



HARVARD WOMEN BASKETBALL SUMMER MANUAL 2008 INTRO

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Dear 2008 Harvard Women Basketball:

Fully dedicate yourself, toughen up, be accountable and prove that 2008-2009 team is worthy of winning the Ivy championship! That's the goal. We need to have the necessary tools; work ethic, toughness and attitude. Since everyone in America is training this summer, **WE NEED TO TRAIN HARDER!** Day by day we must control what we can control. At this point in our pre-season, that means commitment and sacrifice. Each of you has to be committed to lifting and running. Each of you must sacrifice either some amount of leisure, activity, or particular occupation to get this done. Complete every workout because you do have time. Once a puppy turns a year, it isn't a puppy so grow up. It is time to rise to the challenge and opportunity of our summer program. After reading the rest of this letter, go over the entire manual to get a clear understanding of what you need to do to contribute to our team goal.

As you can see by the enclosed calendar, the summer training manual begins on Monday June 2 and ends on Friday September 19. The 16 week manual is divided into 4 week phases. Week 16 is a light week which will allow for recovery before we do our official strength and conditioning testing when you come back to campus in September. S&C training will be 5 days per week. M, W, F are dedicated strength training while T and Th are dedicated athletic movement and conditioning. All training sessions, whether local or in your home town, should take no longer than 60 min to complete; which allows plenty of time for basketball drills and pick up. The S&C program you completed this spring was designed to provide you with a strength and power foundation. In the summer program, the conditioning, agility and speed improvement areas are emphasized even more than during the academic year, even though the weight training portion continues to be a top priority.

All segments of the summer program are important parts of your total development as an athlete, and must be done with consistency and intensity, in order to prepare you for the aggressive fall S&C program at Harvard. Along with our strength and conditioning program, you need to practice and play your sport daily. Do the basketball coaches drills and play pickup on a daily basis. You want to be a better basketball player that play more basketball. Also, extra activities such as martial arts, yoga, pilates etc. are fine but they are just that – extra, and should never take the place of any of the components included in this program or the recovery from a previous S&C session or the regeneration and required rest to be at your best for the next one.

For those of you staying local, the Palmer Dixon Strength and Conditioning Center will have open hours Monday through Thursday from 5am to 1pm and Friday from 5am to 8am. Staying local is a huge advantage as we have our full strength and conditioning staff working along with our athletic trainers and the best facility in the country Palmer Dixon so we really can and will enhance the on site S&C summer manual. Local Crimson please note for training week 5 June 30 – July 4 PD will be closed Wed June 2 and reopening Mon July 7.

As mentioned previously in this letter; we will be have official S&C testing when you come back to Harvard in September. Strength testing will consists of power clean from the floor, back squat and bench press. For the power clean from the floor we will do a 1 rep max. You add weight after each successful max attempt on the power clean. As in the spring, the power clean test concludes when you miss an attempt or a coach cuts you off for safety reasons. For the squat and bench press we will do a 3 to 8 rep max at a high % of your spring max. Need to get at least 3 reps or you will have to test again. As in the spring the squat and bench test will conclude if 8 reps are achieved or the bar is stuck on the safety pins in the squat or on your chest in the bench or the set becomes unsafe and the coach cuts it off. Every returning team member will test together on that day so the environment should be intense. The athletic testing will consist of the 20YD dash, 5/10/5, vertical jump and broad jump. The condition test will occur the same week as the strength and athletic tests so you better come back in excellent shape. See the condition section in the athletic section of this manual for a detailed description of the actual test. The best and only way to pass this conditioning test is to chip away at every scheduled training session in this manual. S&C testing is a great time to show how consistent you were this summer and the level of intensity of this Harvard Team.

Remember why you are training this summer. You must be able to take the physical improvements you make this summer and be able to apply them to your game. This is where speed development, agility, plyometrics and conditioning come into play. The most important aspect of the program remains your dedication to consistently performing each area of training everyday to the best of your ability.

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LINEAR AND LATERAL SPEED

An integral part of this training program is the development of increased speed capacity. Over the past several years, athletics has developed to the point where speed or the lack of it can be a key determinant to success or failure in many competitive situations. While proper weight training, in conjunction with plyometric drills, is extremely important in speed development, a well organized, complete speed improvement program is critical if an athlete is to maximize his speed potential.

