Powerlifting
Training, Health, and Fitness Guide

A quick-start resource for all levels of coaches.

Table of Contents *Note- Page numbers in packet will not line-up with numbers listed below*

- Health and Fitness Talk 2-12
- Warmup and Stretching 13-23
- Sample practice plan 24

Partially sourced from: Special Olympics International Powerlifting Coaching Guide
HEALTH and FITNESS TALK

Suggestions for including a focus on year-round health and wellness in your sports practice.

“To be a great athlete, you need to be a healthy athlete.”

These discussions are laid out in balance, order, and accordance with Special Olympics Montana’s 8 weeks – 10 hours practice requirements. An included practice plan, which shows how these discussions can fit in a practice, is included in this same packet.

The goal of Health and Fitness Talk is to support the health, fitness, growth, and success of Special Olympics Montana competitors. It is designed to be used as a part of your practice season. The following discussions will provide competitors with the introductory knowledge to begin thought processes on:

- Identifying nutritious choices
- Balancing nutrition and portions
- Making healthy and balanced snack and meals choices
- The importance of hydration
- Identifying unhealthy beverage choices
- Understanding endurance and strength
- Understanding flexibility and balance
- Understanding the benefits and fun of exercise

If you are interested in a more in-depth Health and Fitness Program, explanations, examples, and lesson plans/guides, reach out to the Special Olympics Montana Senior Director of Innovation at 406-216-5327.

Practice Week #1 Discussion: NUTRITION: Eating right is important to your health and your sports performance. Eating right can be easy and enjoyable because there are many delicious healthy choices.

Your goal is to eat at least 5 total fruits and vegetables every day!

Tell your teammate the names of some Fruits:

- Fresh: Apples, Bananas, Berries, Grapes, Kiwi, Oranges
- Frozen Fruits
- Canned fruits (pick options with no added sugar)
- Dried fruits: Raisins, Bananas, Apricots

Tell your teammate the names of some Vegetables:

- Fresh: Asparagus, Broccoli, Carrots, Cauliflower, Green Beans, Peppers, Squash
- Lettuces and Dark Leafy Greens
- Frozen Vegetables
- Salads
- Canned Vegetables
What fruits can you have for breakfast? Lunch?
What vegetables can you have for lunch? Dinner?

You know fruits and vegetables are important for your health, but sometimes it can be difficult to know what other foods you should be eating. Here is a list of the other food groups and some great choices in each group that make up a healthy meal or diet.

**Grains:**
- Brown or Wild, or Unpolished Rice
- Oatmeal
- Whole Grain Bread
- Whole Grain Pasta
- Whole Grain Crackers
- Tortilla
- Flatbread

**Diary:**
- Low-fat or Skim Milk
- Low-fat Cheese
- Low-fat, unsweetened yogurt (watch the sugar!)
- Cottage Cheese

**Meats and Beans (Protein):**
- Lean Meats
- Eggs
- Fish (frozen, fresh or canned)
- Nuts
- Beans

-Tell your partner the Grains you ate yesterday. Dairy?
-Share with a teammate what protein (Meats & Beans) you had last night for dinner.

**Practice Week #2 Discussion:** **BUILDING A HEALTHY PLATE:** From last time, you now know what types of foods to eat. Here is how to build a healthy plate for a meal or for a snack.

- Watch the amounts of food you put on your plate (share/discuss the “Perfect Portions” diagram below).
- Save junk food like desserts, chips and sodas for special occasions.
- Make half of your plate fruits or vegetables (see diagram below).
- Fill the other half with foods like whole grains, dairy, and protein.
- Add more fruits and vegetables to your meals.
- Keep snacks healthy and small.

-Tell your teammate how to build a healthy plate.
-Name the 4 food groups that should make up a healthy meal.
Perfect Portions

Here is a fun way to remember how much to eat when you have a serving. The size of sports equipment on the left is about the same size as one serving of the foods on the right.

- A baseball is about the same size as a serving of fruit.
- A small bowl of cereal is about the same size as a serving of pasta.
- A small bowl of pasta is about the same size as a serving of vegetables.
- A small piece of bread is about the same size as a serving of nuts.
- A small piece of nuts is about the same size as a serving of butter.

