

# In-Season Training II

## Facts, Fallacies, and Recommendations

By

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Strength and conditioning is an integral part of competitive sports in this modern era. Athletes make their preparation a top priority, knowing that “to finish first, preparation cannot come second”. Athletes will spend most of their off-season correcting dysfunctions, rehabilitating injuries, increasing strength, size, power and speed, in addition to working with technical and strategic coaches to improve upon skill development. This is a considerable investment of time, money, and resources for these athletes to prepare for a sports season. At the beginning of season, during tryouts, and the beginning phase practices, the results of all the hard work are clearly visible. Improved muscular coordination, increased speed, power, endurance and decreased risk of injury due to proper biomechanics. The athlete has stepped up their game. So now that the hard work of the off-season is complete and performance goals have been attained, all the athletes needs to do is go to practice 2-3 hours each day after school and perform sprints and agility in practice, mixed in with some submaximal plyometrics and calisthenics, and there should be no deterioration in performance, right? Wrong!!! Sadly, this is the unchallenged rule of the uninformed. **What good is it to be your strongest, quickest, and most powerful at the beginning of season, when within 4 weeks those results will rapidly deteriorate. Why go through the rigorous off-season workouts, if you are going to let the gains decline by mid season,** and perform at less than optimum levels by the end of season.

Coaches need time to work on skill development, strategy, and condition during in-season practices, but **there should also be a time allotment for quick in-season strength and conditioning maintenance sessions so the athlete does not have this deterioration of**

**performance.** The goal of any in-season strength and condition program is to maintain, not lose, those hard earned results that the athlete has worked so tirelessly for. Many coaches have allotted time during or prior to practice in which athletes can work in the weight room for 30-45 minutes to maintain their strength and power. Others though, are doing a disservice to athletes when they do not allow their athletes to workout during the season. Athletes need to maintain certain strength and fitness levels throughout season to avoid performance deterioration and injury when competing at a high level. **If an athlete attains a high level of fitness and is then required not to engage in activities that will maintain this level of fitness, the potential for injury increases due to the decreased neural firing pattern and strength of both agonist and antagonistic muscles.** What then, was the point of the athlete engaging in the off-season program in the first place if the results are not to be maintained during season? What is more important, maintaining the athletes level of fitness and decreasing the risk of injury, or limiting the athlete from reaching their potential by deterring them from partaking in a structured in-season strength and conditioning program? The following is a review of just some of the information on in-season training provided by a few of the most credible experts in the strength and conditioning and performance enhancement industries.

1. Francis C., **Planning/Periodization; *The Charlie Francis Training System.*** pp102  
“My athletes never go that far away from any given training element and, therefore, they never have to re-establish it. As an example, **they never go that far away from heavy weights; they keep lifting right through to the end of one season and the beginning of the next, so they never let their strength deteriorate.** Strength is the easiest quality to build, but it is also the easiest one to lose. Consequently, we keep applying a variety of power and power-strength stimuli right through the season.”  
**\*\*Charlie Francis is one of the foremost experts in the world when it comes to training track and field athletes, in particular world class and Olympic champion sprinters!!**
2. Mosher M., Peterson D., **Effect of In-Season Training on Body Composition and Bench press Strength of Collegiate Women Track Sprinters.** *IAHPERD Journal*, 30 (2), 1997  
“ It is possible that the loss in body fat and the maintenance of Lean Body Mass could offset the slight loss of strength leaving running performance unaffected.”

