



Physical Preparation for U14-U16

A method is only the tool that is only as good as its application.



The whole point of exercise is to create a series of adaptations that lead to increased performance. If you exercise one time, you only create an acute *response*, not an *adaptation*. Lump multiple responses together in series and over time those *responses* will lead to an *adaptation* – the goal of training.

There is a very fine line between training hard enough to dramatically improve performance and training so hard your body can't recover properly.



Key principle – how the body adapts to stress. *Key note* – there is no single best method

Injury Prevention

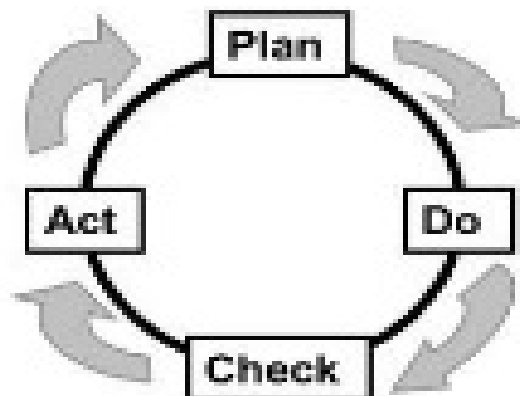
The main causes of injuries are down to 2 things:

1. Lack of physical preparation
2. Poorly managed training program



Tracking

Tracking is more important than the Programme or 'the How to'
And the content is more important than structures
Keep very good records, and constantly tinker with the programme to its just right.





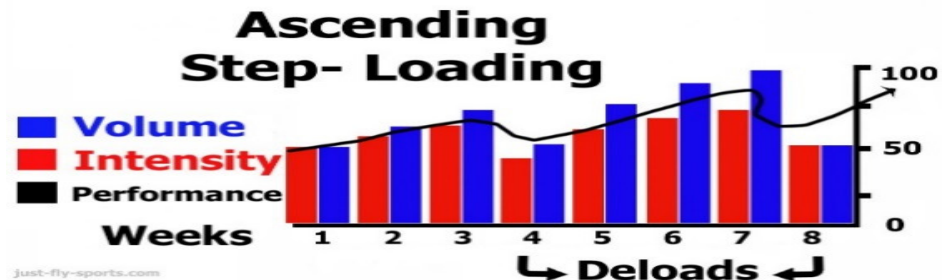
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Understanding Volume & Intensity

When you are a beginner, you have a fairly low threshold for both volume & Intensity. So therefore training everything together can actually be effective. As you become more experienced, your thresholds begins to increase and it takes higher intensities and greater volume to continue the stimulation.

The key is Conjugate sequencing – *using the lowest intensity & least amount of volume to stimulate adaption.*

Save the higher intensity/volumes for when they are needed.



Win or lose the only thing you can have really have complete control of in a game is how well prepared you are for it.

**S&C shouldn't interfere with the practice of your sport,
It should improve it**

Rules to Train By

- No more than 4 high intensity sessions/matches in a week
- No more than 1 high intensity session/ match per day
- Avoid high intensity training the day before games
- Warm up properly before all sessions/games especially before doing long range striking or sprinting
- Players should aim to stick with 1 programme for 5-8 weeks. 5 Weeks is a minimum and stop changing over, as you don't need a lot of variation.
- Test, Assess & track progress. Measure results every day, once you hit a peak, then change your programme, not until then.
- Integrate with sports training, don't separate them or class them as different.
- Need 3 conditioning sessions per week, this must be integrated with the 1st two rules, and can be completed by the player in their own time, or along with a sports training session/ Match, as long as it's monitored.


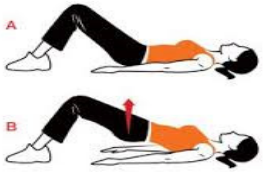



Stretching

- Most unrated, unused area in Training and Player development
- The players who are most flexible, succumb to the least amount of exercises.