Make half of your plate fruits or vegetables.

Fill the other half with foods like whole grains, dairy, and protein.
Practice Week #3 Discussion: **HEALTHY SNACK IDEAS:** Snacking is a great way to make sure you are full of energy. It is important to keep your snacks healthy. Here are a few ideas for tasty snacks that are packed with fruits and vegetables.

- Apple slices dipped in peanut butter
- Low-fat unsweetened yogurt with berries
- Low-fat cottage cheese with tomatoes
- Carrots or peppers dipped in hummus
- Celery topped with peanut butter and raisins

*What snacks do you like the most? Are these healthy snacks or junk food snacks?*

*Tell your partner a healthy snack you could make for yourself.*

*Are these healthy snacks (thumbs up) or junk food snacks (thumbs down)?*

- Doritos
- Banana with peanut butter
- Snickers candy bar
- A half cup of nuts
- Carrot sticks
- A cookie

**HEALTHY MEALS:** Add more fruits and vegetables to your meals. You can make any meal more nutritious with these simple suggestions.

**Breakfast**
- Have a piece of fruit with your meal.
- Vegetables like spinach, tomatoes, onions, and peppers make great toppings on omelettes.
- Dried or cut fruit make great toppings on cereal and oatmeal as well.

**Lunch**
- Top sandwiches with plenty of vegetables like lettuce, tomatoes, cucumbers, peppers, and sprouts.
- Try apples, carrots, or celery for a crunchy side.
- Add leftover or canned vegetables like peas and carrots to soups.
- Make a salad with your choice of meat, cheese, lots of vegetables, and an oil-based dressing.

**Dinner**
- Add vegetables like broccoli, squash, or peppers to pastas.
- Make a stir-fry with brown rice, your favorite lean meat or seafood, and vegetables.
- Add a side of steamed vegetables or a salad to any meal.
- Have some fruit as a healthy dessert.
-What healthy items can you add to a salad (carrots, tomatoes, sunflower seeds, etc.)?
-Do you like oatmeal? What can you add to oatmeal (banana, blueberries, etc.)?
-Tell your partner how you are doing with the goal of having half your plate be fruits and vegetables.

**Practice Week #4 Discussion:** *HYDRATION*: Water is another important fuel for sports and for life. Drinking the right amount of water is important for your health and can also help your athletic performance.

Your goal is to drink 5 bottles of water every day! Your water bottle should be 16-20oz or 500-600ml. Drink out of a sports water bottle to track your water intake. Sports bottles are refillable and can hold 16-20oz or 500-600ml of water.

-Do you have a water bottle? Do you take it with you when you go places? Do you bring it with you to practice?
-Are you drinking water with your meals?

**SIGNS OF DEHYDRATION:** Water helps to keep your body working properly. You lose water when you go to the bathroom, sweat, exercise or even breathe. If you lose too much water without drinking more, your body won’t work as well. This is called *dehydration*. 
**Signs of Dehydration:**
- You feel thirsty
- You are tired or sluggish
- You have a headache
- Your mouth is dry
- Your urine is dark yellow or brown

*Tell your teammate two of the signs of dehydration.*

*Have you ever been dehydrated? How did you know? How did you feel?*

**Practice Week #5 Discussion:** **HEALTHY BEVERAGE CHOICES:** There are many beverage options available, but some of them are healthier choices than others. This guide can help you make the best choices to stay hydrated and perform your best.

*What is your favorite thing to drink? How often do you drink it (most days, sometimes, special occasions)?*

*What is the best thing to drink (water)? Why (no sugar)?*

**Sodas, energy drinks, and sports drinks are NOT good beverage choices.**
Sodas, energy drinks, and sports drinks have extra sugar and can make you gain weight. Energy drinks and many sodas also have caffeine. Caffeine does not help you stay hydrated.

**Moderate amounts of low-fat milk and 100% juice are also good choices in small amounts.**
Low-fat milk and 100% fruit juice are good choices with meals. Keep serving sizes small. No more than 3 cups of milk and 1 cup of juice per day.