3. Di Pasquale M Dr., **In Season Training for Power**  
**“Far too often when the competitive season get under way many coaches and athletes fail to continue to train for power at a time when they want their performance to peak. Not only does this have a negative affect on performance during season, it will also have a negative effect on the results of your next off-season training.”**  
“In-season power training should be done at least two times per week and if the competition schedule will allow, it should be done at least three times per week.”  
**This from a highly respected strength and conditioning coach for professional athletes**
4. Norton, W., **Schedule Time for In-Season Training; Keeping up on workouts can lead to more wins.** *New England Hockey Journal*  
“As little as 30 minutes twice a week can result in improvement throughout the season and sustain your drive to be a better player.”
5. Faigenbaum A., Westcott M., Outerbridge A., Micheli L., Long C., Larosa R, Zaichkowsky L., **The effect of strength training and detraining on children.** *Journal of Strength and Conditioning Research.* (10) pp 109-114  
“Eight weeks of detraining resulted in a statistically significant loss of upper body (19.3%) and lower body (28.1%) strength.”
6. Shepard G., *Bigger, Faster, Stronger* Champaign IL 2003  
“If the sports coach neglects or puts training on maintenance levels, the athlete may not reach full potential. As a result, short changing themselves in higher-level athletics (college, etc.). However if the athlete works to improve their strength/power/hypertrophy during the season, the end result is an explosion of strength and size gains in the off-season program due to the increased neural efficiency and (sometimes) slight increase in size.”  
“Typical in-season programs are generally 2-3 sessions, and a goal of no longer than 45 minutes to an hour in the gym.”
7. Rooney M., **Q and A Parisi Speed School, NJ**  
“Practicing 5 days a week and having games as well is tough to fit in some training. The great news is that you do not have to train 4-5 days a week to maintain or even gain in some cases. I recommend that if you could at least get 1 full body workout in per week and 1 session where you are focused on speed, that would be 24 workouts over a 12 week season that could really keep you close to your best.”  
**Excerpt from a Q and A with world-renowned speed and strength coach, Martin Rooney.**
8. Houston Texans S and C Coach, **In Season Training**  
“Some coaches place a major emphasis on off-season strength training. They administer tests, give out awards, designate specific workout times, and personally supervise lifting session. Once the season begins some coaches’ place strength training on the back burner. **In-season training must be the number one priority for all athletes.** Many years ago we inherited our training methodology from weight lifters whose objective for lifting weights was to peak for a given competition.”  
“Strength is lost rapidly. It is also very hard to gain. Athletes must lift with some degree of frequency (2workouts/week) to improve strength, or maintain near maximum strength levels.”  
**“If an athlete performs an exercise during the off-season, but stops performing it once the season begins, we must ask why waste the time and energy. Our in-season strength program is our program.”**

9. Chek P, Goss K., CHEK Institute Program Design Video; Court Vista, CA 1995  
**“Athletes need to stimulate the muscle fibers with the same tensile loading or greater to maintain your strength levels.** Don’t do less weight, do less sets. Keep the weight the same.”  
“75% of the players make personal bests or maintain their strength throughout the season.”
10. Genetic Potential, *Vertimax Users Manual*. Tampa, Fl. Pp 31  
**“During the season. Preferably Vertimax training 3 times a week,** but with reduced number of sets. Or, still do six resisted sets, but just do them twice a week. Choose those times which allow at least 24 hours before scheduled competition.”
11. Dupont G., Akakpo K., Berthoin S., **The Effect of In-season, High Intensity Interval Training in Soccer Players;** *Journal of Strength and Conditioning Research*, 18(3): pp584-589  
“Maximal aerobic speed was improved (+8.1) and the time of the 40-m sprint was decreased (-3.5) over the 10 week period whereas no change in either parameter were observed during the control period. **This study shows that improvements in physical qualities can be made during the in-season period.**”
12. Marques M., Gonzalez-Badillo J., **In-Season Resistance Training and Detrainng in Professional Handball Players,** *Journal of Strength and Conditioning Research*, 20(3): pp 563-571  
“The results suggest that elite Team Handball Players can optimize important physical parameters over 12 weeks in-season and that 7 weeks of detraining, are sufficient to induce significant decreases in throwing velocity.”
13. Kraemer W., Newton R., Rogers R., Volek J., Hakkinen K., **Four Weeks of Optimal Load Ballistic Resistance Training At the End of Season Attenuates Declining Jump Performance of Women Volleyball Players,** *Journal of Strength and Conditioning Research*, 20(4): pp 955-961  
“ Introduction of a novel training stimulus in the form of ballistic jump squats and reduction of heavy resistance training of the leg extensors stimulated a rebound in performance, in some cases to exceed the athlete’s ability at the start of the season. **Periodization of in-season training programs similar to that used in this study may provide volleyball players with good vertical jump performance for the crucial end-of-season games.**”
14. Cissek J., **In-Season Strength Training and Sprinters.**  
“When the sprinter is in-season, to allow for adequate recovery, the frequency of strength training sessions may drop down to one to two sessions per week. Two sessions is better than one, but sometimes one is the best we can do.”  
**“In order to be able to exert force quickly one must train that quality while maintaining maximal strength during the in season. This is because exerting force quickly won’t help if you cannot exert much force!”**  
“How do we maintain maximal strength in-season? First we can use exercises that develop maximal strength. These include variations of squats, presses, deadlifts, bend over exercises, etc. Second, we perform these exercises with a higher intensity during the in-season, 80-95%, carefully emphasizing the importance of good technique to our athletes. Finally, to save time and to train multiple qualities we combine these exercises with explosive ones.”

