specific Sports Injuries

Specific Sports Injuries

Physician Clearance

While the types of injury discussed in this section should be concerning to every coach and while Special Olympics athletes are at a greater risk of certain types of injury than other athletes, it should be noted that catastrophic injury in the Special Olympics environment is a relatively rare phenomenon. Still, it is incumbent upon every Special Olympics coach and health volunteer to familiarize themselves with these particular risks. The major risk factors for catastrophic injuries that Special Olympics athletes are: 1) cardiac abnormalities, 2) spinal abnormalities, 3) active infection, 4) organ enlargement, 5) significant hypertension, 6) low blood oxygenation, and 7) uncontrolled seizures. Very basic medical clearance guidelines regarding these risks are listed below, some will be discussed in greater detail later in this text.

Listed below are concerns that may be raised in the athlete's medical history or upon physical examination of an athlete by a physician or other clinician. The concerns listed are not an exhaustive list, but if found would likely warrant further medical investigation or treatment before an athlete would be cleared for sports participation. Concerning history or physical exam findings for physicians or other clinicians include:

Cardiac

Grade 3/6 heart murmur or greater, irregular heart rhythm, hypertrophic cardiomyopathy, long QT syndrome or drug-induced long QT syndrome, other significant cardiac disease, or concerning cardiac history.

Spinal Cord

Any symptoms of spinal cord compression, including neurological signs and symptoms of atlantoaxial instability, especially if the symptoms are volatile or new in onset. Such symptoms include: change in control of bowels or bladder, change in gait, head tilt, spasticity, pain, weakness, numbness, tingling, or paralysis in the neck, arms, hands legs or feet.

Active Infection

Any symptoms of an acute bacterial or viral infection are often a temporary reason to limit participation in sports.

Organ Enlargement

Any physical signs of liver or spleen enlargement.

Significant Hypertension

Stage 2 hypertension or greater in either adults (greater than 160/100) or children (varies by age and other factors).

Low Blood Oxygenation

Less than 90% on room air can be an indication of more serious cardiac, pulmonary or hematological issues.

Uncontrolled Seizures

In the sports setting, this means that the athlete has had one or more seizures within the past year. This generally restricts the athletes from some sports, but not all sports.

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Specific Sports Injuries

What you need to know

A physician may temporarily or permanently recommend that an athlete refrain from sports participation (some or all sports) based on the pre-participation sports physical. While a physician may make this recommendation for myriad reasons, the most common include, cardiac or spinal column concerns, an active acute infection, organ enlargement, stage two hypertension or higher, low blood oxygenation, or an uncontrolled seizure disorder. If a coach becomes aware of any of these symptoms, the athlete should refrain from practice or competition until they are seen by a physician.

Athletic Cardiac Arrest

Athletic cardiac arrest (sometimes called sudden cardiac death or sudden athletic death) can occur anytime during exercise and up to twelve hours after exercise. There can be multiple physiologic pathways that lead to athletic cardiac arrest but the final result is that the athlete's heart has stopped. Usually within seconds of this occurrence, the athlete will lose consciousness and will eventually stop breathing. This is the most dire of medical emergencies, because without intervention the athlete will likely die.

The presence of an underlying cardiac defect or arrhythmia increases the likelihood that an athlete could have an athletic cardiac arrest. The three most common known causes of intellectual disability (Down syndrome, Fragile X syndrome and Fetal alcohol syndrome) as well as scores of other syndromes carry with them a much higher risk of defects of the heart and aorta. Though no conclusive studies have been done, experts believe that Special Olympics athletes are 10 to 50 times more likely to have a cardiac defect than other athletes. Additionally, because Special Olympics athletes are likely to have less access to appropriate health services throughout their lifespan, these cardiac concerns may often go undiagnosed. Ultimately, this means that Special Olympics athletes are likely at a higher risk of athletic cardiac arrest than other athletes at similar activity levels.

Warning Signs

Often times, there are no warning signs for athletic cardiac arrest. However, there are some warning signs that could be associated with an increased risk of athletic cardiac arrest happening in the future. If any of these symptoms are noticed in an athlete, they should be taken seriously. The athlete should stop exercising immediately and a physician should be notified, even if the symptoms go away.

Cardiac Warning Signs

Dizziness during exercise	Headache during exercise
Chest pain during exercise	Shortness of breath during exercise
Irregular heart beat	Racing heartbeat
Skipping heart beat	Loss of consciousness

Managing a Cardiac Emergency

If an athlete has had a cardiac arrest, they will likely be unconscious, pulseless and not breathing. It is also possible that an athlete may have a seizure at this time. This can be confusing because supervising staff may think that the athlete is having a normal seizure, instead of a cardiac arrest-induced seizure, wasting precious time. In the heat of an emergency, especially to the untrained eye, it may be difficult to distinguish between the two. In this situation it is best to prepare for the possibility that the seizure is a cardiac-induced seizure and thus that the emergency at hand is a cardiac emergency.

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Specific Sports Injuries

From the moment the athlete's heart has stopped, their chances of survival decrease by 10% for every minute that passes without their heart beginning to beat again. It cannot be stressed enough that in this situation, time is of the essence. More than likely, the athlete will not survive if the only action that is taken is calling an ambulance. While the chances of athletic cardiac arrest are very low, it is important that a coach be mentally prepared for this scenario. The potentially life-saving action steps that can be taken are relatively simple and they must be made as quickly and as efficiently as possible, in order to give the athlete the best chance of survival.

A coach should always know if an automatic electronic defibrillator (AED) is available at the sports venue. AEDs are becoming more and more common. If one exists at the sports venue, the coach should note its location prior to practice or competition and make sure that there are no temporary or permanent obstacles that could slow down the retrieval of the AED. This knowledge should be in the coach's head and communicated to any assistants, prior to commencement of practice in preparation for the unlikely event of an athletic cardiac arrest.

If a suspected athletic cardiac arrest has occurred, the following steps should be taken as close to simultaneously as possible:

1. Send the fastest person available to RUN for the AED and bring it to the athlete to initiate treatment
2. Send another person to call for emergency medical personnel
3. Confirm that the athlete has no pulse and/or is not breathing
4. Confirm that the airway is not blocked or that the athlete has not choked on something. If so, remove the obstruction
5. Begin CPR immediately

When the AED arrives, follow the instructions on the AED and continue administering CPR. Only stop CPR momentarily and stay clear of the patient when the AED is preparing to deliver its electrical shock. CPR should continue to be administered until emergency personnel can take over unless the athlete begins to breath on his own and his pulse returns. While administering CPR, it is likely the person giving the CPR will become fatigued, it is advised that CPR-trained personnel rotate every few minutes giving chest compressions in order to avoid this fatigue. Fatigue leads to less forceful compressions, which leads to less external compression of the heart, which leads to less circulation of blood and ultimately results in less chance of survival.

It is important to know that despite the best efforts of responding personnel, efforts to revive an individual who has had a cardiac arrest are often unsuccessful. CPR will typically be successful only around 10% of the time, whereas AEDs may be successful up to 40% of the time. This should not, however, discourage responding personnel from administering every potentially life-saving measure at their disposal until emergency medical personnel arrive.

What you need to know

Special Olympics athletes may be at greater risk of athletic cardiac arrest. Often there are no warning signs, but if warning signs present themselves, the athlete should stop exercising and a physician should be notified. If an athlete has a cardiac arrest event, the coach should send one person to retrieve the AED and another person to call emergency medical personnel, while the coach checks the athlete to confirm that he/she is pulseless, not breathing and does not have a blocked airway. The coach (with rotating assistance from other personnel) should perform CPR and use the AED as instructed until emergency medical personnel take over, pausing only when directed by the instructions on the AED.

Spinal Cord Injury

Spinal Cord Injuries are a rare, but devastating occurrence in the sports setting. Some spinal cord injuries occur in healthy people who have no preceding risk factors. However, some athletes may have pre-existing signs and symptoms of compression of the spinal cord. Compression of the spinal cord means that the bone of the spine is pressing firmly on the spinal cord. This has been proven to result in injury or severance of the spinal cord with motion or impact that can occur in the sports setting. Thus, detecting athletes who have signs and symptoms of spinal cord compression is important.

The most well-known type of spinal cord compression in Special Olympics is that of symptomatic atlantoaxial instability (AAI). AAI frequently occurs in athletes with Down syndrome. Approximately 1.5% of athletes with Down syndrome will have neurological signs of spinal cord compression or atlantoaxial instability.

Of course, spinal cord compression can occur at any vertebral level and is not limited to people with Down syndrome. In any case, signs and symptoms of spinal cord compression should be taken very seriously, as treating the compression could save the athlete from permanent or devastating injury. Some of the symptoms of spinal cord compression are:

- ◆ Numbness or tingling in the hands, feet, arms or legs
- ◆ Weakness in the hands, feet, arms or legs
- ◆ Abnormal gait changes
- ◆ Changes in coordination
- ◆ Spasticity
- ◆ Paralysis
- ◆ Difficulty controlling bowels or bladder
- ◆ Head Tilting
- ◆ Pain Burners, stingers, or pinched nerves in the arms, neck, should, hands or back.

If any of these symptoms are noticed, especially if they are new onset, the athlete could be at imminent risk of spinal cord injury. All sports activity should cease and a doctor should be contacted immediately in order to assess the athlete for potential risk and/or correct the underlying skeletal system issue.

Managing a Spinal Cord Emergency:

A spinal cord injury in the sports setting is usually preceded by a traumatic impact or sudden and severe movement of the athlete, followed by prolonged immobility of the athlete. If an athlete has had a potential spinal cord injury on the field, this is considered a medical emergency and emergency services should be called immediately. The athlete should be assessed quickly to determine the type and severity of the injury. Is the athlete conscious? Are they responsive? Are they breathing, do they have a pulse? Can they wiggle their fingers and wiggle their toes? All of this will be important information as to what you do next. If the athlete is pulseless and not breathing, then you must initiate CPR while taking care not to move the athlete or the athlete's neck.

The symptoms that the athlete experiences will be directly related to the vertebral level that was injured. Typically, the higher the damage level of the spine, the more severe the injury. If possible, the neck should be immobilized and the athlete should not be moved until professionals arrive on the scene. This point cannot be stressed enough. If an athlete has had a spinal cord injury, there is a possibility that the injury itself is precarious. The injury might be an unstable and incomplete compression instead of a complete severance of the spinal cord – in other words it may not yet be a permanent injury. If the athlete is moved improperly, the spinal cord could become severed, thus needlessly resulting in permanent injury.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

What You Need to Know

Spinal cord injuries are rare occurrences that may be preceded by warning signs of spinal cord compression. While athletes with Down syndrome may be at risk of having spinal cord compression, signs and symptoms may occur in other individuals as well. If an athlete exhibits signs or symptoms of spinal cord compression, the athlete should refrain from sports activity and should be referred to a physician for further evaluation immediately. If a spinal cord injury occurs emergency medical personnel should be contacted immediately and the athlete should not be moved until they arrive. If an athlete stops breathing after a spinal cord injury, CPR should be initiated and continued until emergency medical personnel arrive.

Drowning

Special Olympics athletes, like any other athlete who engages in aquatic activities may be at risk of drowning. The significant increase in the risk of drowning for Special Olympics athletes comes from the high frequency of seizure disorders found in this population. When an athlete has a seizure, they may lose consciousness or lose control of their muscles. If this occurs when they are in water, they may very quickly submerge. This is one of the most terrifying positions for a coach to be in, especially in open water, because of the amount of time it may take to rescue the athlete. For this reason it is recommended that athletes who have had a seizure within the past year not compete in aquatic sports.

When a person is drowning, the air passages typically close to prevent water from entering the lungs. Unfortunately, this also prevents air from entering the lungs, depriving the athlete of oxygen and eventually leading to unconsciousness or death. Because of the high frequency of seizures in the Special Olympics athlete population, coaches of aquatic sports should be prepared for two different drowning scenarios either one that is initiated with seizure activity or one that it not.

Managing a near Drowning

In managing a drowning situation with a conscious and struggling athlete, the first rule of rescuing a drowning athlete is to protect yourself. A person who is drowning and still conscious will strike out and pull down even the most competent swimmer; dirty water can hide dangers such as metal rubbish with sharp edges; and cold water can cause muscles to cramp very quickly. If the person is conscious, reach to the person from the safety using a pole, rope, or buoyancy aid to enable him to help himself out of the water.