**Water is the best choice for a beverage!**
Drink water every day! If you like flavored drinks, try sparkling water or add a few pieces of fruit into your water bottle.
You might consider bringing in some beverages and having your athletes look at the number of grams of sugar in each one. The athletes could count out the number of sugar cubes represented in each drink.

4 grams of sugar = 1 sugar cube

- How does it make you feel knowing that there are 10 teaspoons of sugar in a can of Coke?
- Do sports drinks like Gatorade have sugar in them? TV ads don’t tell you that, do they?
Practice Week #6 Discussion: EXERCISE- Endurance & Strength: You can become a better athlete by enjoying physical activity outside of your sports practice. There are many ways to be physically active. Certain exercises can help you improve the skills needed for your sport. Your goal is to do at least 5 days of exercise every week!

Types of Exercise: ENDURANCE STRENGTH FLEXIBILITY BALANCE

Endurance is the ability of your body to keep moving for long periods of time. Endurance can help you run farther distances without stopping and practice longer with fewer breaks.

Try your favorite endurance exercise for 30 minutes, 5 days each week.
**Strength**

**Strength is the ability of your body to do work.** Strength gives you the ability to jump higher, throw farther, and sprint faster.

**Try to complete a workout for the entire body, 2-3 days each week.**

- Is dancing exercise? (Yes, endurance.)
- Running, biking, and swimming are examples of what type of exercise? (Endurance)
- Push-ups and sit-ups are what kind of exercise? (Strength)
- What exercise do you do for endurance? Strength?

**Practice Week #7 Discussion: EXERCISE- Flexibility & Balance:**

**Flexibility** is the ability of your body to move easily in all directions. Being flexible makes it easier to do sports skills and helps prevent injuries to your muscles and joints!

**Balance** is the ability of your body to stay upright or stay in control of your movements. Balance helps you to stay in control when you are playing sports and helps you to avoid falls.
Flexibility is the ability of your body to move easily in all directions. Being flexible makes it easier to do sports skills and helps prevent injuries to your muscles and joints!

Try to complete a stretch for all body parts, 2-3 days each week!

Balance is the ability of your body to stay upright or stay in control of your movements. Balance helps you to stay in control when you are playing sports and helps you to avoid falls.

Try to complete a full body balance workout, 2-3 days each week!
Practice Week #8 Discussion: EXERCISE IS FUN!

It is easy to get in the right amount of exercise if you make it fun. Here are some tips to help you stay motivated to reach your Fit 5 goal.

Exercise with a friend or group!
- Go on a walk, run, or bike ride with a friend or family member.
- Join a group exercise class.
- Do strength training with a teammate.

Take the lead at practice!
- Ask your coach if you can lead some flexibility or strength exercises.
- Teach a friend a new sport.

Try something new!
- Try a new group exercise class.
- Walk or run a different route than you normally do.
- Learn a new strength or flexibility exercise.

Track your improvements!
- Write a goal on a piece of paper. Post the goal on your wall.
- Keep a log of your exercises so you can see your progress.

Doing exercise together is a fun way to socialize with friends and family.
- How many of you could walk with a friend after school or work? Attend an exercise or fitness class? Bike on a trail? Take a walk with your mom or dad?
- What is a new exercise you would like to try?
- Share your exercise goal with a partner.

The diagrams in this document are from the Special Olympics Fit 5 Guide.

Other resources:
- NCHPAD.org  This website has lots of health resources for people with disabilities. They have articles, videos, and even workout plans.
- ChooseMyPlate.org  This website has it all! Learn how many servings of each food group you need, track your eating to see if you are eating healthy, and even find links to healthy recipes
- EatRight.org  This website also has loads of nutrition information, healthy recipes, and even a section to find a dietitian in your area
- Heart.org  (click on the heading, “Getting Healthy”) The American Heart Association has great resources for leading a healthy lifestyle, including a nutrition center with tons of recipes and cooking videos for heart-healthy recipes.
- Diabetes.org  (click on the heading, “Food & Fitness”) The American Diabetes Association has lots of great articles for people who have diabetes. There are also many diabetes friendly recipes!
Teaching Skills

When teaching powerlifting skills to Special Olympics athletes, increased emphasis should be given to the following:

- Teaching for transfer
- Conditions that will produce the most retention
- The type of teaching cues employed
- The nature of the learning environment

It is extremely important for the coach to determine to what extent the athlete is able to transfer from one task to the next. If he or she can only learn specifics, then each new task will require a review of basic information to achieve success. This must be recognized to avoid negative results. With the athlete who can generalize concepts and principles, this review may not prove necessary. The importance of recognizing each athlete’s learning potential cannot be overstressed. Progress and results will vary greatly from one athlete to another.