Most athletes, with the possible exception of those with extensive track backgrounds, have developed habits over the years which negatively affect speed. One of the goals of the Crimson speed development program is to identify and correct technique problems in movement form and educate the athlete as to the proper mechanics involved in stance and start and acceleration. A second goal of this speed program is to improve the muscular and neural factors which contribute to speed development.

Throughout this program, specific speed improvement drills will be prescribed. The program will always begin with a warm up progression which includes footwork ladder, form run and dynamic flex drills. After the warm up drills are completed, the next area of concentration will be stance, start, and acceleration. This is the area of speed improvement which is most specific to most sports as many athletes seldom run more than 20 yards in any given situation. Thus, all areas of the different facets of speed development will be addressed in an organized, cycled program which will potentially make you faster than you've ever been before!

PLYOMETRICS

To be successful in the world of sports, it is simply not enough just to be strong. Optimal athletic performance requires two critical abilities: **SKILL** and **POWER**. To compete at a high level, an athlete must not only be strong, but must have the ability to move quickly, change direction, and have coordination. A successful athlete must be **EXPLOSIVE!** This is the basis of the Crimson plyometric program.

The goal of plyometrics is to train the nervous system to react quickly to a lengthening of the muscle. Muscle lengthening occurs when an athlete lands on the ground following a movement. This reaction to landing on the ground must be met with maximal force. The body's absorption into the ground has to be resisted and a powerful counter-movement must occur as rapidly as possible.

The Crimson plyometric program consists of exercises designed to enhance athletic ability and increase explosiveness. In order to become better, you must perform all drills with 100% effort. If you give anything less, any explosive adaptations will be severely diminished. You must jump higher, cover more ground, and rebound faster with every jump.

CONDITIONING

One of the principal goals of the Harvard athletics is to out-work and out-condition our opponents. As everyone involved with the program knows, the final moments are that time of the competition where we want to rise to the occasion through great stamina and determination. To be the last one standing requires hard work and dedication to the summer's aggressive running program. This conditioning program is very demanding and will require great effort to successfully complete, but the rewards are obvious and you have the weight of tradition upon your shoulders.

The primary purpose of this summer's conditioning program is obviously to get you into optimal shape to be able to perform your best. But another very important aspect of the conditioning program is to get you into great shape so that you can better withstand the rigors of practice. Practice is a critical part of preparation and having all team members in great shape during this period, so that maximal effort can be expended during practice, can be a very valuable ingredient in the upcoming season. In years past, many collegiate and professional athletic programs looked at pre-season as a time to get into proper condition to play throughout the season. Now, many of these same programs expect their players to *arrive* to preseason in great shape so that total focus can be on specific athletic preparation. Harvard University is no exception to this modern day philosophy.

One major focus of the Harvard conditioning system is development of an anaerobic conditioning base, which is accomplished through the implementation of interval training focused on passing an interval conditioning test. Training and passing the conditioning test helps our athletes develop a strong conditioning base, increased levels of work capacity and accountability. The other focus of the conditioning system is to provide more sport specific movements and recovery times which more closely mimic the actual demands of your sport. The primary goal of this day is to prepare the athlete for optimal performance mimicking actual competition. We feel that these interval training sessions are an excellent training mechanism for the ATP/CP energy system that is so critical to the sport.

When performing the conditioning workouts, adherence to proper rest intervals is critical for maximal benefit. Short rest intervals force the body to increase the replenishment efficiency of specific muscle glycogen which in turn allows the athlete to perform at a higher level with shorter and shorter rest intervals. Make every effort to give 100% effort in the running part of the conditioning, but also to take the proper rest time between sprints. Concentrate on good movement form and work on your speed mechanic weaknesses.

Hydration is another area that needs to be addressed during your conditioning. Every effort should be made to take in plenty of fluids before, during, and after your conditioning sessions. Adhere to the water breaks built into the program and use them for fluid replacement and not strictly as a rest interval. Dehydration can be physically dangerous and causes marked decreases in performance.

NOTE: FOR INFO ON THE HARVARD BASKETBALL CONDITIONING TEST "THE DOMINATOR", SEE THE ATHLETIC SECTION.