15. Foran B., Johnston, K., **In-Season Football Training**, *High Performance Sports Conditioning; Modern Training For Ultimate Athletic Development*: Pp 304, Champaign IL, 2001  
**“It is vital that an in-season strength and conditioning program focus on maintaining the maximum strength levels gained during the off-season and on high power or force velocity outputs.”**  
*\*\*Kent Johnston is/was the strength and conditioning for the Seattle Seahawks*  
*\*\*Bill Foran was/is the strength and conditioning coach for the Miami Heat*
14. Foran B., **In-Season Basketball Training**, *High Performance Sports Conditioning; Modern Training For Ultimate Athletic Development*: Pp 293, Champaign IL, 2001  
“A solid in-season program will maintain the improvements developed in the off-season.”  
**“ To maintain their strength and power throughout the season, basketball players need to be involved in quality, in-season weight training program.** Players should perform in-season weight training twice a week.”  
*\*\*Bill Foran was/is the strength and conditioning coach for the Miami Heat*
15. Foran B., Montes F., **In-Season Baseball Training**, *High Performance Sports Conditioning; Modern Training For Ultimate Athletic Development.*: Pp 288, Champaign IL, 2001  
“The in-season program from April to October (for professional) is designed to maintain the physical strength the athlete needs to be ready to play every day and recover quickly afterward.”  
“Athletes should lift twice per week during the in-season, perform a conditioning routine two to three times per week, and do mobility and agility drills once a week.”  
*\*\*Fernando Montes is/was the strength and conditioning for the Cleveland Indians.*  
*\*\*Bill Foran was/is the strength and conditioning coach for the Miami Heat*
16. Foran B., Twist P., **In-Season Hockey Training**, *High Performance Sports Conditioning; Modern Training For Ultimate Athletic Development.*: Pp 312, Champaign IL, 2001  
“Players strength train three times per work and work the energy systems three times per week from September to November.”  
*\*\*Peter Twist was/is president of the Hockey Conditioning Coaches Association*  
*\*\*Bill Foran was/is the strength and conditioning coach for the Miami Heat*
17. Foran B., Carter C., **In-Season Volleyball Training**, *High Performance Sports Conditioning; Modern Training For Ultimate Athletic Development*: pp 324, Champaign IL, 2001  
**“The primary objective of the in-season strength and conditioning program for volleyball is to maintain the strength and conditioning levels that players attained during the off-season.** Players do the maintenance program two days per week.”  
*\*\*Courtney Carter was/is the strength and conditioning coach for the Univ. of Nebraska*  
*\*\*Bill Foran was/is the strength and conditioning coach for the Miami Heat*

## **Keypoints:**

- 1. In-Season Strength training should be a priority in order to keep performance levels consistent.**
- 2. The goal of the in-season program should be to maintain the strength and power gained in the off-season.**
- 3. It is recommended to strength train at least 2 times per week during the season.**
- 4. Training sessions should last no longer than 1 hour in duration.**
- 5. Volume should be decreased, not intensity. An athlete should decrease the overall workload (sets and reps) while trying to maintain intensity. By maintaining intensity and dropping volume an athlete's neural drive is still stimulated, therefore, maintaining strength and power.**
- 6. An In-Season training program can help decrease the risk of injury in athletes.**
- 7. Focus on Recovery and Regeneration following both practices and workouts.**

If there is not enough credible information here to educate one on the importance of in-season training, there are many other research articles and strength and conditioning books which cover the topic in detail. I also recommend reading Part I of this article, In Season Training and Performance Deterioration. Remember, this can be critical time for athletes with college scholarships, pro contracts, and state titles on the line. As a coach, one should not jeopardize an athlete's future by not promoting or even disallowing this integral piece of athletic development and performance enhancement. After all, shouldn't the athlete's future be the most important factor when it comes to why one coaches in the first place.

## References

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