FLEXIBILITY ROUTINE

The following routine should only be performed once the muscles are warmed up. The best time to perform the Flexibility Routine is following Strength Training, Speed and Agility or Conditioning workouts. Increased range of motion will be beneficial to athletic movement. The lack of flexibility will negatively affect performance.

Exercise	Purpose	Procedure	Volume	Key Points
Partner Assisted Lying Hamstring	To increase the flexibility in the hamstrings	Lie on your back with the legs straight and toes flexed. Allow your partner to lift your leg and apply pressure with his hand while holding the other leg down.	2x10 each leg	Never stretch to the point of pain.
Partner Assisted Knee to Chest	To develop flexibility in the hamstrings, groin & glutes.	While lying on your back your partner will bend your leg at the knee and push it toward your chest while keeping your opposite leg straight. Partner will apply pressure by leaning forward and guiding the knee to your chest.	2x10 each leg	Never stretch to the point of pain.
Partner Assisted Spinal Twist	To develop flexibility in the lower back & glutes	While lying on your back your partner will bend your leg at the knee and pull your bent leg over your straight leg while applying pressure to your bent knee and opposite shoulder. Your partner should ensure your shoulders are kept flat against the floor.	2x10 each leg	Never stretch to the point of pain.
Partner Assisted Quad Stretch	To develop flexibility in the quadriceps	Lie on your stomach with both legs extended. Your partner will bend one of your legs at the knee and guides your heel to your butt while applying pressure to your lower back.	2x10 each leg	Never stretch to the point of pain.
Rhomboid Foam Roll	Improve the mobility and flexibility in the rhomboids which are usually overactive and tight.	Lie down with the foam roller placed lengthwise along your spine. Cross your arms in front of you, resting each hand on opposite shoulder. Roll from the inside border of your scapula/shoulder blade to just outside your spine, working on the rhomboids.	Roll 30-60 seconds each side.	You may use a medicine ball or a harder roller to increase the tension.
Illotibial Band Foam Roll	To improve flexibility and range of motion in the IT Band.	Lie on your side on the ground with the roller underneath the outside portion of your thigh. Place the same side elbow (or hand) and the opposite hand/foot on the ground. From the starting position, press up and roll back and forth over the outside portion of your thigh. To increase the pressure, take your opposite leg off the floor or stack it on top of the opposite thigh.	Roll 30-60 seconds each side.	Use long, broad strokes to hit the entire IT Band area.
Thoracic Spine Foam Roll	To increase the mobility in the thoracic spine which will positively impact the neck and lumbar spine.	Lie on your back with a foam roller placed in the middle of your back. Your feet should be on ground with hands placed behind your head. From the starting position, slowly extend the upper back. Slowly work the roller up and down the back, repeating the extension at the various spinal levels.	Roll 30-60 seconds	Do not extend the low back. "Brace" the stomach to ensure that the movement comes from the upper back.

TESTING AND EVALUATING

Through periodic testing and evaluating the Beaumont Cougars coaching staff will be able to determine the progress and ability of student-athletes taking part in the Strength and Conditioning Program. Testing will be conducted at several points during the Yearly Plan to provide feedback to both the coach and athlete. The 1st test will be conducted following the season in December and will serve as a baseline going into the Off-Season period. The 2nd official testing period will be conducted at the end of the Off-Season period at the end of May and the 3rd official testing period will be conducted at the end of the Pre-Season period at the end of July prior to the start of official fall practices. The strength training program allows for maxes to be adjusted as athletes perform their workout. When athletes are able to perform all the prescribed sets and reps for a particular exercise the weight will be able to be adjusted. Similarly, athletes that appear to be having difficulty will be able to have their weights decreased.

Athlete Test Card

BEAUMONT COUGARS FOOTBALL STRENGTH TESTING CARD

Name: _____

TESTS	FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
	1	2	3	1	2	3	1	2	3	1	2	3
Height												
Weight												
Body Fat												
Vertical Jump												
Pro Agility												
300 Yard Shuttle												
40 Yard Sprint												
Bench Press												
Squat												
Power Clean												

Testing Protocol

To ensure accuracy and objectivity the following protocol will be followed for all tests.

Height Test

Equipment Needed:

1. Flat surface wall, flat ground.
2. Wall marked every ¼ inch from 4'6" to 7'0".
3. Straight edge device to place at top of athlete's head to record height.

Procedure:

1. Have athlete remove shoes.
2. Have athlete standing with back against wall & feet flat against ground.
3. Place straight edge device at top of athlete's head at 90 degree angle to wall.
4. Measure athlete's height to the nearest ¼ inch.
5. Record on testing card.