WEIGHT TRAINING

The power and strength training aspect of your summer preparation provides the foundation from which the other training areas can be built on. An athlete must have strength and power to be able to get maximal training effects in the areas of plyometrics, speed improvement, and agility. Obviously, explosiveness and pure strength are also critical ingredients in their own right on the football field.

The poundages you will be using this summer are based on percentages of your projected maxes in the big 3 lifting movements; power clean, back squat, power clean. To get the poundages you will be using for the core lifts will require you to first look up your training maxes in the strength section of this manual. Then you will need to go to the percentage chart in this manual to look up the weights you will be using. If you are not sure what your 1 rep max is (freshman) you need to do 2 things. First is to find a qualified strength coach to watch you perform a 1 rep max in the power clean. The qualified coach will take into account proper technique and safety as well as give you experienced coaching cues. Second thing you need to do is find training maxes for the back squat and bench press utilizing the “AMRAP” test as described below.

The (AMRAP) testing will entail the performing of “as many reps as possible” within a 3-8 rep range on the back squat and bench press. Make sure you only count those reps that you were able to perform all by yourself, with no help from spotters. When you have completed your rep tests, go to the top column of the percentage chart which says “Repetition Maximum =” and go to the number which corresponds to the number of reps you achieved. Once you’ve found this number, go down the column to the weight that you were using for your AMRAP test. From there, go across to the “1 Rep Max” column to get your new max.

Example: Achieved 290 lbs for 6 reps in the bench press AMRAP test
 Go to 6 RM column (says 85% underneath)
 Go down to 290 pound figure in chart
 Go across to “1 Rep Max” column (either far right or far left)
 New max = 340 lbs

After you have computed your test results into max figures for the big 3, you now need to figure the training maxes for the rest of your core % lifts described below.

Instruction: Once you have your training maxes for the big 3 lifts finding the training maxes for the rest of the core lifts is easy. For each non big 3 core lift there is a given % off of its corresponding big 3 lift. For example a hang clean training max is 90% of the power clean. Below we have listed each non big 3 core lift and the % it is of its corresponding big 3 core lift.
Hang clean max = 90% of Power clean max
Clean pull max = 130% of Power Clean max
Front squat max = 75% of Back squat max
Incline press max = 85% of Bench Press max

Example: Looking for my hang clean max with a power clean max of 290 lbs
 Go to 1 RM column (1st and last columns on chart)
 Go down to 290 pound figure in that column
 Go across to 90% column on the far right (says 4RM above)
 New Hang clean max = 260 lbs

Once you have all the maxes for all your core lifts that use % (power clean, hang clean, back squat, front squat, bench press and incline press) record the new projected maxes into the blanks provided for you on the top of your lifting card. You will use these new maxes for your lifting percentages for the remainder of the summer lifting cycle. If necessary you may adjust your training maxes down or up during the summer; this however should be only due to rare a circumstance such as injury, burnout or improving at a much faster rate than the %.

All returning players have been well-trained in weight training technique, function, and purpose. We fully expect for you to continue to weight train as you are accustomed to doing in the weight room on campus. This means performing the program in the correct order, from top to bottom. All the exercises in the weight training program are important to the preparation of the Ivy League Championship caliber player and none of our players have reached the point in their career where they can afford to skip exercises or prescribed sets.

To accurately record your weight training performance, write the weight you lifted and the number of repetitions you achieved in the blank space underneath the percentage. You are required to fill in the workout sheets with accurate weight and rep numbers. If you fail in a set and do not achieve the required number of reps, please indicate that in the appropriate blank space.

We feel that the Olympic weight lifting movements are a great way to develop the speed and explosiveness which is so critical in athletics. Performing the clean, its' related movements is an excellent method for developing hip drive and speed strength.

When executing the power clean, be sure to attain good body position while the bar is on the floor, and control the ascent in the initial stages of the pull. Also, be sure to continue focusing on the redirection of the bar up the thighs after it passes the knee and keeping it close to the body.

When executing the hang clean, be sure to keep your chest over or actually slightly in front of the bar as it rests on your legs. Too many athletes try to initiate the hang clean from an upright position and just cannot get the hip drive necessary for total development. Concentrate on getting the bar moving up as fast as possible because the faster the bar moves, the more explosiveness you're exhibiting.