If the person is not conscious or having a seizure then they will actually pose less of a threat to the rescuer but they will also be need unable to resist sinking in the water or consciously grasp any safety objects, thus the entire rescue relies upon the strength, speed and skill of the rescuer. In either case, a drowning athlete will need to be brought back to land as soon as possible, in order to initiate resuscitation efforts. Because of the second-by-second urgency of the situation, if a coach is the only person in the vicinity able to render help, he or she should immediately attempt to safely rescue the athlete before attempting to call emergency personnel at a remote location. If there are others in the vicinity who can assist the coach, the strongest swimmer, most familiar with in-water rescue techniques should initiate the rescue while others assist in the effort and/or call for emergency personnel.

A person who has nearly drowned is likely to vomit because of the large volume of water that may have entered their stomach. If the athlete vomits while being resuscitated, turn the athlete toward you, and clear out the mouth before turning him on to the back and resuming rescue breathing. If the victim vomits while in recovery position, clear out the mouth and keep a close eye on breathing to ensure that it has not stopped. If the victim is conscious and become sick encourage him to lean forward and give support while he is vomiting. Do not make any effort to remove water from the lungs by applying chest compressions or abdominal thrusts. The risk of water in the lungs is minimal, while compressing the chest or stomach will increase the risk of the victim choking on his own vomit.

In the event of near drowning, the athlete will be at risk of hypothermia. Hypothermia is a lowering of the body's core temperature and is very common secondary problem of near drowning. If untreated, hypothermia leads to the breathing and heart rate slowing down and eventually stopping. To reduce the risk of hypothermia in a case of near drowning, place the athlete on a blanket or layer of coats to insulate him from the ground. Remove wet clothing if you are able to replace it quickly with warm and dry clothing; if not, then cover the wet clothing with blanket and coats. Cover the head to prevent heat loss. Warm the external environment if possible as much as possible.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

What You Need to Know

Special Olympics athletes participating in aquatic sports are at risk for drowning. Having an uncontrolled seizure disorder will increase that risk. Thus, it is recommended that athletes who have had a seizure within the past year not participate in aquatic sports. If an athlete begins to drown, they must be brought out of the water while keeping the safety of the rescuer in mind. CPR may need to be initiated. Since vomiting may occur during resuscitation rescuers should take precautions to ensure that neither the athlete nor the rescuer choke on it. Hypothermia is also a significant risk for near-drowning victims, thus athletes should be warmed as part of the rescue effort.

Seizure Risk

As stated previously, about 20-25% of Special Olympics athletes have some kind of seizure disorder. In general and seizure is considered “well controlled” if the athlete has not had a seizure within the past year. In this case, athletes are generally cleared to participate in any sport of their choosing. A “poorly controlled” seizure disorder is one in which the athlete has had a seizure within the past year. In general, it is recommended that these athletes not participate in sports where having a seizure during the peak activity of the sport could result in significantly increase bodily harm. For example, sports such as swimming, sailing, downhill skiing, snowboarding, bicycling and equestrian should be avoided until the athlete’s seizures are well controlled.

It should be noted that athletes who generally have well-controlled seizures may still be at risk of developing seizures during competition events, even if they had not developed seizures during practices. The reason for this has to do with the games environment. Athletes often find the games to be exciting and distracting events. This might cause increases in adrenal activity, decreases in sleep, neglect of proper hydration leading to electrolyte imbalances or forgetting to take medications. Each of these factors could potentially trigger a seizure. Additionally, some athletes may engage in what is sometimes called anti-doping. Some athletes taking anti-seizure medications recognize the deleterious effect these drugs might have on their athletic performance. These athletes might decide to skip seizure medication doses in order to improve their performance in competitions. Unfortunately, this places the athlete at additional seizure risk during games events.

Managing a Seizure event

Generally, seizures are temporary, self-limiting events. If an athlete has a seizure, more than likely the seizure will stop within a few seconds to a few minutes. In this scenario, the best courses of action to take are comfort measures. Make sure the athlete’s head is cushioned, any tight clothes are loosened and the athlete is turned on their side to avoid choking risk. Additionally, during a seizure, nothing should be placed in the athlete’s mouth. It is not unusual for an athlete to be slightly disoriented following a seizure, so do not be alarmed if this occurs.

If the athlete’s seizure is prolonged, this could be a sign of something more significant. Status epilepticus occurs when a seizure lasts for a prolonged period of time. In the sports setting, if an athlete’s seizure lasts for more than 5 minutes, or if the athlete has multiple seizures within a 5 minute period without regaining consciousness, emergency personnel should be called. Status epilepticus can be a medical emergency that limits the athlete’s ability to breath. Some athletes who are prone to prolonged seizures may carry with them a suppository injector filled with medicated diazepam (valium) gel. In the US, this may go under the trade name Diastat. If an athlete is having prolonged seizures, and they also have this gel prescribed, the coach may need to administer this gel in order to save the athlete’s life. In this situation, the gel is injected directly into the rectum of the athlete. While responding personnel may not be comfortable administering this medication, doing so will often save the athlete from a potentially life-threatening situation.

What You Need to Know

Many Special Olympics athletes have seizure disorders. If an athlete has not had a seizure in over a year, it is generally considered safe for them to participate in any sport. If an athlete has had seizure within the past year, sports involving water, speed, or heights should be avoided. Generally, when seizures occur, they are self-limiting. In these cases, only comfort measures need to be taken and the athlete should be turned on their side until the seizure is complete. If the athlete experiences some confusion after the seizure, this is normal and will generally go away within a short period of time. If a seizure lasts for more than 5 minutes, emergency medical personnel should be contacted and administration of rectal diazepam (valium) gel may be indicated.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches

Specific Sports Injuries

Asthma

Approximately 14% of Special Olympics athletes have asthma compared to 8% in the general population. Asthma attacks can result in breathing difficulty. They can be triggered by pollution, pollens, allergens and even by exercise. Generally, asthma attacks can be treated with inhalers and symptoms will subside. However, occasionally symptoms do not subside and may worsen. If this occurs, the athlete's asthma could be developing into a potentially life-threatening situation known as status asthmaticus. Symptoms of status asthmaticus include:

- ♦ Chest tightness
- ♦ Labored breathing
- ♦ Wheezing
- ♦ Progressively worsening shortness of breath
- ♦ Dry mouth
- ♦ Use of accessory muscles

While most asthma "attacks" are minor and will generally be relieved by the use of an inhaler, it is possible that the attack may become severe enough to warrant contacting emergency medical personnel. The use of accessory muscles in breathing should be an indication that emergency personnel should be called right away. The use of accessory muscles means that the athlete is using additional muscles in order to breathe than would usually be seen. This might mean using muscles of the neck, shoulders and back in order to facilitate greater airway movement. In these instances it is usually apparent that the athlete is visibly struggling to breathe. It should be noted that accessory muscles fatigue relatively quickly, so their use is an indication that a timely response is very important.

If an asthma attack or especially status asthmaticus is suspected, the athlete should stop physical activity immediately and use their inhaler as soon as possible. Multiple inhaler doses may be needed to bring the asthma attack under control. If the athlete appears to be in significant distress or the symptoms of the asthma attack do not begin to improve within a few minutes, the coach should contact emergency personnel or go to the nearest emergency room.

Prevention

It is important to note that athletes who are known to have exercise-induced asthma may benefit from taking one or two puffs from their inhaler prior to exercising. Such pre-medication may prevent asthma attacks from happening. It is important that these athletes have access to their inhalers at all times. Athletes who are known to have severe forms of exercise induced asthma should not participate in sports unless they have access to their inhaler.

What You Need to Know

Athletes who have asthma should have access to their inhalers at all times. Athletes who have exercise-induced asthma may benefit from taking two puffs of their inhaler prior to exercise. If an asthma attack occurs, it is generally treatable with the use of an inhaler. If an athlete appears to be struggling with breathing, is using accessory muscles to breath or has other signs of a status asthmaticus, emergency personnel should be called immediately.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

Anaphylaxis (Allergic Reactions)

Generally, mild allergic reactions that result in a skin rash are not terribly concerning in the sports setting. However, some allergic reactions can produce very significant physical effects. In the sports setting the most common allergic reactions are due to medications, insect bites or stings or exposure to certain food products.

Symptoms of anaphylaxis may include:

High pitched breathing sounds	Difficulty breathing
Difficulty swallowing	Lightheadedness
Swelling in the face, eyes or tongue	Slurred speech
Wheezing	Unconsciousness
Abdominal pain	Anxiety
Chest Discomfort	Chest tightness
Cough	Diarrhea
Hives	Itchiness
Nasal Congestion	Nausea
Vomiting	Palpitations

If an athlete begins to experience the symptoms of anaphylaxis, this should be considered a medical emergency. Emergency personnel should be contacted immediately. If the allergic reaction is due to a sting or a bite, do NOT squeeze the affected area, as this will cause more allergenic venom to be released and could lead to a worsening of symptoms. If an athlete is highly allergic to something, there is a chance that the athlete might carry some kind of rescue medication with them. If the athlete is able to swallow, diphenhydramine liquid (also known as Benadryl) can be helpful. Occasionally the athlete will carry with them a product known as an EpiPen. This is a single shot dose of injectable epinephrine. If symptoms continue to worsen, and especially if the athlete is struggling significantly to breathe or loses consciousness, do not hesitate to use the EpiPen. It is important to note that the effects of epinephrine are almost immediate, however, they do not last for very long. If epinephrine is used, the athlete should be taken to the nearest emergency room immediately, before its effects wear off.

Prevention

The best way to prevent an anaphylactic allergic reaction is to know the allergy history of your athletes. Ask about insect or animal bites, foods, medications and any other substances to which the athlete is allergic. Though this history is often contained on the athlete's medical form, it is possible that the athlete may have developed new allergies since that history was taken.

In addition to knowing the allergy status of your athletes, it is also wise to be prepared for the inevitable allergic reaction. Any first aid kit that coaches maintain for their athletes should also contain liquid diphenhydramine (Benadryl). Additionally, if an athlete is known to have rescue medications, it's important to make sure that you have access to these rescue medications during your time with the athlete.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

What You Need to Know:

Severe allergic reactions may result in a medical emergency and could even obstruct an athlete's ability to breathe. Knowing what athletes are allergic to and taking the appropriate measures is the best way to prevent allergic reactions. If a severe allergic reaction occurs the use of liquid diphenhydramine or injectable epinephrine may be indicated. Severe allergic reactions should be considered a medical emergency. Even if rescue medications are used and symptoms appear to go away, emergency medical personnel should be contacted immediately.

Medication Side Effects

People with ID, including Special Olympics athletes, are prone to taking more medications than the average person. They are 25% more likely to get a prescription when visiting the doctor, but are 300% more likely to have that medication represcribed during the next office visit. These medications are used to treat chronic conditions, however, they may also, themselves, produce chronic side effects. In fact, it is estimated that approximately 25% of Special Olympics athletes are taking medications that could negatively effect sports participation.

Medications can produce any kind of side effect. Some side effects that are relevant to athletes include:

1. Long QT syndrome (or other cardiac arrhythmias)
2. Weight Gain
3. Osteoporosis
4. Constipation
5. Sun Sensitivity
6. Reflux
7. Dehydration
8. Hypoglycemia
9. Change in mental status or mood
10. Dental Cavities

Below you will find a brief explanation of the significance of each of the side effects.

Long QT syndrome

Long QT syndrome is a cardiac arrhythmia that can either be inherent in the heart or induced by medications. The general rule of thumb is that roughly 5% of Special Olympics athletes are taking medications that could potentially induce Long QT syndrome. Roughly 5% of those athletes (or 1 in 400 athletes) will actually develop long QT syndrome, and roughly 5% of those athletes (or 1 in 8000) will have an adverse cardiac event because of the side effect. Long QT syndrome is only identifiable with an EKG. Thus, it is recommended that if an athlete is taking a medication known to potentially induce Long QT syndrome, they should have at least one EKG as a precaution.

Weight Gain

Many Special Olympics athletes take medications that can induce weight gain. Athletes, who take these medications, on average, are likely to weigh an additional 5 to 10% more, on average, than their non-medication-taking counterparts. This can be compounded when junk food and high-carbohydrate beverages are used as a reward in the athlete's life. If an athlete is taking medications that can induce weight gain, it is recommended that they pay extra attention to the foods and drinks that they are consuming. Sometimes, this means that the coaches and the family of the athlete need to play a more active role in guiding the athlete's nutritional choices and portion sizes.