Body Weight Test

Equipment Needed:

1. Flat ground.
2. Digital scale

Procedure:

1. Have athlete remove shoes.
2. Weigh in should be conducted wearing t-shirt, shorts and socks.
3. Weigh in should be conducted prior to any activity.
4. Measure to the nearest ½ pound.
5. Record on testing card.

Body Fat Test

Equipment Needed:

1. Flat ground.
2. Digital body fat measuring device

Procedure:

1. Have athlete remove shoes.
2. Athlete will hold on to both handles until body fat percentage is displayed..
3. Record on testing card.

Vertical Jump Test

Equipment Needed:

1. Flat ground.
2. BFS Just Jump Pad.

Procedure:

1. Test should be conducted wearing t-shirt, shorts & athletic shoes.
2. Athlete will jump as high as possible.
3. No steps are allowed. Athlete is not allowed to kick legs out or tuck knees in when jumping or landing.
4. Athlete will be allowed 3 attempts.
5. Measure to the nearest ¼ inch.
6. Record the best jump on testing card.

Pro Agility Test

Equipment Needed:

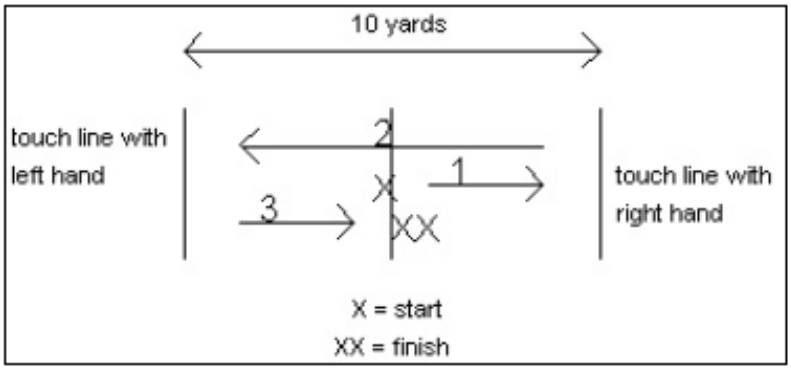
1. Digital Stop Watch.
2. Football field with lines 5 yards apart.
3. 2 cones.

Procedure:

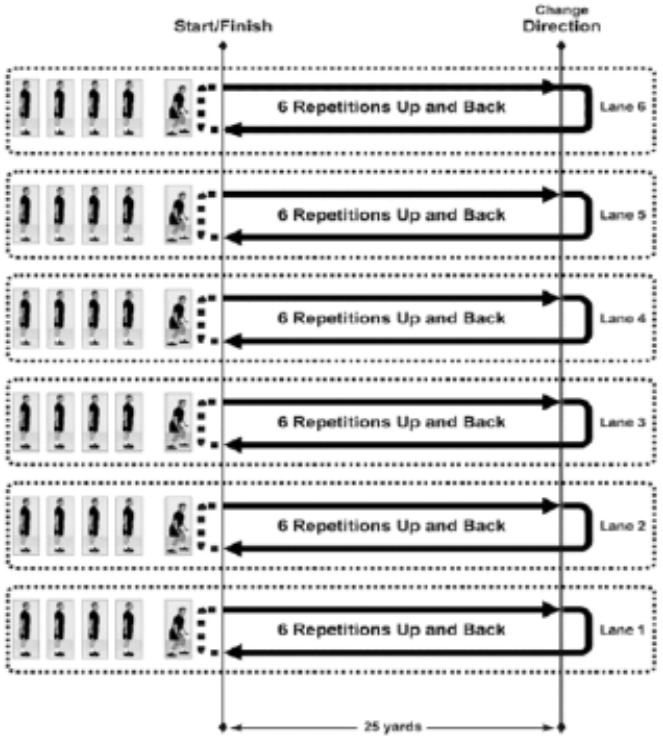
1. Begin from a two-point stance straddle line 1 facing the timer.
2. Start by running to the right to line 2 & touching the cone with your right hand.
3. Sprint back across line 1 to line 3 and touch the cone with your left hand.
4. Stop when you cross line 1.
5. Player will have 2 attempts with best time recorded.

Cause for Disqualification:

1. Athlete will be disqualified and must start again on failure to touch cone on line 2 or line 3 with hand.



300 Yard Shuttle Test



Equipment Needed:

1. 3 Stopwatches with split timers.
2. Measured course of 25 yards.
3. Recording charts for rest periods

Procedure:

1. Two athletes line up for the first shuttle run in lane 1 and begin on command.
2. The athletes sprint to the 25 yard line, turn and come back to the starting line for 6 round trips. The athlete must make foot contact with the 25 yard line and the start line each time they change directions.
3. Timer will call out the time and the laps that have been completed each time the athlete comes back to the starting line.
4. Upon completion both runners times will be recorded.
5. Runners will be given a 5 minute rest period. They must be ready to run at the end of 5 minutes.
6. While they are resting another group can start their 300 Yard Shuttle Run.
7. When a runner has completed both runs 2 times will be recorded to the nearest 1/10 second.