An emphasis must be placed, particularly during the initial stages of instruction, on the acquisition of effective work methods and habits. These will often determine the ultimate success or failure of the task. Due to some athletes’ lower level of retention; they must be constantly reminded of materials and concepts presented through review. It cannot be taken for granted that all of the instruction will be retained from week to week.

Repetition is essential for the Special Olympics athlete to learn each of the powerlifts. Repeat correct form as often as possible. Break up the lifting into separate movements if necessary. Remember walking is a pretty complex series of movements and much more difficult than squatting, deadlifting, or benchpressing. Your athletes learned to walk with repetition, and they can learn to lift correctly with repetition. Make sure to use no weight or very light weight when teaching correct form.

It may be necessary to develop a base level of muscle tone and strength in athletes who are deficient in these areas. This may require use of machines to develop muscle tone and strength before moving on to the more complex exercises with free weights. Never hurry the athlete toward competition. It may take four to five months of progressive training before the athlete is ready for competition.

- Visual information and physical prompting and assistance are more effective than excessive verbal cues when coaching Special Olympics athletes.
- Too many words may confuse athletes over a short period of time and bore them during longer explanations. However, an athlete who is having difficulty with a specific motor task often can benefit greatly from a well-time, succinct verbal cue.
- When training your athletes, develop very simple verbal and appropriate tactile (touching) cues. Develop a series of tactile and verbal cues that can be used to get the athlete “set” for the lift. Examples include touching the chin in the squat and deadlift to keep the head up along with pulling back gently on the belt to keep the hips back. When instructing an athlete in the deadlift, an effective way to prevent the athlete from rounding the bar is to place one hand on the shoulder and pull back while pushing in with the other hand on the lower back. To get the athlete to put the bar at the correct location on the chest in the bench press, touch the place on the chest where the athlete should place the bar. During training sessions, you may be effective using the verbal cue “stop” when the bar is at chest and again when the athlete’s arms are at full extension so the athlete will learn to wait for the referee’s signals (“press” and “rack” at these two positions).
- Training videos have also proven effective in teaching powerlifting skills. Video offers clear, visual information without an excess of lengthy verbal explanations. If video is used, the coach should align the Special Olympics athlete with the screen so that the athlete can see the image and mimic the powerlifting positions of the model athlete being displayed on the video screen.
• When presenting concepts, it is best to go from simpler tasks to the more complex. It is for this reason that lead-up activities are vital prior to teaching the more difficult exercise movements. More will be achieved when a training session is broken up into a number of partial tasks rather than when the complete task is practiced over and over. An example is teaching each part of the competitive lift with its separate command, one step at a time. The bench press involves the three commands of “start,” “press” and “rack” so each would be covered separately before moving on to working the complete lift with each command.

Warming Up and Stretching
The correct sequence of preparation for exercise is warming up, stretching, exercising, stretching, and cooling down. The importance of warming up prior to exercise cannot be stressed enough.

• From a physiological aspect, warm-up prepares the muscles, nervous system, tendons, ligaments, and cardiovascular system by raising the body temperature.

• From a psychological aspect, warm-up helps prepare the athlete mentally by beginning the concentration necessary to complete the exercise routine or weight training workout.

• Further, warm-up reduces injury, since warm muscles and their connectors are more flexible and easily stretched.

The three types of warm-up are passive, general, and specific.

• Passive warm-up increases the body temperature by external means. For example, a warm shower or heat lamp are passive warm-ups.

• General warm-up occurs when the athlete performs major muscle group movements not associated with the activity about to be done. For example, jogging and rope jumping are two common forms of general warm-up.