Low Bone Density

Approximately 20% of Special Olympics athletes have low bone density. 5% have Osteoporosis. As bone density decreases, the risk of fracturing a bone increases substantially. In fact, approximately 21% of Special Olympics athletes have broken a bone in their lifetime. While anti-seizure medications are notorious for lowering bone density, many medications can have this side effect – and the effect tends to get more pronounced with age. If an athlete is noted to be taking a medication that can induce low bone density, it is recommended that they periodically have their bone density checked.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches

Specific Sports Injuries

In the bone density screening that is done at Special Olympics Health Promotion venues, bone density is rated based on a numerical score. The average bone density score is 0.0, with the normal range being between -1.0 and +1.0. If an athlete has a score of less than -1.0, they are considered to have low bone density. If they have a score of less than -2.5, they are considered to have osteoporosis. In either case, the athlete should engage in more weight bearing exercise, ingest more vitamin D, ingest more calcium and try to receive 10 or 20 minutes of direct sunlight per day. It may also be a good idea for a physician to review the athlete's medications in order to determine if another medication (with less pronounced side effects) might be available. If an athlete has osteoporosis, it is recommended that the athlete not participate in sports that might have a high risk potential for impact trauma and, thus, bone fracture.

Constipation

A large number of medications that Special Olympics athletes take have the unpleasant side effects of constipation. Because of this, many athletes are also prescribed laxatives. Constipation, if serious enough, can even induce behavior changes in athletes. Often it is difficult to ask about constipation, but identifying this issue may be very beneficial to an athlete's athletic performance. The treatment of constipation relies mainly on prevention. This should take the form of increases in dietary fiber, proper hydration and may include the occasional use of laxatives as prescribed by a physician.

Sun Sensitivity

Approximately 20% of Special Olympics athletes are taking a medication that can induce sun sensitivity. Sun sensitivity occurs when an athlete is exposed to direct sunlight, often resulting in redness, rash, blistering or peeling of the skin on sun-exposed areas. Most athletes should take at least some precautions when exposed to sunlight, but this could be very important for athletes taking medicines which have sun sensitivity as a side effect. In these athletes, preventive measure such as the use of sunscreen, long sleeves, hats, pants, sunglasses and shaded rest areas are recommended. Additionally, discussing medication alternatives with a physician is recommended.

Gastroesophageal Reflux (GERD)

Also known simply as "reflux", GERD occurs when acid from the stomach travel up the esophagus. Depending on the person, the acid can at times enter the mouth. The most common symptom of GERD is the feeling of "heartburn" and it typically occurs after eating or when lying flat. In people with intellectual disabilities, GERD can become quite pronounced and may be undiagnosed for years. Complications of GERD include esophagitis, Barrett's esophagus, gastritis, esophageal cancer, tooth erosion and tooth loss. Up to 36% of Special Olympics athletes may have GERD. Some may even be taking medications which cause GERD, without taking the medications that treat it. Sometimes, dentists can identify serious cases of undiagnosed GERD by finding signs of enamel erosion in the posterior mandibular teeth. GERD can be treated with various medications. GERD also tends to lessen when stress is reduced, the athlete stops smoking, loses weight, decreases meal portion sizes, avoids soft drinks, avoids caffeine, avoids chocolate and avoids spicy foods. Any medication that an athlete is taking which could cause GERD, should be reviewed by a physician.

Dehydration

Athletes perspire during exercise, especially in the presence of a hot environment. When athletes perspire, they lose fluid. It is possible for a person to lose up to two kilograms (4.5 pounds) of fluid per hour while sweating. This can pose a significant risk for athletes. Generally, a loss of 2% of body weight will begin to impair physical performance, a loss of 3-5% will put significant stress on the cardiovascular system and may induce fatal arrhythmias, and a loss of 7% will likely cause an athlete to collapse.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

Certain medications may speed up the dehydration process or may keep the athlete in a mild state of dehydration normally, resulting in less fluid reserve for them to utilize during exercise. Many athletes with intellectual disabilities are taking these types of medications, so it is important to pay attention to an athlete's hydration status. One very simple way to determine if an athlete is hydrating properly is to weigh them before exercise and after. If the athlete is hydrating properly, there will be very little difference between the weight of the athlete before and after exercise.

Symptoms of dehydration include: dry mouth, dizziness, inability to produce tears or saliva, inability to sweat or produce urine, a rapid heart rate, delirium, altered mental status, and loss of consciousness. In serious cases, dehydration can cause sudden cardiac arrest, seizures, kidney failure, hypovolemic shock, heat injury, cerebral edema and could ultimately result in death.

Dehydration in the sports environment is entirely preventable. Athletes should be encouraged to hydrate before, during and after exercise. For exercise lasting less than 30 minutes, hydration with water or other fluids is recommended. For exercise lasting longer than 30 minutes, hydration with fluids containing electrolytes is recommended.

When athletes sweat, they lose electrolytes such as sodium and potassium. These electrolytes are what help conduct nerve impulses, such as the nerve impulses that control the heartbeat. When the body sweats, fluids and electrolytes are lost in proportion with each other. For the most part, this means that there isn't much variation between the electrolyte concentrations of somebody before and after they exercise. However, if the athlete drinks only water for rehydration, the concentrations of electrolytes will decrease. Small changes in electrolyte concentrations are not harmful to the body, however, large decreases in electrolyte concentrations can be a serious medical concern. This is the reason why rehydration with water is recommended for exercise lasting less than 30 minutes, however, rehydration with water and electrolytes is recommended for exercise lasting over 30 minutes.

Hypoglycemia

Maintaining adequate energy for physical exercise is extraordinarily important. As athletes become more conditioned, their ability to sustain exercise for longer periods of time increase. However, some athletes especially if they are relatively unconditioned athletes, may have difficulty regulating the energy they need for continued physical exercise. Additionally, some Special Olympics athletes may be taking medications that cause the athlete to have lower blood sugar. Athletes with diabetes who take insulin or other diabetes medications are at particular risk.

If hypoglycemia occurs, the athlete may experience some of the following symptoms:

- ♦ Lethargy or weakness
- ♦ Nausea
- ♦ Dizziness
- ♦ Difficulty thinking clearly or speaking
- ♦ Headache
- ♦ Tremors
- ♦ Decreased balance
- ♦ Emotional outbursts or transient depression.

Often these symptoms appear suddenly. Generally, if they are not medication induced, they will pass even if left untreated. However, if an athlete is hypoglycemic, a quick dose of sugar should resolve these symptoms within minutes. In this case, a sweetened beverage, such as a sports drink is a great source of carbohydrates. In fact, any kind of sugary or carbohydrate-rich snack, such as fruit or candy will help. It is important that the athlete not be given any diet drinks or sugar free candy in this situation. Such diet foods will do nothing to improve the situation.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

Changes in Mental Status or Mood

Many medications that athletes with ID take may have effects on the mood or mental status of an athlete. Generally, these effects are fairly unnoticeable in a medication that the athlete has been taking for a long time. However, occasionally an athlete may be started on a new medication, or may accidentally take too much or too little of a medication. If mood changes or mental status changes occur, a physician should be contacted immediately as these may be signs of an accidental overdose of medications

What You Need to Know

Athletes with ID are likely to be prescribed more medications than athletes without ID. These medications may have long term side effects. If any potential side effects of medications are noticed, a physician should be contacted. Usually these side effects are not considered emergencies, however, if significant changes occur, this may be the sign of a medical emergency and medical personnel should be contacted immediately.

Heat Illnesses

Heat illnesses can be broken up into three types: heat cramps, heat exhaustion and heat stroke. Heat illnesses, in general, occur in athletes who exercise in hot environments. Typically, dehydration increases the likelihood of heat illness and can make the severity of the symptoms worsen.

Heat cramps and heat exhaustion are fairly self-explanatory and both are warning signs that exercise should cease immediately. In the case of heat exhaustion, that athlete may start to feel lethargic and tired. Again, this is a warning sign that the athlete should stop exercise.

In both cases, after the athlete stops exercising, they should immediately take measures to hydrate and cool the body. The athlete should be hydrated with fluids and electrolytes. Cool water may be placed on the athlete's head or body to help them cool off. Additionally, the athlete should immediately seek shade. If a shaded, air-conditioned environment is available, that may be helpful as well.

Heat stroke is a serious medical emergency. Typically, the an athlete experiencing heat stroke will have a body temperature that is at or above 40 degrees Centigrade or 104 degrees Fahrenheit. During heat stroke, the athlete will have hot, dry skin and will have very little or no ability to sweat. They may develop a headache and, worse, may have a seizure or lose consciousness.

If heat stroke is suspected, call for emergency medical personnel immediately. While you are waiting for medical personnel to arrive, it is imperative that the athlete's body be cooled as rapidly as possible. All excess clothing should be removed. Air conditioning or a fan should be set up to blow directly on the athlete and the athlete's body and head should be cooled with as much ice and water as possible. During this time, it is also important to monitor the athlete's breathing and pulse, to make sure that the situation is not worsening. It is important to mention that no attempt should be made to hydrate an athlete who is unconscious or having a seizure.

What You Need to Know

Heat-induced cramps or exhaustion are warning signs that should result in immediate cessation of exercise, cooling of the athlete and rehydration with fluid and electrolytes. If the athlete has a very high body temperature and feels hot and dry, these may be signs of heat stroke, which is a medical emergency. In the case of heat stroke, emergency medical personnel should be contacted immediately, the athlete should be actively cooled as quickly as possible and rehydration with fluid and electrolytes should occur as quickly as possible, provided that the athlete is not unconscious or having a seizure.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches

Specific Sports Injuries

Concussion and Head Trauma

Concussion and its long-term effects are becoming more of a concern in sports. Concussion occurs when the brain impacts the interior bony surface of the skull as a result of a sudden change in velocity of the head. The symptoms of a concussion tend to vary significantly depending upon the severity of the injury. Symptoms may be barely noticeable or extraordinarily debilitating. Repeated concussions seem to be correlated with long-term psychiatric and neurological consequences, though those consequences do not seem to be significant in athletes who have had only one minor concussion in their lifetime.

About 4% of Special Olympics athletes have a medical history of sustaining a concussion, though it is suspected that concussion is both under-recognized and underreported in this athlete population. In Special Olympics, the highest risk sports for concussion are floor hockey, floorball, basketball, softball, football (soccer), equestrian sports, downhill skiing and bicycling, though concussion may occur while participating in any sport.

If an athlete sustains an injury to the head a concussion could occur. Symptoms of concussions include: Nausea, dizziness, headache, slurred speech, fatigue, sleepiness, ringing in the ears and loss of consciousness. Sometimes these symptoms can last for weeks or months. It should be noted that concussion is very rarely a life-threatening condition and that loss of consciousness occurs in only about 10% of cases. Though, if concussion is suspected, the athlete should be evaluated by medical personnel immediately.

Often following an impact in which the athlete was visibly affected, coaches must decide when an athlete can return to play. This is a very controversial and difficult decision to make. If an athlete has a concussion and they immediately return to play, they may exacerbate the concussion, especially if they are impacted again. While there are many methods to determining if an athlete can return to play, it is generally felt that if the athlete appears to be at their baseline neurological functioning, they can return to play. Conversely, if there is any suspicion at all that the athlete is not functioning at their neurological baseline, then they should not return to play.

While concussion itself is generally not a life threatening condition, there are other conditions that can arise due to head trauma that are life threatening such as: skull fracture, hematoma or stroke. Because of this, if an athlete has sustained a significant head trauma, physical activity should be ceased immediately and the athlete should be assessed.

If an athlete has head trauma, the following symptoms may indicate a more significant injury. It is important to note that these symptoms may not appear immediately. If these symptoms are noted at any time within a few days following a head trauma, it may be an indication of a medical emergency:

- ♦ **Pain :** Constant or recurring headache
- ♦ **Motor dysfunction:** Inability to control or coordinate motor functions, or disturbance with balance
- ♦ **Sensory Changes:** Changes in ability to hear, taste or see; dizziness; hypersensitivity to light or sound
- ♦ **Cognitive Changes:** Shortened attention span; easily distracted; overstimulated by environment; difficulty staying focused on a task, following directions or understanding information; feeling of disorientation, confusion and other neuropsychological deficiencies.
- ♦ **Speech Changes:** Difficulty finding the "right" word; difficulty expressing words or thoughts.