Cause for Disqualification:

Failure to touch the 25 yard line or the start line with foot will result in test being stopped and athlete will have to begin again.

40 Yard Sprint Test

Equipment Needed:

1. Electronic Timing System.
2. Lined football field.
3. Two coaches, one to time and one to watch for incorrect starts.

Procedure:

1. Allow athlete sufficient time to warm up and stretch.
2. Athlete will place one hand behind the line. The timer will start the watch when the hand on the ground moves.
3. Record 2 trials and circle the best time.

Cause for Disqualification:

1. Not having opposite hand and foot on starting line.
2. Rocking or swaying.
3. Stepping with back foot before moving hand on ground.
4. Placing hand or foot in front of start line.

Squat Max Test

Equipment Needed:

1. Olympic Bar & Olympic Weights
2. Squat Rack
3. Spotter
4. Collars

Procedure:

1. Allow athletes time to perform warm up sets.
2. Athletes will be given 3 max attempts with the best recorded.
3. The athlete must have a spotter and a coach to record present.
4. Athletes hip must come even or below the knee joint in order to have lift counted successfully.

Cause for Disqualification:

1. Not going to proper depth.
2. Poor technique on lift.
3. Inability to rack weight at end of lift.

Bench Press Max Test

Equipment Needed:

1. Olympic Bar and Olympic Weights
2. Olympic Bench
3. Spotter
4. Collars

Procedure:

1. Allow athletes time to perform warm up sets.
2. Athletes will be given 3 max attempts with the best recorded.
3. The athlete must have a spotter and a coach to record present.

4. Bar must come in contact with the chest and then be locked out at the top of the lift.
5. Spotter may assist with a lift off at the beginning of lift. The spotter may not touch the bar or give assistance during the lift.

Cause for Disqualification:

1. Feet coming off ground or hips coming off bench.
2. Poor technique on lift.
3. Bouncing weight off chest.

Power Clean Max Test

Equipment Needed:

1. Olympic Bar and Olympic Bumper Weights
2. Spotter
3. Collars

Procedure:

1. Allow athletes time to perform warm up sets.
2. Athletes will be given 3 max attempts with the best recorded.
3. The athlete must have a spotter and a coach to record present.
4. Bar must start on the floor and finish with it being "racked" on the shoulders at the top of the lift. Athlete must demonstrate good control of the weight.
5. No assistance may be given on the lift.

Cause for Disqualification:

1. Poor or dangerous technique on lift.
2. Failure to "rack" weight on shoulders at the top of the lift.
3. Athlete starting with weight off the floor.

NUTRITION/HYDRATION PLAN

Nutrition is the science of foods and nutrients and their actions within the body (including ingestions, digestion, absorption, transport, utilization and excretion). Nutrition has played a significant role in your life, even before birth, and will continue to affect your life in major ways depending on the foods you select. Due to the high demands placed on athlete's bodies nutrition is essential. Many times athletes may be eating the required calories however the body breaks down because the athlete did not take in the proper combination of proteins, carbohydrates and fats. Great nutrition and high intensity workouts go hand in hand. Without proper nutrition there will be a catabolic (breaking down) effect on the athlete's body.

- ***Foods*** are products derived from plants and animals that can be consumed by the body to produce energy and nutrients for maintenance of life and the growth and repair of tissues.
- ***Nutrients*** are the chemical compounds obtained from food and used by the body to provide energy, structural materials and regulating agents to support growth, maintenance and repair of the body's tissues and organs.
- ***Energy*** is the capacity to do work. The energy from food is chemical energy. The body can convert this chemical energy into mechanical, electrical and heat energy.
- ***Proteins, Carbohydrates and Fats*** are 3 essential macro-nutrients needed by the body for exercise performance.

Protein

Proteins are referred to as the "building blocks" of Muscle. They are essential for muscle growth and repair. Good sources include Lean Beef, Skinless Chicken and Turkey, Fish, Egg whites, Non Fat cottage cheese and Protein Supplements (Whey & Egg).

Proteins are precursors to neurotransmitters, energy production, urea production and hormone function. It is proven that athletes need more protein than inactive people. The actual needs are based on activity levels.