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Stretching - Activation Exercises

<p>Hip Flexor Hold</p> 	<p>Flatten your lower back and lean your hips forward slightly until you feel a stretch at the front of your hip. Try to keep your body upright as you do this.</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1 Each Side</td> </tr> <tr> <td>Reps/Time</td> <td>30-90sec</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1 Each Side	Reps/Time	30-90sec	Wgt	N/A	Rest	N/A
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<p>Glute Bridge</p> 	<p>Points toes into air. Push heels into ground Squeeze their glutes to begin movement & Focus on squeezing glutes rather than elevating the hips</p> <p>Repeat again after Single leg</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1</td> </tr> <tr> <td>Reps/Time</td> <td>30-90sec</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1	Reps/Time	30-90sec	Wgt	N/A	Rest	N/A
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<p>Single Leg Glute Bridge</p> 	<p>Hold non-supported leg tight to your chest Points toes into air. Push heels into ground Squeeze their glutes to begin movement & Focus on squeezing glutes rather than elevating the hips Pause for 1sec at the top.</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1 Each Leg</td> </tr> <tr> <td>Reps/Time</td> <td>30-90sec</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1 Each Leg	Reps/Time	30-90sec	Wgt	N/A	Rest	N/A
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<p>Plank Matrix</p> 	<p>Squeeze their glutes & keep abs braced Breathing maintained & elevate their hips. Straight line ankle, knee, hip, shoulder & head, Elbows directly beneath shoulder with forearms parallel, as viewed from above and straight on Squeeze shoulder blades together</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1 Each Hold</td> </tr> <tr> <td>Reps/Time</td> <td>30-90sec</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1 Each Hold	Reps/Time	30-90sec	Wgt	N/A	Rest	N/A
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<p>Bird Dog/ Superman</p> 	<p>Trunk Position should not change, while slowly raising your arm to shoulder height, At same time raise opposite leg to hip level. No weight shift should occur, even when swaping sides.</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1 Each Side</td> </tr> <tr> <td>Reps/Time</td> <td>10-15 Rep ES</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1 Each Side	Reps/Time	10-15 Rep ES	Wgt	N/A	Rest	N/A
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Warm Up