Obviously the squat exercise is a great way to prepare your legs for the rigors and demands of competition. This summer, we will be squatting twice per week. On day 1 the emphasis will be on performing the back squat with heavier loads and on Fridays, team members will be front squatting with relatively lighter loads. Be sure to continue with the excellent depth (top of the thigh at 90 degrees) you have been utilizing throughout the spring semester. When performing the squat, remember to concentrate on going down in a slow and controlled fashion. Spread your chest big, keep your body as tight as possible and make every attempt to reach your butt back to initiate your hips and glutes. Always make sure you have the safety catch pins set up to hip height in order to save you on a missed rep. Our ability to improve leg strength this summer through great squatting will have an important impact on the team's success this season.

The bench press and its corresponding core lifts the incline and military press are great shoulder girdle strength builders. The only problem is that to many athletes put too much emphasis on the amount of weight they are benching rather than the form they are using. Statistical studies have shown that the bench press is actually the most dangerous lift in the weight room which is ridiculous when you consider it is the least technical lift. Keep your ass on the bench, touch not bounce the bar and always use a spotter. If you do this you make great gains.

Give proper intensity and dedication to the non % lifts of the strength system because they are just as important as the % lifts. For example pull ups are just as critical as any pressing movement and necessary to balance out the pressing. A chain is only as strong as its weakest link.

IRON CRIMSON RULES OF STRENGTH TRAINING

1. When you enter the weight room, be prepared to lift. Wear appropriate clothing, have your shoes tied, and be mentally prepared to improve. It doesn't make sense to make the effort to go to the gym to train if you're not ready to give 100%.
2. Follow the order of the weight program. The exercises are set up so that all explosive movements are done first, with the major compound lifts following them. The assistance movements are always the last exercises done. This will allow you to have maximal strength and energy for the major lifts.
3. Make it a habit to use excellent technique in all training movements. This means always having control of the barbell or dumbbells, especially in the lowering phase. Pay attention to your technique and don't allow outside distractions to affect your set.
4. Follow the cycled poundages that have been prescribed for you in core lifts. This progression is designed for maximal improvement and will put you at peak strength levels right at the conclusion of the training cycle. Use the percentage charts included in this manual to find the weights you will be using for the day.
5. Keep missed reps to a minimum! If you fail on a rep, rack the weight and lower the poundage for the next set. Do not have your spotter continue to assist you on rep after rep if the weight is too heavy. This can cause excessive micro tears to the muscle fibers and can actually make you weaker.
6. Take sufficient rest between sets, especially in the major, core lifts. Three to four minutes between sets should be the norm if you are to be rested and prepared for your next set.
7. Assistance movements are an integral part of the total physical preparation necessary for intercollegiate sports. Be aggressive every week on these lifts. Working hard on the assistance movements is critical for performance and injury prevention.
8. Take every precaution to insure a SAFE lifting environment. This means having competent spotters, using collars on free weight lifts, and keeping plates off the floor.
9. Do not use straps when lifting weights. Hand strength is a critical ingredient in sports, and the more you grip and squeeze, the stronger your grip will become.
10. Do not use supportive equipment (belts etc.) when lifting weights. Supportive equipment gives athletes a false sense of security which may lead them to using too much weight on an exercise which may cause serious injury. When one region is supported the others become even more susceptible to injury. Also wearing a lifting belt causes a raise in blood pressure which may lead to bigger weights in the present but internal harm in the long run and in some cases immediately. The benefit of not wearing supportive gear is the core gets trained. Core strength is a critical ingredient in sports, and the more you use it to support your body position the stronger your core will become.
11. Fill out your lifting card completely. Fill in all weights used and indicate the number of reps you achieve on every set. Good record keeping helps a great deal in long term improvements.
12. Crush abdominal work! Just because you may have great looking abs, does not mean you have sufficient strength in this critical area. We do abdominal work to have great strength in the torso area, not to look good.

STATIC FLEXIBILITY

Flexibility is an area of training that most athletes feel is important but is often neglected nonetheless. This neglect can occur due to the mild discomfort associated with stretching or because it is time consuming or maybe even because of post-workout fatigue. But far and away, the biggest reason that flexibility training is neglected is due to laziness. And this is certainly not a valid reason to dismiss an area of training that can potentially make an athlete much more effective.