– 0.8g/kg – Recommended Daily Allowance

– 1.2-1.4g/kg - regular endurance exercise

– 1.8-3.0g/kg - regular heavy resistance, strength exercise

Carbohydrates

The main function of carbohydrates in human nutrition is to provide energy. Carbohydrates are needed prior to and immediately following strenuous exercise to ensure proper glucose utilization and glycogen replacement. Consuming carbohydrates before and after exercise can ALSO help restore some of your body water reserves.

There are 2 categories of carbohydrates that are used for energy which include simple carbohydrates and complex carbohydrates.

- **Simple carbohydrates:** Examples: Sugar, honey, fructose, dextrose, glucose and high fructose corn syrup.
  - – Recommend in small amounts during and after exercise/game to help maintain blood glucose levels.
  - – Not a desirable source of energy (burns fast, not longlasting).
- **Complex carbohydrates:** Examples: Oatmeal, beans, corn, whole grains, potatoes, yams and brown rice.
  - – Good energy source for athletes = Slow Burn
  - – They are recommended 1-2 hrs prior to exercise.
  - – Does not promote fat storage near as much as sugar

Another type of carbohydrate are referred to as fibrous carbohydrates, which include spinach, asparagus, broccoli, cauliflower, zucchini, green beans. Although low in calories, these are plant carbohydrates and are not digested well by humans. A benefit is that they slow down the release of insulin, limiting the storage of fat.

Fats

Fats are essential in endurance exercise as a source of energy; they have not been shown to enhance recovery after exercise. The best sources of fat include poly and mono-unsaturated such as nuts, olive/canola oil, avocado & peanut butter. It is best to avoid foods high in saturated fat such as mayonnaise, egg yolks, salad dressing and anything fried.

Healthy Eating Guidelines

- Design a meal pattern that fits your daily cycle. Plan to eat several times a day using regularly spaced meals with balanced calories to help meet caloric and nutrient needs.
- Eat a diet rich in complex carbohydrates (starches).
- Starchy foods such as oatmeal, whole grain breads, pastas and cereals, sweet/reg potatoes, gluten free millet and quinoa, that provide a major energy source to fuel your activities. These foods are also a source of fiber, vitamins and minerals.
- Drink sufficient fluids to stay hydrated during training and competition periods - don't wait until you are thirsty to drink.
- Eat a diet that contains a variety of foods from breads and cereals; fruits; vegetables; meat and meat substitutes; and dairy foods. It is your best insurance for getting needed nutrients. Eating a variety of nutrients is the key to sticking with the program.
- Be disciplined. Treat your body like an engine – It needs FUEL

Gaining or Losing Weight

To gain 1 LB per week add 500 calories to your total Daily Calories spread over your meals. To gain 2 LBs per week add 1000 calories to your Daily Calories spread over your meals.

To Lose 1 LB per week subtract 500 calories from your total Daily Calories spread over your meals. To Lose 2 LBs per week subtract 1000 calories from your total Daily Calories spread over your meals.

Sample Meals to Maintain, Gain and Reduce

Proper nutrition is essential for the athlete who seeks to attain success. Athletes need to realize the direct relationship between proper sports nutrition and SIZE, STRENGTH, ENDURANCE AND CONDITIONING.

Listed below are sample meals that you can use as a guide to help you reach your specific caloric level. Meals are divided into WEIGHT MAINTENANCE, WEIGHT GAIN, and WEIGHT REDUCTION categories.

Breakfast	**Breakfast**	**Breakfast**
TO MAINTAIN	**TO GAIN**	**TO REDUCE**
Apple, 1	Orange juice, 1 cup	Apple, 1
Cereal, 2 cups	Pancakes, 6	Toast with jam, 1
Toast with margarine and jelly	Syrup,¼cup	Cereal, 1 cup
2% milk, 1 cup	Margarine, 2 pats	Skim Milk, 1 cup
	Low Fat Milk, 2 cups	
Breakfast Items:	**Breakfast Items:**	**Breakfast items:**
Fresh Fruit	Cinnamon Toast	Skim Milk
Canned Fruit	Pancakes	Water
Cold Cereal	2% Milk	
Hot Cereal	Toast with margarine and jelly	

Lunch	**Lunch**	**Lunch**
TO MAINTAIN	**TO GAIN**	**TO REDUCE**
Baked Chicken, 1 piece	Turkey Breast, 6 oz	Chicken Breast, 1 piece
Noodles/Pasta, 1 cup	Whole Wheat Bread, 4 slices	Baked Potato, 1 med
Peas/Green Beans, 1 cup	Light Mayo, 2 Tbl	Margarine, 1 pat
Oatmeal cookie, 1	Grape juice, 2 cups	Apple, 1
Skim Milk, 1 cup	Fruit Yogurt, 1 cup	Iced Tea
Water		
Lunch Items:	**Lunch Items:**	**Lunch Items:**
Baked Chicken	Whole Wheat Bread	Fruit juice
Turkey Breast	Baked potato	Iced tea
Tuna (Water packed)	Fresh fruit	Light Mayo
Spaghetti	Fruit yogurt	Margarine