In assessing the neurological baseline of athletes with ID, it is important that the assessment takes their intellectual disability into consideration. It is equally important that the intellectual disability not be used as an "excuse" for the athlete being unable to perform a cognitive task that they were previously able to perform. In the event that concussion or head injury is suspected, activity should cease immediately and the athlete should be seen by a physician immediately.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

What You Need to Know

Athletes sustaining a head trauma should be evaluated. Head trauma may result in concussion, though, it may also result more significant medical emergencies. Symptoms of significant head trauma may not be readily apparent immediately following the trauma. If any symptoms are observed with a few days of the trauma, even if it appeared to be a minor incident, it could be an indication of a medical emergency and should be treated as such. Establishing a neurological baseline of functioning for individual athletes may help in assessing athletes after a head trauma.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

Sprains, Strains, Contusions, Cramps, and Fractures

Minor traumatic injuries are the most frequently encountered type of sports injury. The causes of these types of injuries vary greatly but the treatment is generally the same.

Definitions

- ♦ **Sprain:** injury to the ligaments and/or joints
- ♦ **Strain:** injury to the muscles and/or tendons
- ♦ **Contusion:** blunt force trauma to soft tissue
- ♦ **Cramp:** muscular pain due to overuse or overexertion
- ♦ **Fracture:** injury to the bone that results in cracking or breaking of the bone

In almost all cases of sprain, strain or contusion, the following treatment is generally recommended:

Rest – stop athletic activity, rest the affected area

Ice – over affected area for 20 minutes at a time, over the next 24-36 hours

Compression – wrap with proximally decreasing tension

Elevation – above the heart

Often, when a sports injury results in a strain or sprain, coaches and athletes are concerned about the possibility of a fracture. While some fractures are obvious, most are not. In some cases, the only definitive way to diagnose a fracture is through x-ray. If there is any concern that an athlete may have sustained a bone fracture, not only should the “RICE” procedure above be implemented, but medical professionals should be contacted in order to assess the athlete.

What You Need to Know

Sprains, strains, contusions and fractures are the most common types of sports injuries. In the event of these types of injuries, coaches should employ the RICE treatment: Rest, Ice, Compression and Elevation. If a fracture is suspected, the athlete should be evaluated immediately by medical personnel.

Other minor injuries

Minor injuries can negatively impact sports performance. Though, by definition minor injuries should not result in significant or permanent effects, if they are not treated properly they can develop into more significant problems. Thus, it is important that these injuries be treated effectively and monitored for improvement. While athletes often compete with minor injuries, physical activity may exacerbate the injury or slow its rate of healing. If a minor injury does not appear to be healing properly it may be necessary for the athlete to temporarily cease physical activity until the injury is fully healed.

Blisters

- ♦ Keep pressure off new blisters using a felt "doughnut."
- ♦ Where the skin is torn, use extreme care.
- ♦ Keep it clean, and cut skin halfway around the perimeter without removing the skin.
- ♦ Apply antiseptic ointment and a sterile dressing.
- ♦ When underlying tissue toughens, cut away the remaining flap of skin.

Blisters most often occur at points of repetitive contact on the feet or hands. Aside from treating the blister as noted above, it may be advisable to observe the athlete's equipment for proper fit and possibly recommend that the athlete either adjust their playing style or change their equipment (e.g. different shoes or the addition of gloves).

Abrasions and contusions (floor burns and deeper bruises)

- ♦ Keep them clean.
- ♦ Expose them to the air when possible.
- ♦ Keep them dry.
- ♦ Encourage gentle activity.

Even clean abrasions may develop infections. Abrasions should be monitored for proper healing. If an abrasion is located on an area of the body that receives excessive pressure or movement during sports, the abrasion may reopen. In this instance, the athlete should temporarily cease the motion that causes this until the wound has healed properly.

Chronic knee pain, thigh muscle overload, tendonitis, stress fractures and ligament strain.

- ♦ Follow the doctor's directions, which will generally include:
- ♦ Rest for 5-7 days.
- ♦ Ice for pain.
- ♦ Stretch related muscles to strengthen them.
- ♦ Move gently, stopping at the point of pain.
- ♦ Exercise to strengthen afflicted area as it heals.

Like abrasions, strains and sprains may occur in areas of the body that are put under stress during sports and are therefore prone to re-injury. If this occurs, the re-injury may be more significant than the initial injury. Monitoring of the athlete's improvement along with following medical advice from a physician is recommended. Injuries to bones, joints or ligaments tend to heal slowly, it is not unusual for such injuries to take several weeks or months to heal.

Special Olympics Sports Sciences: Sports Injury Guide for Coaches Specific Sports Injuries

What You Need to Know

Coaches should be aware that areas of minor injury are prone to re-injury or exacerbation. Minor injuries should be treated effectively and monitored for improvement. If improvement does not occur or the injury worsens, cessation of physical activity and medical consultation are advised.



***Special
Olympics***

**SPECIAL OLYMPICS SPORTS SCIENCES:
SPORTS PSYCHOLOGY FOR COACHES**

Special Olympics Sport Sciences: Sport Psychology for Coaches

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Coaching Special Olympics Athletes

Special Olympics is committed to coaching excellence. The most important thing to know as a coach in Special Olympics is that athletes are individuals, and coaching them is just like coaching any other youth or community sports team. But we recognize that there are some situations that make Special Olympics coaching unique, Athletes are people who have been identified as slow learners; beyond that, they are just like everyone else, individuals with unique challenges, talents, abilities and interests. People with an intellectual disability learn just like everyone else, they use different strategies and strengths to help them understand. Some learn best through seeing things, others through hearing things, some need to feel what it is like to do something before they can learn it.

There are three main considerations to take into account that will affect your coaching

1. Learning Considerations (Motivation; Perception; Comprehension; Memory)
2. Medical Considerations (Intellectual Disability and other related developmental disabilities section)

The most important things to remember regarding these issues are safety, dignity and expectations.

- ♦ Safety is dealt with by talking to parents, guardians and athletes themselves about what coaches should be aware of. They are not expected to be a physician, but must be aware of any restriction on activity (Medical Release Form).
- ♦ Dignity is an easy thing to deny or to give. The best gauge of ability comes from talking to athletes about what they like, how they feel during a workout or what they want to accomplish in this sport.
- ♦ Expectations come from many sources. Coaches will set expectations for their athletes and for themselves in order to challenge and push the Athletes, designing workouts to help them meet those expectations. Athlete's families may have expectations about what they can or cannot do.

3. Social Considerations (Social Skills; Physical recreation at home; Economic status)

The role of the Special Olympics coach is much the same as any other volunteer coach in the community. There is an expectation that the coach will know something about the sport and how to teach it. This expectation varies with the skill level of the athletes and the environments in which the coaching takes place. These expectations will:

1. Help athletes select appropriate sport(s) and levels of participation
2. Offer a range of activities/events for all ability levels
3. Provide safe training and competition opportunities
4. Conduct high quality training and competition
5. Involve families and/or other support groups
6. Assist athletes to becoming integrated into the overall community

Coaching and Teaching Basic Sport Skills

The main objectives of coaching and teaching basic sport skills are:

- ♦ Move athletes from being coach dependent to being independent and self-monitoring
- ♦ Teach athletes sports skills and to know when and how to use them

One of the primary roles of the coach is teaching. Teaching means helping athletes learn physical skills and improve their athletic performance. The coach has the responsibility to develop athletes from the beginning stage of learning to becoming skilled athletes. Like all training, the process of learning skills is a long-term process. Teaching techniques is a fundamental skill in successful coaching. Techniques are the building blocks of skilled performance. A skilled athlete has good consistent technique and knows when and how to use technique to produce the best results.

How Athletes Learn

Techniques are the basic building blocks of skilled performance. Techniques are learned skills that allow athletes to compete most efficiently within the rules of sport. Skill has two meanings: a task and/or performance; the observable behavior that demonstrates a skill. Learning is the relative improvement in performance through practice. Skill learning is an invisible process. Because other factors can impact changes in performance, it is not always easy to know if an athlete has learned a skill. An athlete's consistent performance of a skill is the key to knowing if the skill has been learned.

Motor Program

As athletes continue to practice, feedback and instruction are the basic pieces of information used to create a sequence of the athlete's movement (motor program). The motor program is developed whenever we practice a skill. The memory of the previous attempts is used to physically perform the action again. With practice, a clear and precise memory of the skill is formed. The development of an athlete's motor skills is what allows him/her to master a skill. As a coach, one of your major responsibilities is to help athletes develop good motor skills. Many factors impact the learning of motor skills: your coaching ability, the environment, and the athlete's physical and cognitive ability to name a few. Most importantly, your athletes will be influenced greatly by what you do: how you teach, organize practice and give feedback.

Stages of Learning

Beginning Stage

The beginning stage of learning is the thinking stage. This is where the athlete is working out in his mind what to do. As the coach, first you must explain very clearly to athletes the skills they are to learn. It is imperative to be very patient in this stage. The athlete can get easily overwhelmed when he or she is given too many tasks to learn at one time or if you put a lot of pressure on the athlete too quickly. The stage is complete when the athlete can perform the skill, even though he or she may not perform it perfectly.

Intermediate Stage

The intermediate stage is the next level in learning. This stage invokes the motor program that was started in the beginning stage. The athlete needs to be motivated and given feedback on his/her skill development. The emphasis is now on the quality of practice to refine skills. The shift is from mental activity to learning the sequence of movements to master the skill. Athletes work on refining their timing and coordination. They need to know what they are doing incorrectly and how they can make corrections. Feedback is vitally important at this stage. As the skill becomes more automatic, the athlete has entered the advanced stage.

Special Olympics Sports Sciences: Sports Psychology for Coaches Coaching and Teaching Basic Sport Skills

Advanced Stage

The advanced stage is when the athlete is performing the skill. The control of the movement becomes more automatic. The athlete is not thinking about the movement as much. The athlete can now focus on more critical skills and applying strategy of the new skill to his/her sport. It is important to note that improvement in this area is smaller and may require more motivation for the athlete to practice.

Coaching Tips

- ❑ An athlete may be at the advanced stage for one skill and at the beginning or intermediate stage for another skill. Your success is in being able to determine where your athlete is at various learning stages and provide the best instruction, motivation and feedback for each one's success.

Learning Models

There is more to coaching than knowing sport specific skills. Successful coaches must properly teach skills and mentally prepare athletes for competition. Regardless of physical, mental, social and emotional well-being, all students learn differently. Coaches must be aware of the learning process in order to create an improved learning experience for the athlete. Coaches must honor the athletes learning style; sensory mode and reasons for participation when assessing and selecting athletes' levels of competition.

- ♦ Athletes may tend to process visually
- ♦ Athletes may tend to process auditorily.
- ♦ Athletes may tend to process kinesthetically.
- ♦ Athletes may tend to process using a blend of all of the above.

Coaches must take notice of how an athlete processes the information he or she receives. After you have identified how an athlete processes information, it is your job to help athletes set goals that will allow them to maximize participation and potential and simultaneously develop their own goal setting skills.

Teaching Skills

There are two basic types of skills: simple and complex. Learning simple skills typically require little practice. However, they are only considered simple if the athlete can learn them quickly. What is simple for one athlete may not be as simple for another.

Simple Skills

Simple skills are most easily mastered from seeing them performed. It is generally considered that 80 percent of learning takes place through what is seen. The basic methods in teaching simple skills are imitation and demonstration. Basically, athletes copy what you show them ("Watch this ... Try it."). If the imitation is accurate, immediate and specific positive feedback is a good way to confirm this to the athlete ("Yes, you got it. Good job as you followed through with your wrist. Now, let's practice it a couple more times to make sure we remember it."). Coaches should strive to identify specific behaviors to notice and provide positive feedback on as this confirms to athletes what they did correctly and increases the odds that they will repeat the correct skill/behavior.

Complex Skills

Complex skills require a little more effort on the part of the coach. First, learn to break down complex skills into smaller tasks to assist athletes in learning the skill. Some coaches and educators call this shaping. How do I break down complex skills into smaller tasks? Your sport specific coaching guide will go into greater detail and illustrate actual teaching progressions.

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Coaching and Teaching Basic Sport Skills

Levels of Instruction

Regardless of the type of skill, the basic levels of instruction are verbal, demonstration, physical prompting and physical assistance. Athletes may require a single method or a combination of these methods to learn a sport skill. It is important to identify the methods that work best for your athletes. For example, one athlete may require only verbal instruction to learn skills; another athlete may require both demonstration and physical assistance.

Verbal Instruction

Verbal instruction is the most common form of teaching and should be used first when presenting new skills. Be conscious of presenting the task in one or two-part directions. All language should be clear and consistent throughout the lesson. Using simple key words is essential. For example, a “lay-up” should always be a “lay-up” and not a “toss” or a “shot.”