Flexibility is critically important to maximizing an individual's athleticism. It is defined as the range of motion around a joint and common sense would seem to indicate that if an athlete's range of motion were to increase, his performance capability would also rise. With this improved range of motion around a joint, an athlete can now decrease his risk of injury due to the fact that the muscles have more elasticity and can go into greater areas of stretch before being damaged.

Flexibility in the knee and hip joints, as well as in the torso, is a critical ingredient in the maximization of an athlete's speed potential. Many athletes are extremely tight in these areas, especially the hip joint and lower back region, and for this reason are not in a position to run to their capabilities. We strongly encourage you to stretch these areas as frequently as possible so that you can put yourself in a position to improve your speed.

Proper flexibility training is not a difficult task to perform but requires a little discipline and concentration. You should spend from 20-30 seconds in each stretch, holding the stretch in a position of very mild discomfort. Stretching to the point of extreme pain is not efficient in improving flexibility and can cause micro tears in muscle fibers. When stretching, concentrate on what you are doing and not on your surroundings and emphasize deep, controlled breathing. A list, with descriptions and illustrations, of appropriate dynamic and static stretches is included below. Spend 30 minutes per night rotating through this stretch circuit and you will make great gains in all the other aspects of your training.

1. **ROLL OUT NECKS** – Maintaining a flexible neck area is extremely important in sports. Roll out your neck out throughout a total range of motion in both directions.
2. **LUNGE STRETCH** – This stretch works on the hip flexors which are critical in speed development. With your back knee resting on the ground move your front leg forward until the knee is bent over the foot.
3. **STRADDLE OUT** – From a deep straddle position, reach down to your left leg and pull yourself down. Do also to the right leg and down the middle between your legs. This is excellent for the groin and ham.
4. **SAIGON SQUAT** – One of the best lower body and hip flexibility exercises, the Saigon squat is performed by placing your feet about shoulder width apart down as with your heels flat on the ground.
5. **LEGS TO CHEST** – While lying flat on your back pull both knees to your chest. Attempt to pull your knees to your chest and raise your buttocks off the ground.
6. **SPINAL TWIST** – This is a great movement for lower back and torso flexibility that also works on rib muscles and the upper back. Turn your head and torso as much as possible and look directly behind you.
7. **HURDLE STRETCH** – This is a great exercise for the hamstring muscles which are critical in sprinting speed. Be sure to put the inside of your foot against the inner thigh of the leg being stretched to alleviate pressure on the knee.
8. **QUAD STRETCH** – The quad area can be stretched efficiently in several different ways. Lying on your stomach, grab either your right or left ankle and pull into your buttocks. To hit the vastus group of the quads, be sure to keep the stretched leg in contact with the ground. To work more on the rectus femoris, allow the stretched leg to come off of the ground.
9. **STANDING HAMSTRING STRETCH** – Put heel onto a waist high object and bend forward into stretch.

Burning Desire

A LONG WHILE AGO A GREAT WARRIOR FACED A SITUATION WHICH MADE IT NECESSARY FOR HIM TO MAKE A DECISION THAT WOULD INSURE HIS SUCCESS ON THE BATTLEFIELD. HE WAS ABOUT TO SEND HIS ARMY AGAINST A POWERFUL FOE WHOSE MEN OUTNUMBERED HIS OWN. HE LOADED HIS SOLDIERS INTO BOATS AND SAILED THEM TO THE ENEMY'S COUNTRY, UNLOADED HIS SOLDIERS AND EQUIPMENT, THEN GAVE THE ORDER TO BURN THE SHIPS THAT HAD CARRIED THEM. ADDRESSING HIS MEN BEFORE THE FIRST, HE SAID, "YOU SEE THE BOATS GO UP IN SMOKE. THAT MEANS WE CANNOT LEAVE THESE SHORES ALIVE UNLESS WE WIN! WE NOW HAVE NO CHOICE-WE WIN--OR WE PERISH."

THEY WON!

EVERY PERSON WHO WINS IN ANY UNDERTAKING MUST BE WILLING TO BURN HIS SHIPS AND CUT ALL SOURCES OF RETREAT. ONLY BY DOING SO CAN ONE BE SURE OF MAINTAINING THAT STATE OF MIND KNOWN AS A BURNING DESIRE TO WIN, ESSENTIAL TO SUCCESS.