Dinner	**Dinner**	**Dinner**
TO MAINTAIN	**TO GAIN**	**TO REDUCE**
Chicken Breast, 1	Cheese/Veggie Pizza, 1 med	Spaghetti with tomato sauce 2 cups
Baked potato, 1 med	Low fat milk, 2 cups	Italian Bread, 2 pieces
Mixed vegetables	Grape fruit juice, 2 cups	Skim Milk, 2 cups
Margarine, 1 pat		Water
Tossed salad, 2 cups		
Iced tea		

Pre-Game and Workout Guidelines

- Eat a well-balanced meal that you KNOW your body digests well.
- Avoid bulky foods. They may stimulate bowel movements.
- Bulky foods include raw fruits and vegetables, dry beans and peas and popcorn.
- Avoid gas-forming foods such as vegetables from the cabbage family and cooked dry beans.

- Eat slowly and chew well. Stay hydrated!
- Avoid drastic changes in your normal diet routine immediately
- Pre-Game Meal should be about 4 hours prior to competition then that same meal 1.5 hrs prior to competition just ½ the portion.

During Games/Workouts

- The key is electrolytes (mainly sodium), glucose and hydration – WATER is a must pre, during and post event.
- Gatorade or Powerade – High carbs to sustain blood sugar during EVENT.
  - 0.5 – 1.0grams simple carb/minute
- PowerBar – Can be eaten during event (NIBBLED ON) – do not eat all at once
- WATER! WATER! WATER!
- Avoid Caffeine – Diuretic

Supplements

The position of the Beaumont Cougars Football Coaching Staff is that athletes should attempt to avoid using supplements while the body is still developing during the teens. Most of what is found in supplements can be found in foods when you are eating properly. A quality multi-vitamin could be incorporated into an athlete's daily routine. Prior to deciding to take supplements athletes should ask themselves if they are doing the following:

- Am I eating properly
- Am I getting 8-10 hours of quality sleep per night.
- Am I taking part in quality workouts.

If the athlete could answer yes to all 3 they may be a candidate for supplements such as whey protein, etc. Anabolic Steroids, steroid pre-cursors and growth hormone should never be considered. Not only are these illegal but they pose serious side effects in the form of physical health risks.

Water

The body is predominantly composed of water. All systems in the body are dependent upon water. Premature fatigue during a game and poor recovery can be the result of not drinking enough water each day. Most athletes live in an under-hydrated state, which significantly decreases the efficiency of all systems in the body. There is currently no fountain of youth, no magic pill or potion that will enhance performance. However, there is water. There are few things that will cripple an athlete faster than dehydration. as little as 1-2% drop in body weight due to water during activity can cause a 15% decrease in performance. Normally we will lose 2 to 3 liters of water a day this water must be replaced. Athletes should consume at least 2 extra quarts (eight 8 ounces glasses) of water every day above and beyond what you sweat to remain properly hydrated.

Water Tips for Beaumont Cougars Football

How do you know if your water intake is at adequate? A rule of thumb you can use is the color of your urine. You're urine should be almost clear in color. Bright yellow urine indicates that you are not drink enough water. Another rule of thumb is replacing each pound of weight lost with a pint of water. A pint of water weighs approximately 1 pound. When the body gets hot it perspires in an attempt to cool the blood down. About 50% of your body heat is lost through your head. During hot weather you should remove your helmet whenever possible. Expose your skin as much as possible (pull your socks down when you're off the field, remove your pads at halftime, replace sweat drenched clothing, don't wear a bandana). Thursday is not a reliable indicator of proper hydration; those who work out tend to replace only about 2/3 of the water they've lost during exercise.

Players prone to cramping should use extra salt during periods of abnormal sweating. After testing laboratory in Chicago, Gatorade researchers have discovered that we lose sodium in significantly greater amounts than other minerals. Salty snacks (pretzels) and additional table salt are recommended during periods of high heat and humidity. you also need to drink during cold weather. Often the urge to drink when your cold is suppressed but proper hydration is still critical.

A football player should drink 20 ounces of water 2 hours prior to kickoff, and about 8 ounces every 15 minutes to the game.

The next time your friends start discussing fitness and supplements you can join in and tell your friends that the best supplement you take is water.