• Specific warm-up mimics the specific event to be done and is most important for the actual event: for example, doing squats or bench presses with no weight or a stick or with light resistance.

Flexibility is the ability to move a joint through the full range of movement it is designed to do. Hold stretches from 10 to 20 seconds, repeating as necessary. Do not bounce while stretching. The stretching exercises illustrated here are safe, easy, and increase flexibility.

Partner stretching is a fun way for athletes to work through what is sometimes the most tedious part of the workout. Variations of the stretches can be done with other athletes or a coach with excellent results. As with the individual stretching, it is important that the athlete (or coach) does not bounce when stretching. Caution should be used, and the athletes should not stretch beyond their limits.

Training for Muscle Balance
For every push exercise, a pull exercise should be performed. Balance of opposite muscle groups will help prevent injuries in short-term as well as long-term training. Training for balance will also prevent the over work of one group of muscles or the wear on joints that occurs from the lack of balanced muscle training.

• For balanced shoulders (one of the areas of the body most vulnerable to injury), make sure bent rows or low pulls are done regularly to balance the push exercises such as the bench press and incline bench press.

• Leg curls and stiff-legged deadlifts should be done to balance the work done with the front of the thighs from squatting.

• Crunches and bent leg sit-ups should be performed to balance the work done with the lower back from squats and deadlifts.
High Risk Exercises

Some weight training exercises may have a relatively high degree of risk or hazard and should only be done with extreme care or not at all.

- Dips or behind-the-neck presses place a high degree of stress on the shoulder joint and should be avoided.
- Behind-the-neck press places the neck and shoulders in a vulnerable positions.
- Bench squats place a high amount of stress on the spine and should also be avoided.
- Negatives and overloads place a lot of stress on the athlete's joints, ligaments, and muscles and should not be done. These exercises are generally overrated when considering the risks and long-term problems they can create.
Stretching

Flexibility is critical to an athlete’s optimal performance in both training and competition. Flexibility is achieved through stretching. Stretching follows an easy aerobic jog at the start of a training session or competition.

Begin with an easy stretch to the point of tension, and hold this position for 15-30 seconds until the pull lessens. When the tension eases, slowly move further into the stretch until tension is again felt. Hold this new position for an additional 15 seconds. Each stretch should be repeated 4-5 times on each side of the body.

It is also important to continue to breathe while stretching. As you lean into the stretch, exhale. Once the stretching point is reached, keep inhaling and exhaling while holding the stretch. Stretching should be a part of everyone’s daily life. Regular, daily stretching has been demonstrated to have the following effects:

- Increase the length of the muscle-tendon unit
- Increase joint range of motion
- Reduce muscle tension
- Develop body awareness
- Promote increased circulation
- Make you feel good

Some athletes, like those with Down Syndrome, may have low muscle tone that makes them appear more flexible. Be careful not to allow these athletes to stretch beyond a normal, safe range. Several stretches are dangerous to perform for all athletes, and should never be part of a safe stretching program. These unsafe stretches include the following:

- Neck Backward Bending
- Trunk Backward Bending
- Spinal Roll

Stretching is effective only if the stretch is performed accurately. Athletes need to focus on correct body positioning and alignment. Take the calf stretch, for example. Many athletes do not keep the feet forward, in the direction that they are running.

This Coaching Guide will focus on some basic stretches for major muscle groups and will start at the top of the body and work our way to the legs and feet.
Upper Body

Chest Stretch

- Raise arms at sides of body
- Pull hands back as far as possible for 20 seconds
- Feel the stretch in the chest
- Repeat

Side Stretch

- Keep knees slightly flexed
- Stand or sit with arms overhead
- Hold elbow with hand of opposite arm
- Pull elbow behind head gently as you slowly lean to side until mild stretch is felt
- Hold 10 to 15 seconds
- Repeat on other side
Arm Circles

- Swing arms forward in large circles
- Repeat going forward and backward

Neck Stretch

- Roll the neck from shoulder to shoulder with chin touching body at all times
- Do not perform full circles as they may hyperextend the neck
- Tell athlete to roll neck to right, center and left; never have the athlete roll neck backward