Be clear, concise, consistent and command-oriented.

Demonstration

This level of teaching is universal and can be used by the coach to assist with the verbal instruction of a skill. When a skill becomes too difficult for the athlete to verbally comprehend, demonstration should be used.

For new skills, linking demonstration with verbal instruction is most effective.

Physical Prompting

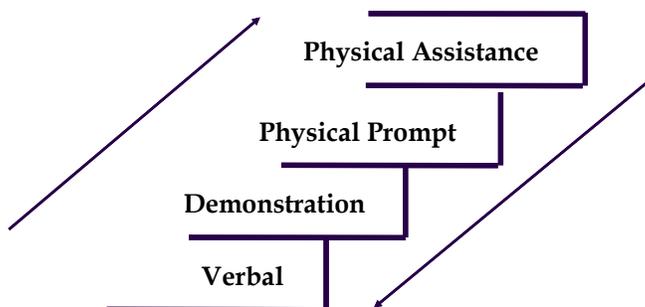
Physical prompting is best used when verbal and demonstration methods are not working. Guidance by touch to prompt an athlete into proper position is an example of a physical prompt.

Verbal and demonstration instruction is also good to use during physical prompting.

Physical Assistance

Physical assistance is used when all other levels of instruction have been exhausted. This level requires the coach to physically move the athlete into position and to physically assist the athlete to complete the skill. This method should be used with caution, especially if the athlete functions at a lower level and/or does not like to be touched.

Levels of Instruction



Special Olympics Sports Sciences: Sports Psychology for Coaches Coaching and Teaching Basic Sport Skills

Below are general guidelines to help Coaches teach sport skills more effectively.

- ♦ Briefly explain the skill.
- ♦ Break the skills into smaller, simpler steps so that the athlete can be successful.
- ♦ Briefly demonstrate the skill.
- ♦ Let the athletes practice the simpler skills.
- ♦ Gradually combine steps so that the entire skill is shaped into the desired performance.

Watch athletes carefully during practice so that you can provide positive feedback and reinforcement. Allow athletes to continue practicing once you have given feedback and corrected errors. It is important to make sure that athletes complete the practice feeling successful and good about themselves.

Coaching Tips

- | |
|--|
| <ul style="list-style-type: none"><input type="checkbox"/> Develop one component of a skill at a time.<input type="checkbox"/> Learning is a long-term process. Patience is required. |
|--|

Coach as the Model

Your every action as a coach on and off the playing field is a form of nonverbal communication. One of the most important things you communicate by your actions is respect or the lack of it. How you walk, approach others, your gestures and what you say and how you say it convey your attitudes about sportsmanship, other coaches and athletes. Athletes can be highly impressionable, and they hold their coach in high esteem. Your actions can teach athletes much more than sport skills and rules of your sport.

Special Olympics Sports Sciences: Sports Psychology for Coaches Coaching and Teaching Basic Sport Skills

Intellectual Disability and Other Closely Related Developmental Disabilities

At times, you may see or hear the following terms to describe something about an athlete. These terms describe traits, or conditions, but they do not describe the person. There are very few traits or characteristics that are true for all people with any label.

Disability	Characteristics	Best 3 Strategies to Affect Learning
Intellectual Disability (General)	<ul style="list-style-type: none"> Information processing and learning occurs at a slower rate; attention span is short This was noticed for the first time before the person turned 18. 	<ul style="list-style-type: none"> Train for short periods of time Provide repetition (key to athlete gaining new skill development) When training, think of athletes as literal thinkers
Autism	<ul style="list-style-type: none"> Communication difficulties "In their own world," but frequently aware and bright 	<ul style="list-style-type: none"> Craves established routines Signal transition, change, loud noises, etc. Provide highly structured and least distracting environment
Cerebral Palsy	<ul style="list-style-type: none"> Poor muscle control Does not necessarily indicate intellectual disability Difficulty with speech articulation 	<ul style="list-style-type: none"> Work on strengthening muscles Teach skills in isolation to help build muscles Develop gross motor skills
Down Syndrome	<ul style="list-style-type: none"> Anywhere from moderate to significant intellectual disability Genetic cause Make sure you know about atlanto-axial instability before you do a drill that puts pressure on the neck or head. About 10 percent of people with Down syndrome have weakened vertebrae. The information will be on the medical release. 	<ul style="list-style-type: none"> Set clear expectations and limits Use eye contact when talking; work one-on-one to demonstrate new skill (gain full attention) Use repetition and review
Fetal Alcohol Syndrome	<ul style="list-style-type: none"> Tends to have attention and memory deficits. Finds it difficult to stay on task. Has difficulty in remembering what was previously learned 	<ul style="list-style-type: none"> Create routine Set rules and limits Reinforce acceptable behaviors
Fragile X	<ul style="list-style-type: none"> Elongated face Prone to seizures Coordination difficulties 	<ul style="list-style-type: none"> Provide structured and predictable activities Provide minimal auditory and visual stimulations Establish routine and structure
Prader Willi	<ul style="list-style-type: none"> Sleep disturbance Compulsive eating Skin picking 	<ul style="list-style-type: none"> Signal and practice transition Set firm rules and expectations Establish routine and structure

Special Olympics Sports Sciences: Sports Psychology for Coaches Athlete's Behavior Characteristics and Strategies to Improve Learning

Athlete's Behavior Characteristics and Strategies to Improve Learning

The goal of this chart is to provide coaches with information about Special Olympics athletes with different functional and learning characteristics (not labels) so that coaches can teach and coach Special Olympics athletes more effectively. When an athlete exhibits what is generally perceived as inappropriate behaviors, those behaviors may simply be a reflection or part of the person. Inappropriate behaviors that will not be tolerated include defiance, acting out or silliness.

When possible, talk with parents, providers, teachers, former coaches, etc., about an athlete's common characteristics and the successful strategies used to affect learning. Use the characteristics as a checklist. Ensure that one or more of the strategies opposite the respective characteristics are employed in each practice. Finally, be aware that not all athletes will demonstrate these characteristics.

Athlete Characteristics	Strategies to Improve Learning
<input type="checkbox"/> Learning occurs at a slower rate	1. Provide structure 2. Provide repetition and review 3. Break down skills into smaller parts
<input type="checkbox"/> Short attention span	4. Train for short periods of time 5. Provide repetition and review (key to gaining new skill) 6. Work one-on-one (gain full attention)
<input type="checkbox"/> Resistance to change	7. Provide clear and continuous transitions 8. Establish routines (enforce concept of flexibility) 9. Build on successes
<input type="checkbox"/> Stubborn/Behavior problems	10. Set clear rules, expectations and limits 11. Enforce rules but provide conditions for coming back 12. Reinforce acceptable behaviors
<input type="checkbox"/> Verbal communication difficulties or not all	13. Allow for additional time to express thoughts 14. Use picture boards/other assistive devices 15. Ask him or her to demonstrate or show what he/she means
<input type="checkbox"/> Prone to seizures	16. Know signs and symptoms 17. Control atmosphere (heat, sun, sugar, etc.) 18. Inform and assure teammates when they occur
<input type="checkbox"/> Poor muscle tone	19. Provide specific exercise and strengthening programs 20. Stretch safely; do not allow athletes to stretch beyond normal joint range of motion
<input type="checkbox"/> Lower pain threshold; sensitive to touch	21. Establish eye contact when talking 22. Use softer/adaptive equipment 23. Forewarn if any touch is necessary
<input type="checkbox"/> Failure to form social bonds	24. Work in small groups 25. Have athletes work in pairs (same pairs for several weeks) 26. Provide highly structured and least distracting environment
<input type="checkbox"/> Over-stimulated easily	27. Remove or lessen stimuli (dim lights; soften sound; remove unnecessary objects) 28. Train in separate room or smaller group; gradually add people

Special Olympics Sports Sciences: Sports Psychology for Coaches Athlete's Behavior Characteristics and Strategies to Improve Learning

Athlete Characteristics	Strategies to Improve Learning
<input type="checkbox"/> Difficulty with balance or stability	29. Provide additional assistance 30. If stretching, sit down, lean against wall or hold on to partner 31. Allow for extra time to complete a task
<input type="checkbox"/> Compulsive eating	32. Remove food from practice/competition sites 33. Provide structure and routine for eating
<input type="checkbox"/> Coordination problems	34. Break down drills to easier movements 35. Allow additional time with one-on-one support 36. Progress according to athlete's ability
<input type="checkbox"/> Mood swings (frequency and intensity)	37. Provide structured and predictable activities 38. Set clear expectations, limits and conditions 39. Separate from group when necessary, but allow back
<input type="checkbox"/> Physical limitations or impairments	40. Provide adaptive equipment or modifications 41. Provide exercises that strengthen and stretch muscles 42. Develop gross motor and stability skills
<input type="checkbox"/> Blind	43. Use many verbal cues 44. Provide action-specific feedback 45. Hand-over-hand demonstration may be needed
<input type="checkbox"/> Deaf	46. Establish eye contact when talking 47. Use signs or pictures or American Sign Language 48. demonstrate what is desired

Special Olympics Sports Sciences: Sports Psychology for Coaches

Athlete's Behavior Characteristics and Strategies to Improve Learning

Understanding and Utilizing Sport Psychology

Psychological Considerations

Coaching goes well beyond teaching fundamental skills. Once the athlete has learned the basic skills of the game, they must then learn how to apply their skills, knowledge of the rules and etiquette of the game in preparation for competition.

Before any of that can happen, the athlete must enjoy the sport and want to play it. Establishing that from the outset will give the coach an immediate platform for learning. When the going gets tough, the coach can remind athletes that it is meant to be challenging and that sport is an activity they really want to be able to do. Without setting that groundwork, the concept of quitting becomes an option—the worst possible scenario in sport.

Tasks ⇒ Skills ⇒ Application ⇒ Competition

Special Olympics athletes have been given the tasks or elements required to perform a skill. Skills are the fundamental abilities required for application to sport. They have developed a combination of skills to apply in preparation for competition. They are now ready for competition according to the rules and guidelines of the sport.

Athletes will develop sport confidence by following a simple to more complex skills training progression that allows the athlete to experience successful athletic achievement through repetition in settings similar to the competitive environment.

Athlete Readiness

Readiness of the athlete means being focused and it must be determined in preparation for competition.

- ♦ **Mental Readiness:** Being a contender in the event, showing confidence and understanding strategy
- ♦ **Physical Readiness:** Being physically conditioned and trained in the skills required for competition

Physical Readiness + Mental Readiness = Competition Readiness

The Special Olympics Sports Skills Assessment and Daily Performance sheets are excellent resources for measurement of skill and competition readiness. These tools will help the Coach determine the athlete's appropriate events.

For example in Athletics, Special Olympics offers many disciplines - sprints, long-distance running, jumps, throws and race walking and wheelchair events. Athletes must not only be placed in a level of competition that will challenge their skills and keep them motivated to continue their effort to surpass their personal bests, but they must also be placed in events that they like and enjoy. Positive motivation and participation can inspire the athlete to excel and gain sport confidence.

Special Olympics Sports Sciences: Sports Psychology for Coaches

Developing Communications Skills

Developing Communications Skills

There are many aspects of sport psychology, however none will be more important to coaching than learning how to communicate with your athletes and understanding what motivates them to train and compete in sports. By default, successful coaches are good sport psychologists - skillful communicators and motivators.

Coaching is communication. Every act of coaching requires you to communicate. As a coach you must be able to communicate effectively in countless situations

1. Teaching athletes how to do certain skills, run plays
2. Talking to an official who you believe has made an incorrect call
3. Talking to parents or caregivers about their family member

Communication is more than a two-way process; it is dimensional. Communication encompasses sending and receiving messages, verbal and nonverbal language and emotions and feelings involved in the content of the message.

- ♦ Coaches must be as skillful in receiving messages as they are in giving clear understandable messages. Successful coaches need to be sharp, active listeners so they can understand their athletes.
- ♦ It is also essential that coaches be aware of nonverbal communication. It is estimated that over 70 percent of communication is nonverbal. Therefore, coaches must be aware that their athletes are constantly observing and modeling their actions.
- ♦ Content is the substance of the message and emotions and feelings pack the content.