Shoulder Stretch

- Sit on floor with left leg straight out in front
- Bend right leg, cross right foot over, place outside left knee
- Bend left elbow and rest it outside right knee
- Place right hand behind hips on floor
- Turn head over right shoulder; rotate upper body right
- Hold 10 to 15 seconds
- Repeat on other side
- Breathe slowly
Lower Body

**Standing Quad Stretch**
- Stand with foot flat on ground
- Bend knee toward buttock while grasping ankle with hand
- Pull foot directly toward buttock
- Do not twist knee
- Stretch can be done standing alone or balancing with partner, fence and/or wall
- If pain is felt in knees during stretch and foot is pointing out to the side, point foot back to relieve stress

**Forward Bend**
- Stand, arms outstretched overhead
- Slowly bend at waist
- Bring hands to ankle or level without strain
Calf Stretch

- Bend forward leg slightly
- Bend ankle of back leg
- Athlete may also stand facing a wall/fence
- Bend both knees to ease strain
Low Back & Glutes

**Side Straddle Stretch**
- Stand with feet flat on the ground
- Lean body to one side, bending knee slightly
- Keep opposite leg straight
- Repeat with other leg

**Hurdle Stretch**
- Sit on floor, legs straight out at sides
- Bend left leg in at knee
- Slowly bend forward from hips toward foot of straight leg until you feel slight stretch
- Do not dip head forward at start of stretch
- Hold this developmental stretch 10 to 20 seconds
- Repeat on other side
- Position foot of straight leg upright, ankles and toes relaxed
- Use a towel if you cannot easily reach your feet

**Hip Stretch**
- Lie on floor, legs straight
- Bend left knee, extend left arm straight out from side
- Use right hand to pull knee across body
- Turn head toward left arm
- Keep shoulders flat on floor, feet and ankles relaxed
- Hold for 10 to 20 seconds
- Stretch both sides
Stretching - Quick Reference Guidelines

Start Relaxed
Do not begin until athletes are relaxed and muscles are warm

Be Systematic
Start at the top of body and work your way down

Progress from General to Specific
Start general, then move into event-specific exercises

Easy Stretching before Developmental
Make slow, progressive stretches
Do not bounce or jerk to stretch farther

Use Variety
Make it fun
Use different exercises to work the same muscles

Breathe Naturally
Do not hold your breath
Stay calm and relaxed

Allow for Individual Differences
Athletes start and progress at different levels

Stretch Regularly
Always include time for warm-up and cool-down
Stretch at home
Cool-Down

The cool-down is as important as the warm-up; however, it is often ignored. Stopping an activity abruptly may cause pooling of the blood and slow the removal of waste products in the athlete's body. It may also cause cramps, soreness and other problems for Special Olympics athletes. The cool-down gradually reduces the body temperature and heart rate and speeds the recovery process before the next training session or competitive experience. The cool-down is also a good time for the coach and athlete to talk about the session or competition. Note that cool-down is also a good time to do stretching. Muscles are warm and receptive to stretching movements.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Purpose</th>
<th>Time (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow aerobic jog</td>
<td>Lowers body temperature</td>
<td>5 minutes</td>
</tr>
<tr>
<td></td>
<td>Gradually lowers heart rate</td>
<td></td>
</tr>
<tr>
<td>Light stretching</td>
<td>Removes waste from muscles</td>
<td>5 minutes</td>
</tr>
</tbody>
</table>
Training Plan with Health and Fitness Elements

Elements of a safe and successful practice

- Check area for safety hazards
- Warmup
- Stretching
- Skills practice
- HYDRATE!!!
- Competitive/fun session
- Cool down
- Health and fitness discussion
- Wrap-up and conclusion
- *Elements can be added and subtracted, as desired*

1.25 hour practice plan example

- 8:30-8:40 – Coach arrives and checks area for safety hazards.
- 8:45-8:50 – Walking or jogging to warm-up muscles.
- 8:50-9:00 – Stretching
- 9:00-9:15 – Skills practice
- 9:15-9:20 – Water break
- 9:20-9:30 – Skill practice
- 9:30-9:40 – Competitive/fun session
- 9:40-9:45 – Cool down
- 9:45-10:00 – Health and Fitness Discussion, Wrap-up, and conclusion