Coaching Tips

<input type="checkbox"/> Communicate unto others as you wish them to communicate unto you.
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The Communication Flow

1. The coach has a thought that he/she wants to tell the athlete.
2. The coach translates the thought into a message.
3. The coach conveys the message – verbally or nonverbally.
4. The athlete receives the message.
5. The athlete interprets the meaning of the message.
6. The athlete responds inwardly and/or outwardly to the message.
7. Much of communication is non-verbal so it is important to watch facial expressions as well as other physical gestures

Sometimes this flow is smooth and sometimes it is not. It is based on the clarity of the message and the athlete's understanding of the message.

What Makes Communication Ineffective

- ♦ The content of the message may not fit the situation.
- ♦ The message does not adequately communicate your intentions.
- ♦ The athlete does not receive the message.
- ♦ The athlete does not understand the message.
- ♦ The athlete misinterprets the content of the message.
- ♦ The message itself is inconsistent.

Ineffective communication is not about finding fault. Poor communication can be a result of many factors as noted above. Finding where the communication flow stopped is the key to building successful communication between coach and athletes.

Developing Credibility When You Communicate

Your credibility is the single most important element in communicating effectively with athletes. Your credibility is reflected in the trust athletes place in you as a coach. Athletes give you initial credibility because you are the coach. You also have the ability to maintain and build upon this place of trust or to lose it. Once lost, it is tough to get back. How can you build credibility as a coach?

1. Be an emotionally balanced coach
2. Know your sport, be willing to learn more and be honest about what you do not know
3. Be reliable, consistent and fair
4. Express empathy, warmth and acceptance of your athletes and where they are in their development
5. Be positive

Coaching Tips

- It is natural for athletes to play and joke around.
- If athletes behaved perfectly, they would not need a coach.

Special Olympics Sports Sciences: Sports Psychology for Coaches Developing Communications Skills

Learning How to Listen

Statistics show that untrained listeners hear less than 20 percent of a conversation. The majority of us fall within this category. Poor listening skills cause a breakdown in the communication process. If an athlete continually fails in getting you to listen, he/she will simply stop talking with you. Coaches who are poor listeners often have more discipline problems; athletes stop listening to their coach because he/she is not listening to them. Athletes may make a drastic attempt to get you to listen by misbehaving or acting out. Your response to athletes' views and thoughts is important as you begin teaching and training them in their sport.

Improving Your Listening Skills

1. Recognize the need to listen.
2. Concentrate on listening by giving your undivided attention to what is being said.
3. Search for the meaning behind what is being communicated to you.
4. Avoid interrupting athletes as they are talking with you.
5. Respond constructively to athletes emotions.
6. Respect the rights of athletes to share their views with you. Listen to their fears, joys, problems and accomplishments.

Coaching Tips

- Emphasize praise and rewards to strengthen desired behaviors.
- Positive communication helps athlete value themselves as individuals, athletes.
- Be aware of the emotion expressed in your messages to athletes.
- Set realistic goals about athletes' athletic performance abilities as well as their emotional and social behavior.
- Be consistent.
- Keep your word.
- Be as good as your word.

Special Olympics Sports Sciences: Sports Psychology for Coaches Information and Problem Solving

Information and Problem Solving

Description of Common Behaviors and Recommended Accommodations

Oral Expression

Athletes may	Accommodations
Speak only in single word statements or phrases	If you understand what they mean - great! If you do not understand, ask them to say it differently
Exhibit word retrieval problems and substitute words for words they are having trouble retrieving	<ul style="list-style-type: none"> ♦ Help them calm down and relax so they can find the words they want ♦ Come up with "signs" for common requests or concerns
Exhibit bizarre patterns of language usage	<ul style="list-style-type: none"> ♦ It may be bizarre to you but make perfect sense to the athlete. ♦ Explain that you are having trouble understanding what they mean. Get a conversation going - the give and take should make their intent more clear
Imitate or repeat words incorrectly	<ul style="list-style-type: none"> ♦ The accommodation is only necessary if you do not understand. ♦ If that is the case, ask them to pick a different word to tell you what they mean.
Use gestures as a substitute for a word	Learn what the signs or gestures mean.
Have difficulty relating ideas in sequence	Break down sequences into steps and learn them individually; then put them together after the steps have been mastered.
Have difficulty making themselves understood to peers	If one peer does not understand, ask others if they understand and would they be willing to help "translate."
Contribute to discussion with off-task comments	<ul style="list-style-type: none"> ♦ Again, it may seem "off task" to you but very on task to the athlete. ♦ Ask them how their comment fits the discussion. They will explain it, give insight into their thinking or realize that they were off the topic.
Confuse words	<ul style="list-style-type: none"> ♦ Help them use the correct term. ♦ Be patient; give them an opportunity to formalize ideas.

Special Olympics Sports Sciences: Sports Psychology for Coaches Information and Problem Solving

Listening Comprehension

Athletes may	Accommodations
Ask that questions be repeated	Repeat them. If it starts to take too much time, pair the athlete with another athlete who can provide assistance.
Often say “what,” or “huh,” etc.	<ul style="list-style-type: none"> ♦ Check for hearing issues. ♦ Switch from verbal instruction to visual demonstration of the task.
Confuse the meaning of similar sounding words	Explain the difference between the words and try visual techniques instead of auditory.
Fail to follow verbal directions	<ul style="list-style-type: none"> ♦ Have them repeat directions back to you to verify understanding. ♦ If failure to follow directions creates distractions for other athletes, have the athlete sit out or work with an assistant coach until you can determine the reason for not following original directions.
Do the opposite of the given instructions	<ul style="list-style-type: none"> ♦ Have them repeat directions back to you to verify understanding. ♦ If failure to follow directions creates distractions for other athletes, have the athlete sit out or work with an assistant coach until you can determine the reason for not following original directions. ♦ Make sure you are stating the direction as a “positive” statement, such as, “Dribble all the way to the basket and shoot a lay-up,” as opposed to, “Never dribble all the way to the basket and then NOT shoot a lay-up!”
Have difficulty locating the direction of sounds	<ul style="list-style-type: none"> ♦ Switch to visual cues ♦ Set up a physical reaction to the sound no matter where it comes from. For example, “When you hear my whistle, stop and look at the sideline.”
Answer questions inappropriately	Establish that they understood the question by restating the question with their answer and then asking if that was what they meant to say.
Confuse time concepts (before/after)	Switch to physical (Kinesthetic) mode so that the end of one action leads to the next and will “feel” right. Like what is supposed to happen next.
Confuse direction words (front/back)	Instead of saying, “Go to the top of the key,” say, “Come and stand right here,” so they have a visual and physical way to remember.
Ask irrelevant questions	Make sure you understood the question, or what they were really asking. You may not understand at first, so ask them to help you understand the question.
Show increased difficulty in any of the above areas when noise increases	Make a rule that it must be quiet when you are talking, and explain that it is because some athletes won’t be able to understand if it is noisy. “Let’s all help each other have the best chance to learn this skill!”

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Attention Skills

Athletes may	Accommodations
Fail to finish	Provide reward via praise or the right to move on once a task is completed.
Seem easily distracted	<ul style="list-style-type: none"> ♦ Keep them busy using a variety of short tasks. ♦ Be quick with praise and give it often.
Appear not to listen	Touch on arm, forearm, or get down to athlete level and ask if they understand what to do.
Have difficulty concentrating on tasks requiring sustained attention	<ul style="list-style-type: none"> ♦ Break skills down into smaller tasks, and ♦ Keep instruction time limited so they move more quickly from one activity to the next. ♦ Teach as you do it with them.
Appear to act before thinking (impulse control issue)	<ul style="list-style-type: none"> ♦ Pair them with another athlete who can act as a screener for the impulse. ♦ Deep breaths help them slow down to focus and help you calm down as well!
Shift excessively from one activity to another	<ul style="list-style-type: none"> ♦ Set up rewards for mastering a skill before moving on. ♦ Ask them to teach the skill to another athlete who is having trouble. This keeps them focused on someone else's action and not on their desire to move on.
Have difficulty waiting for their turns in games/drills	Teach Athletes patience waiting in line and waiting their turn being a team player.
Excessively run about to climb on things	Help organize activities/limit materials if feasible.
Have difficulty staying seated	<ul style="list-style-type: none"> ♦ There should not be a lot of sitting during a sports practice. ♦ Have activities set up so that the minute they arrive they have something to start on. "The first thing you should do when you get to practice is get a ball and shoot five baskets from each of these blue Xs."

Special Olympics Sports Sciences: Sports Psychology for Coaches Information and Problem Solving

Social Perception

Athletes may	Accommodations
Make inappropriate comments	Depends on the nature of the comments. If it is disruptive or makes other athletes uncomfortable, have them sit out or move to work with an assistant until you can explain that this is hurting their teammates.
Make inappropriate use of personal space	<ul style="list-style-type: none"> ♦ Do a warm up drill that establishes an arm's length; talk about giving everyone space. ♦ Have partners shake hands and remind everyone that hand-shake distance is usually best for talking. Any closer and people get nervous and can't focus on what you are saying.
Have difficulty anticipating behavior in others	Repetition via drills will help in learning patterns of actions.
Have difficulty in changing behavior	Reward and praise positive behavior and changes. Notice and comment on improvements no matter how slight.
Appear to be inflexible	Make every action a choice. Say, "Do you want to join the group over here or do you want to join the group over there?" Try to avoid "or else" comments.
Difficulty responding to non-verbal cues, hand gestures, facial expressions	Experiment with different cues and have them decide which ones work best for them.

Positive Reinforcement and Rewards

When used appropriately, reinforcement is one of the primary communication tools of a successful coach. Reinforcement is used to praise an athlete when he/she does well or to get an athlete to stop undesirable behavior. Reinforcement is relative and not absolute. For reinforcement to work, a coach must be consistent and systematic in its use. If you are not consistent, your athletes will behave erratically, like the coach. If you are not systematic, you will send confusing messages to your athletes.

Communicating and Correcting Errors

1. **One skill at a time.** Correct only one behavior or movement at a time.
2. **Ask before giving correction.** Allow the chance to explain what they believe they did. This lets them feel they are a part of the process.
3. **Find the cause.** The cause of an error may be something that you may not see. Again, ask the athlete what they believe they are doing.
4. **Provide constructive instruction.** Avoid too much of “what’s not right” by focusing on “how to do it right.” Always build up the athlete; do not tear them down.
5. **Praise before correction.** Begin with a positive comment about something that the athlete is doing well. Now they are attuned to you. You have gained their attention and trust. Follow up with constructive instruction. Be concise and to the point. Remember to send another message of praise and encouragement.

The “Sandwich approach” is an effective way to provide both positive reinforcement and corrective feedback. Start off with a compliment such as “Great effort on the backcheck and not letting up and then identify what they need to improve on such as, “but when backchecking stay on her inside shoulder” followed by encouragement and a positive outcome, “Staying on her inside shoulder will insure she cannot cut to the basket”

Using Rewards

Coaches should observe and know their athletes to determine why they participate in Special Olympics and reward them accordingly. Rewarding athletes is not always as easy as it sounds. Below are a few tips on rewarding athletes.

- ♦ Reward the performance, not the outcome.
- ♦ Reward athletes just as much for their effort as you do for the desired outcome.
- ♦ Reward little accomplishments on the way to learning an entire skill.
- ♦ Reward the learning and performance of desired emotional and social skills too.
- ♦ Reward frequently, especially when new skills are being learned.
- ♦ Reward as soon as possible when new skills are learned.
- ♦ Reward an athlete when they have earned it.

Types of Rewards

- ♦ Intrinsic: Athlete competes for the thrill and joy of the sport
- ♦ Extrinsic: Athlete competes for the reward

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Positive Reinforcement and Rewards

Misbehavior

Although coaches should reinforce what athletes do correctly it is not uncommon for athletes to misbehave. One approach is to ignore the bad behavior. This approach can prove successful in certain situations because punishing the athlete's misbehavior encourages them to act out more. Ignoring misbehavior does not work when the athlete causes danger to himself/herself or other teammates and coaches. In that case, immediate action is necessary. Sometimes ignoring misbehavior if it is not habitual can be successful. Punishment delivered calmly and matter of factly can also correct an athlete's misbehavior. Below are a few suggestions for appropriate use of punishment.

- ♦ Have athletes discuss and decide on appropriate team rules and the consequences for violating them so that your punishment reflects what the athletes decided upon. Coaches will need to set some guidelines so the team rules and consequences are reasonable and not trivial.
- ♦ When possible, give a warning before using punishment.
- ♦ Reducing playing time is often an effective punishment.
- ♦ Deliver punishment in a calm and rationale manner.
- ♦ Be consistent when administering punishment.
- ♦ Never use exercise as punishment and never engage in physical punishment.
- ♦ Do not choose a punishment that causes you to feel guilty or upset.
- ♦ Once a punishment has been given, do not make the athlete feel like they are still in trouble.
- ♦ Punish sparingly, only when absolutely necessary.

Some examples other than excessive exercise might be; putting away equipment at the end of practice such as picking up all of the balls, retrieving balls from a player practicing free throws, sitting out and missing practice/game time (although this obviously is counterproductive for learning), maybe having a starter NOT start for 5 minutes.

Motivation

According to Burton, Damon and Thomas Raedeke in *Sport Psychology for Coaches* (2008), motivation is reflected in three behaviors:

- ♦ **Choice:** Motivation shows in the choices athletes make—choosing to play sport, to practice, to set challenging goals, and to train even in the off-season.
- ♦ **Effort:** Motivation is also reflected in how much effort athletes give—how intensely they train, compete, and strive to achieve their goals.
- ♦ **Persistence:** Motivation level can be seen in how long athletes persist at striving to attain their goals, even in the face of adversity and obstacles.

Motivation is better understood by debunking some myths.

Motivation Myth 1: Athletes are either motivated or not motivated

Some coaches believe that motivation is simply a personality trait, a static internal characteristic. They believe that an athlete either has motivation or doesn't. They don't believe motivation is something coaches can develop. For these coaches, the key to having a motivated team is to find and recruit athletes who have the right personality. However, while some athletes are, in fact, more motivated than others, this view does not provide any direction or guidance on how coaches can help develop and sustain athletes' motivation. The fact is, coaches can help athletes develop motivation.

Motivation Myth 2: Coaches give athletes motivation

Other coaches view motivation as something they can inject into their athletes on demand, like a flu shot, by means of inspirational pep talks or gimmicks. They may use slogans, posters, and bulletin board quotes from upcoming opponents. These strategies may be helpful, but they are only a small piece of the motivation puzzle. There is much more to the story—motivation is not something coaches can simply give their athletes.

Motivation Myth 3: Motivation means sticks and carrots

Some experts suggest that effective motivation means using carrots (rewards) and sticks (punishments) to drive athletes to do things they would not do on their own. This may seem innocuous, but think about it on a deeper level. It assumes that athletes don't want to do something, so the coach will provide motivation to make them do it through punishments or rewards. Coaches who emphasize the stick, in the form of chastising, criticizing, yelling, coercing, and creating guilt, often find themselves swimming upstream. No matter what they try, they meet resistance and negative attitudes. Not only is this approach ineffective, it saps the enjoyment out of sport. Coaches must understand athletes' needs in order to create a team culture that naturally motivates them.

Athletes' needs and intrinsic motivation

According to Burton and Raedeke in *Sport Psychology for Coaches* (2008), great coaches know that they don't give athletes motivation. Rather, they create the conditions or team climate in which athletes motivate themselves. Coaches do this by recognizing the importance of **intrinsic motivation**, which stems from the sheer pleasure and inner satisfaction athletes experience from participating in sport. Intrinsically motivated athletes play for the love of the game. They enjoy the process of learning and mastering difficult sport skills and play for the pride they feel when working hard toward accomplishing a challenging goal. They also find sport stimulating and feel exhilarated when engaged in it.

The secret to cultivate athletes' intrinsic motivation is to understand what athletes need from the sport. Structuring sport in a way that meets athletes' needs fosters intrinsic motivation, and failure to meet athletes' needs lowers it. What do athletes need from sport? Evidence from a variety of sources suggests that athletes seek to fulfill four primary needs

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Motivation

1. The need for fun and stimulation)

In a survey done to 10,000 former athletes (Ewing & Seefeldt 1990; Seefeldt, Ewing, & Walk 1992), was found that having fun and developing skills were the most common reason why athletes participate in sports, even more important than winning

When they were asked why they quit, they typically answered something along these lines:

- ♦ “I found other activities more interesting.”
- ♦ “I would rather do other things than play sport.”
- ♦ “Sport was no longer fun.”
- ♦ “I burnt out on sport.”

It was found that the connection between the reasons athletes play sport and the reasons they drop out was motivation, which comes naturally and easily when athletes are having fun. Lack of fun makes sport seem like a boring job, lowers motivation, and even causes athletes to drop out. If sport is not fun, coaches find that motivating athletes is difficult, if not impossible. Sport is much more enjoyable when athletes find practice activities stimulating, challenging, and exciting.

One of the greatest challenges as a coach is to avoid destroying the athletes’ intrinsic motivation to play sport. Some coaches erroneously believe that fun means easy workouts, frivolous games, and countless team parties. But challenging practices, intense workouts, and focusing on skill development can be fun. In fact, fun is maximized when athletes experience optimal stimulation and excitement. No one finds it fun to lose or fail constantly, so build in some success. Most athletes are also bored by being underchallenged while performing tedious drills. Thus coaches should strive to fit the difficulty of the skill to the ability of the athletes. Coached this way, athletes feel challenged but not overwhelmed, because they have the ability to meet the challenge.

Coaching Tips

- | |
|---|
| <input type="checkbox"/> Coaches must understand athletes’ needs in order to create a team culture that naturally motivates them. |
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Wise coaches have long known that meeting athletes’ need for fun enhances motivation. Yet they also know that athletes must practice to learn and improve skills. The creative coach can find ways to facilitate skill development in a way that is fun for athletes. Here are a few examples:

- ♦ Use developmental progressions to create an optimal skill–challenge balance.
- ♦ Keep practices stimulating by varying the activities.
- ♦ Teach fundamentals by means of action-packed, gamelike activities that use the targeted skills.
- ♦ Keep everyone active. Don’t give players time to get bored by having them stand in long lines.
- ♦ Set aside time in each practice when athletes can just play the game, without receiving evaluation or feedback from the coach.

Structuring sport to be fun is key not only to motivation but also to helping athletes develop their skills. If athletes enjoy sport, they become more motivated and are less likely to drop out. If they are more motivated, they improve. As they improve, they enjoy sport more. And so it goes. Athletes who are motivated primarily by their need to have fun may present discipline problems for coaches who have sapped the fun out of sport. As these athletes try to find creative ways to have fun, they may be seen as goof-offs or discipline problems. Some coaches assume that athletes are not motivated when they balk at doing everything the coach’s way. In reality, such players are often highly motivated to play—just not according to the structure and methods dictated by the coach.

2. The need for acceptance and belonging

The second basic need athletes strive to fill through sport is for acceptance and belonging. This need can be met if athletes feel they fit in and are accepted by others on the team. In fact, some athletes play sport primarily because they enjoy being with their friends and being part of a team, and coaches can use this need as a powerful motivator. Here are some guidelines: Many children with various disabilities are often teased or ignored. Being a member of team that includes similar other peers can be a tremendously gratifying social experience. Hence coaches should not underestimate the value of the social benefits that the athletes will derive from their sport experience. In fact being with their friends may be a more powerful motivation than playing the sport.

- ♦ Recognize that these athletes are usually responsive to team goals. Although performing well and winning may not be as significant to them as is identifying with the team, they will internalize team goals because of their desire to be part of the group.
- ♦ Arrange activities that allow athletes to get to know each other and spend time together. Social activities are a good way to help fulfill the need for acceptance and belonging.
- ♦ Include team building activities to help build cohesion. By working together toward a common goal that is not directly related to sport, athletes can learn to appreciate previously overlooked strengths in themselves and their teammates.
- ♦ Create an atmosphere on the team where athletes feel they are playing with each other rather than against one another.
- ♦ Have returning athletes serve as mentors to new athletes
- ♦ Ensure that all athletes feel they are important members of the team and that their roles are important and valued.

3. The need for control and autonomy

This need is important but easily overlooked. In fact, one of the most basic human needs is to develop autonomy, and this is especially true among adolescents on their journey to adulthood. Filling this need requires that athletes have control over their own lives and determine their own course of behavior. Once they choose to participate in a sport, they need to have ownership and feel they have a say in decisions affecting their involvement. Otherwise, they feel pressured or obligated to act, think, or feel a certain way. High autonomy encourages wanting to participate, whereas low autonomy means having to participate.

You can use several strategies to help athletes develop a sense of ownership and responsibility. When appropriate, involve athletes in decision making, provide choice, and request their input. You can do this, for example, by giving them a say in their training regimen. You can teach athletes how to develop their own training program, giving them more and more responsibility as they learn more about effective training principles. Encourage athletes to take as much responsibility as you judge they have the maturity to handle. Provide structure and guidance, giving more control as athletes demonstrate the wise use of responsibility. When athletes err in using their responsibility, constructively help them better understand how to act responsibly. Athletes should neither expect nor be given free rein, but they should be given choices within a structured environment.

The coach who facilitates this type of graduated responsibility development is not necessarily a democratic coach in every respect. Not all decisions are voted on—many are the sole responsibility of the coach. But by shifting some control to athletes, it is possible to develop a disciplined team where athletes feel a strong sense of ownership.

In summary, to meet athletes' need for control and autonomy, you should make sure they feel a sense of ownership over their sport involvement. Ways to do this include the following:

- ♦ Provide a rationale for your decisions.
- ♦ Ensure that athletes feel they are responsible for their own fate and are not merely pawns.

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- ♦ Solicit athletes' input and provide choices whenever possible.
- ♦ Involve athletes in developing practice plans and game strategies, evaluating practices and competitions, developing team rules and a team covenant or mission, and selecting captains.

4. The need to feel competent and successful

The need to feel competent is one of the most important components of motivation. Perceived competence means having positive perceptions of one's skills and abilities and feeling capable of succeeding in sport. It is doubtful that athletes will work hard, or even stay in sport, if they feel like failures. Athletes use many sources to judge their skill and success at sport. Even the simple act of choosing up sides can influence athletes' feelings of competence. Always getting picked first by one's peers contributes to feeling competent, thus enhancing motivation, whereas routinely getting picked last may cause an athlete to feel incompetent and walk away from sport.

Athletes' perceived competence can be raised through success at challenging tasks, positive feedback from a coach, and approval from parents. Effective coaches spend a lot of time and energy structuring sport in a way that makes each athlete feel competent. Although experiencing success is central to feeling competent, experiencing failure is inevitable in the sport world, as in life. All athletes, no matter how talented, experience failure, adversity, and setbacks at some point. How athletes respond to failure has a huge effect on long-term motivation.

Many athletes will equate winning and losing with success and failure. This is often a self-defeating perspective as athletes only partly control the outcome of competition and often winning is unrealistic. Coaches should almost always focus on individual effort, self-improvement and learning as barometers of success.

Developing Sport Confidence

Sport confidence is gained through experiencing success, time and time again, in the same or similar situation. Sport confidence is one of the most important predictors of athletic achievement. Your coaching strategies should be devised around repetition in settings similar to the competitive environment.

1. Developing sport confidence in athletes helps to make participation fun and is critical to the athlete's motivation.
2. A considerable amount of anxiety is eliminated when athletes know what is expected of them and when they have to be prepared.
3. Mental preparation is just as important as skills training.
4. Progressing to more difficult skills increases the challenge.
5. Dropping back into easier skills increases one's confidence.

Place emphasis on the importance of improving a personal best and giving maximum effort at all times during training and competition.

- ♦ Reward the athletes when goals are achieved (verbal, nonverbal, and tangible).
- ♦ Motivate and challenge the athlete through well-planned training sessions.
- ♦ Establish guidelines for acceptable behavior and expectations by creating positive cues and reinforcements.

Coaching Tips

The only things an athlete can control are: Attitude and Effort

Developing Self-Confidence through Goal Setting

Realistic yet challenging goals for each athlete are important to the motivation of the athlete both at training and during competition. Accomplishing goals at practice through repetition in settings similar to the competition environment will instill confidence. Sport confidence in athletes helps make participation fun and is critical to the athlete's motivation. Setting goals is a joint effort between athletes and coaches. The main features of goal setting are:

1. Goals need to be structured as short-term, intermediate and long-term.
2. Goals need to be viewed as stepping stones to success.
3. Goals must be accepted by the athlete.
4. Goals need to vary in difficulty— from easily attainable to challenging.
5. Goals must be measurable.
6. Goals need to be used to establish the athlete's training and competition plan.
7. Goals need to be flexible
8. Goals need to be written down
9. Goals need to be identified as either performance goals or practice goals
10. Sometimes athletes will need to seek support to accomplish their goals

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Athletes with or without an intellectual disability may be more motivated by accomplishing short-term goals than long-term goals; however, do not be afraid to challenge athletes. Include athletes in setting their personal goals. For example, ask the athlete, "How far do you want to jump today? Let's see how far you jumped at the last practice. What is your personal best? What do YOU think you can do?" Awareness of why the athlete is participating is also important when setting goals. There are participation factors, which may influence motivation and goal setting:

Age appropriateness	Ability level
Readiness level	Athlete performance
Family influence	Peer influence
Athlete preference	

Performance Goals versus Outcome Goals

Effective goals focus on performance, not outcome. Performance is what the athlete controls. Outcomes are frequently controlled by others. An athlete may have an outstanding performance and not win a contest because other athletes have performed even better. Conversely, an athlete may perform poorly and still win if all other athletes perform at a lower level. If an athlete's goal is to run 12.10 seconds in the 100m, the athlete has greater control in achieving this goal than winning. However, the athlete has even greater control of achieving a goal if the goal is to run using the correct form, driving the knees through the entire race. This performance goal ultimately gives the athlete more control over his/her performance.

Performance Goal	Outcome Goal
Athletics	
Run in lane the entire race, completing event	Run race hitting split goals
Basketball	
Make contact with opponent and block out after the shot	Get the rebound
Football	
Sprint after balls coming into play	Get to the ball first and control it

Motivation through Goal Setting

Goal setting has proved to be one of the most simple and effective motivational devices developed for sports. While the concept is not new, today the techniques for effective goal setting have been refined and clarified. Motivation is all about having needs and striving to have those needs met. How can you enhance an athlete's motivation?

1. Provide more time and attention to an athlete when he/she is having difficulty learning a skill.
2. Reward small gains of achievement in skill level
3. Develop other measures of achievement outside of winning
4. Show your athletes that they are important to you
5. Show your athletes that you are proud of them and excited about what they are doing
6. Fill your athletes with self-worth

Goals give direction. They tell us what needs to be accomplished. They increase effort, persistence and the quality of performance. Establishing goals also requires that the athlete and coach determine techniques for how to achieve those goals.

Measurable and Specific

Effective goals are very specific and measurable. Goals stated in the form of "I want to be the best that I can be!" or "I want to improve my performance!" are vague and difficult to measure. It is positive sounding but difficult, if not impossible, to assess whether they have been reached. Measurable goals must establish a baseline of performance recorded during the past one or two weeks for them to be realistic.

Difficult, but Realistic

Effective goals are perceived as challenging, not threatening. A challenging goal is one perceived as difficult but attainable within a reasonable amount of time and with a reasonable amount of effort or ability. A threatening goal is one perceived as being beyond one's current capacity. Realistic implies that judgment is involved. Goals based upon a baseline of performance recorded during the past one or two weeks are likely to be realistic.

Long- versus Short-Term Goals

Both long and short-term goals provide direction, but short-term goals appear to have the greatest motivational effects. Short-term goals are more readily attainable and are stepping stones to more distant long-term goals. Unrealistic short-term goals are easier to recognize than unrealistic long-term goals. Unrealistic goals can then be modified before valuable practice time has been lost.

Positive versus Negative Goal Setting

Positive goals direct what to do rather than what not to do. Negative goals direct our attention to the errors we wish to avoid or eliminate. Positive goals also require coaches and athletes to decide how they will reach those specific goals. Once the goal is decided, the athlete and coach must determine specific strategies and techniques which allow that goal to be successfully attained.

Set Priorities

Effective goals are limited in number and meaningful to the athlete. Setting a limited number of goals requires that athletes and coaches decide what is important and fundamental for continued development. Establishing a few, carefully selected goals also allow athletes and coaches to keep accurate records without becoming overwhelmed with record keeping.

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Mutual Goal Setting

Goal setting becomes an effective motivational device when athletes are committed to achieving those goals. When goals are imposed or established without significant input from the athletes, motivation is unlikely to be enhanced.

Set Specific Time Lines

Target dates provide urgency to an athlete's efforts. Specific target dates tend to eliminate wishful thinking and clarify what goals are realistic and which are not. Timelines are especially valuable in high-risk sports where fear often promotes procrastination in learning new skills.

Formal versus Informal Goal Setting

Some coaches and athletes think that goals must be set in formal meetings outside of practice and require long periods of thoughtful evaluation before they are decided upon. Goals are literally progressions which coaches have been using for years but are now expressed in measurable, performance terms rather than as vague, generalized outcomes.

Team versus Individual Goals

While team goals appear to have great importance for team sports, the reality is that most team goals can be broken down into individual roles or responsibilities. Each player must achieve these individual roles or responsibilities for the team to function effectively.

Goal Setting Domains

When asked to set goals, athletes typically focus on the learning of new skills or performances in competitions. A major role of the coach is to broaden the athlete's perception of those areas, and goal setting can be an effective tool. Goals can be set to enhance fitness, improve attendance, increase intensity, promote sportsmanship, develop team spirit, find more free time, or establish consistency.

Coaching Tips

Ask yourself "What motivates me to be the best coach that I can be."

Winning and Losing

Many coaches face the issue of winning when developing their coaching objectives. Society clearly places great emphasis on winning. However, society also looks to sport as a means to help young and old athletes alike build character and develop leadership skills. The balance is in not evaluating yourself or your athletes on the win-loss record. You, the coach, must resist trying to win and encouraging your athletes to win at all costs. How do you overcome this temptation? Place your athletes first—athletes first at practice; athletes first at competition.

Striving to Win

Placing athletes first does not mean that winning is not important. Striving to win within the rules of sport and the competition is an important objective for both athlete and coach. Striving to win is essential for an enjoyable competition. The emphasis should not be on winning itself but on striving to win. It is the pursuit of victory, the dream of achieving the goal that matters most.

Keeping Winning in Perspective

Striving to win is important in sport. The process of winning can bring out the best in people—performance, attitude and approach to life. As coach, it is imperative that you not lose sight of the long-term objectives: helping athletes to develop and improve sports skills, have fun, and do well in sport competition—to win. Winning or striving to win is never more important than your athletes' well-being. Keep winning in perspective - there is room for fun too.

Coaches and athletes must remind themselves that winning is measured by how well they apply all their effort and maintain self-control in pressure situations. Winning means more than where you place at the finish line. An athlete is never a loser if he/she gives maximum effort.

To that end, the first question a coach needs to ask before a competition is

- ♦ "Are you ready to give it everything you've got?"

The first questions after a competition needs to be

- ♦ "How did that feel?"
- ♦ "Do you feel like you did your best?"

Coaching Tip

❑ Remember, positive thoughts yield positive results.

Well-prepared athletes will handle their performance and the performance of their competitors in a positive and sportsmanlike manner in accordance to the Athlete's Code of Conduct and the Official Sports Rules for your sport. A losing outcome does not negatively impact the athletes' confidence if the coach and athletes have been successful in developing a winning attitude.

The athlete's effort, attitude and personal skills attainment must be rewarded and positively reinforced.

It is also important to remind athletes that the point of competing in Special Olympics is to prove to themselves and the rest of the world what they can do. The award ceremony is a chance for the world to see a group of skilled athletes celebrating their sport skills and enjoyment of competition.

Athletes of all ages, regardless of intellectual ability, enter competitions to do their best and hopefully to win. Is it all right to be disappointed when you do not win? Of course it is. But also, it is a chance to evaluate your performance and make a training commitment that will help you perform better next time.

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Handling Grief

Communication strategies by the coach, fellow athletes, families and friends will help an athlete handle grief or disappointment. Listen to what the athlete says and why he/she may be experiencing the grief. Offer positive switches -positive comment - correction - positive comment to take the athlete's attention away from his/her disappointment. Again, the athlete's effort, attitude and preparation should be emphasized, not the result of the competition.

It is important to not discount feelings of disappointment. It is appropriate to be disappointed when we lose a game or match. The challenge of the coach is to redirect that disappointment into a renewed commitment to training for the next competition or season. Becoming obsessed with losing is not a healthy or natural reaction for anyone.

Anxiety and Stress Management

Anxiety and stress can be controlled through proper preparation. A winning attitude and confidence will equip an athlete with coping skills to handle his/her emotions when confronted with a stressful or anxious moment. Below are a few hints a well-prepared coach might consider to better prepare his athlete for competition.

- ♦ Repetition in a familiar environment can help alleviate a lot of stress when preparing the athlete for competition. Include mini meets in practice that simulate the competition.
- ♦ Provide athletes with additional competition opportunities at as many local-level meets as possible.
- ♦ Have athletes perform in front of spectators and peers.
- ♦ Make sure athletes are in proper events that they like and can display their talents and skills.
- ♦ Also, to reinterpret "arousal" as excitement and not anxiety.
- ♦ Visit the track or stadium prior to competition. When possible, practice on the track or in the stadium before competition.
- ♦ Teach your athletes visual imagery to help them practice the event in their mind before competition.
- ♦ Review the rules of competition and event calls and strategies with your athletes.

Positive self-talk and imagery

Self-talk represents the things you say in your head about yourself and is often negative (e.g., that team is much better than ours). Positive self-talk involves repeating a helpful and positive word or phrase such as "I am fit and ready to play" Imagery or visualization is using the "mind's eye" to recreate a past great performance or to create a future correct play or movement. Imagery is also much more than seeing yourself as it also involves "feeling" a correct movement and incorporating all of the senses (i.e., smell, sound, even taste) to most accurately capture reality in your head.

Positive self-talk and imagery can promote confidence and success. Hence, coaches can help educate their athletes on the value of positive self-talk and imagery. One thing coaches can do is help athletes set up a pre-performance routine. At the start of a competition athletes can very briefly (10-15 seconds) do four helpful behaviors: Close their eyes, take a few deep calming breathes, repeat a positive phrase "I am ready" and picture themselves successfully making a shot, or running strongly, depending on their sport.

Taking Athletes to Competition

It is the coach's responsibility to have the athletes prepared physically and mentally for the competition. This involves ensuring that all uniforms are ready, all athletes have proper footwear, all equipment is present, meals and transportation are available and all entries are correct. Below are a few tips for coaches to follow before, during and after the game/meet/match.

Athlete Flow at Competitions

Coaches do not determine flow of athletes. Coaches have to know the athlete flow of a specific competition to ensure that athletes are where they need to be at the time that they need to be there.

Coaching Tip

- ❑ Athlete flow process is designed to make the athlete experience as smooth as possible from arriving at the competition to receiving awards to leaving the competition.

Before the Game/Meet/Match

- ♦ Make final check of all equipment and athlete needs.
- ♦ Be confident and relaxed.
- ♦ Be sure your athletes are warmed up, stretched and ready to compete.
- ♦ Be sure to have the proper equipment for each event.
- ♦ Be positive and upbeat but do not over excite.
- ♦ Make sure that the athletes have plenty of fluids.

At the Game/Meet/Match

- ♦ Encourage and support your athletes, but do not yell and scream. Keep calm and offer positive reinforcement at the competition.
- ♦ Restrict coaching from the bench to positive comments that athletes can use at the time of competition.
- ♦ Tell parents to be supportive but not to coach athletes.
- ♦ Keep substitutions simple. Have substitutes ready in case of injuries or no-shows.
- ♦ Commit yourself to equal participation throughout the season.
- ♦ Give different athletes the chance to compete in new events for which they have trained. Be a coach who allows the athlete to progress to new levels.
- ♦ Make sure that the athletes have plenty of fluids.

When to Drink Water	How Much Water to Drink
Night before practice or competition	Glass of water (8 oz./250ml)
Four hours before event	Glass of water (8 oz./250ml)
15 minutes before event	One-half glass of water (4 oz./125 ml)
During event of less than one hour	One water break
During event of more than one hour	One-half glass of water (4 oz./125 ml)
After event	Glass of water every three hours until next day

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After the Game/Meet/Match

- ♦ Say “well done” or “good effort” to all your athletes when appropriate. Good effort when you.....
But eliminate “Well done” as not specific enough.
- ♦ Feedback is usually best (not always) done right after the behavior.
- ♦ Be sure to collect all the equipment from each athlete.
- ♦ Cool down after competition to prevent soreness.
- ♦ Spend time reviewing the athletes’ performances and prepare some useful comments for the beginning of the next practice.
- ♦ Somewhere a mention of keeping a training log for a) to build confidence by revisiting good workouts and b) to know what workouts were effective at getting athletes in really good condition.
- ♦ Make sure that the athletes have plenty of fluids.

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