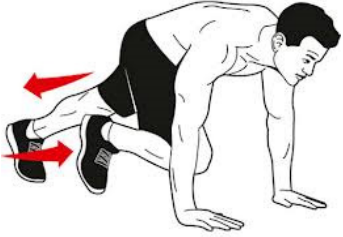


Follow the Ulster GAA Activate Warm Up or the Gaelic 15 Warm Up

Warm Up – Exercises to include

<p>Jump Jacks</p> 	<p>Jump up in the air and split legs apart, at the same time raise arms out to the side. After a quick ground contact time return to start position & repeat. Change arm position every 10 Reps Similar to Jumping Jacks, however arms now go across the chest instead of out to the side.</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1</td> </tr> <tr> <td>Reps/Time</td> <td>20-50</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1	Reps/Time	20-50	Wgt	N/A	Rest	N/A
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<p>Squat</p> 	<p>Keep Torso parallel to shin by Bending ankle, knee & hip, If required elevate heels to teach feeling Keep Feet flat on the ground stick bum out behind them. Make space between knees for the hips, push their feet through the floor</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1</td> </tr> <tr> <td>Reps/Time</td> <td>10-20</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1	Reps/Time	10-20	Wgt	N/A	Rest	N/A
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<p>Over & Unders</p> 	<p>Face sideward to hurdle at waist height. Lift leg over Hurdle and land while lifting trailing leg over. Then squat down, keeping lower back flat and bum down, step under hurdle and follow through with trailing leg. Trun round and repeat on opposite side.</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1</td> </tr> <tr> <td>Reps/Time</td> <td>6-10 Each Side</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1	Reps/Time	6-10 Each Side	Wgt	N/A	Rest	N/A
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<p>Side Shuffle/ R-Band Walk</p> 	<p>With your feet shoulder width apart, bend your knees slightly and move into a half-squat position. Keep feet in line with shoulders, face forward with body weight evenly distributed over both feet. Maintain the half-squat position, Slowly shift your weight over one leg and take a step sideways with the other leg by Pushing off big toe of trailing leg, keep head, hips & shoulders level all times</p>	<table border="1"> <tbody> <tr> <td>Sets</td> <td>1</td> </tr> <tr> <td>Reps/Time</td> <td>8-10 Each Side</td> </tr> <tr> <td>Wgt</td> <td>N/A</td> </tr> <tr> <td>Rest</td> <td>N/A</td> </tr> </tbody> </table>	Sets	1	Reps/Time	8-10 Each Side	Wgt	N/A	Rest	N/A
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<p>Linear Lunge</p> 	<p>Bend supporting knee first, to bring knee over toe Keep shoulders directly above hips, sit hips down. Keep Front knee above ankle at all times, Focus on knee stability Extending back leg, keep knee below hips at bottom High knee drive in-between</p>	<table border="1"> <tr><td>Sets</td><td>1</td></tr> <tr><td>Reps/Time</td><td>6-10 Each Leg</td></tr> <tr><td>Wgt</td><td>N/A</td></tr> <tr><td>Rest</td><td>N/A</td></tr> </table>	Sets	1	Reps/Time	6-10 Each Leg	Wgt	N/A	Rest	N/A
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<p>Lateral Lunge</p> 	<p>Keep toes parallel to each other, push knee out to the side Keep Torso parallel to shin by pushing chest forward and sticking bum out behind Bend ankle knee & Hip so hip can come down to front knee height</p>	<table border="1"> <tr><td>Sets</td><td>1</td></tr> <tr><td>Reps/Time</td><td>6-10 Each Leg</td></tr> <tr><td>Wgt</td><td>N/A</td></tr> <tr><td>Rest</td><td>N/A</td></tr> </table>	Sets	1	Reps/Time	6-10 Each Leg	Wgt	N/A	Rest	N/A
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<p>Mountain climbers</p> 	<p>Don't put heel down on front foot, stay on toes and keep knees in front of your toes Try to get knee in front of shoulders</p>	<table border="1"> <tr><td>Sets</td><td>1</td></tr> <tr><td>Reps/Time</td><td>6-10 Each Leg</td></tr> <tr><td>Wgt</td><td>N/A</td></tr> <tr><td>Rest</td><td>N/A</td></tr> </table>	Sets	1	Reps/Time	6-10 Each Leg	Wgt	N/A	Rest	N/A
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<p>Jumping & landing</p> 	<p>Displays good squat mechanics during descent through bending ankle knee & hip Reach for the sky by extending ankle, knee & hip Absorbs landing by landing softly through bending ankle, knee & Hip upon landing If required use box jumps as landing is easier</p>	<table border="1"> <tr><td>Sets</td><td>1</td></tr> <tr><td>Reps/Time</td><td>6-10 Each Leg</td></tr> <tr><td>Wgt</td><td>N/A</td></tr> <tr><td>Rest</td><td>N/A</td></tr> </table>	Sets	1	Reps/Time	6-10 Each Leg	Wgt	N/A	Rest	N/A
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<p>Fast Feet</p> 	<p>From a jog, increase your strike rate such that you take as many steps as possible in a 10 metre interval. Emphasis on quick turnover with the legs moving in front of, not behind or under, the body. Move the arms as fast as possible and really drive your elbows back towards your shoulders and not just to your side</p>	<table border="1"> <tr><td>Sets</td><td>2</td></tr> <tr><td>Reps/Time</td><td>10 metres</td></tr> <tr><td>Wgt</td><td>N/A</td></tr> <tr><td>Rest</td><td>10sec</td></tr> </table>	Sets	2	Reps/Time	10 metres	Wgt	N/A	Rest	10sec
Sets	2									
Reps/Time	10 metres									
Wgt	N/A									
Rest	10sec									



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Basic Strength Progression Programme - Sets, Reps and Weight?

- Begin with Exercise learning, and get this right!
- Be as individual to a player needs as possible i.e. set a team programme, but allow players to change the exercises if required.
- Focus on 2-10 exercises per workout, No more – Exercises should include 1 multi-joint exercise for pressing, pulling & leg movement
- Master Body Weight exercises first then move to a Maximum 60-80% 1RM;
This should allow for 7-10RM, and reach the point where you can no longer move the weight.
N.B. 1RM = 5 Reps Max Weight x 1.2
- Perform 1 set to failure for each exercise by using a 5/5 Rep cadence; which basically means 5sec up; 0sec Pause; 5sec down
- This should take 80-120sec approx. (as if you can do more, then it's time to change exercise)
- Rest for Minimum of 3mins between exercises
- The aim is to complete as many proper reps of each exercise until failure
- Technique is King, 1 Poor Rep doesn't count, 2 Poor Reps you must stop or regress the exercise
- Complete 2/3 sessions per week for 5 weeks

Strength Work Out

Get into monitoring your sessions - Record your next 5 session scores

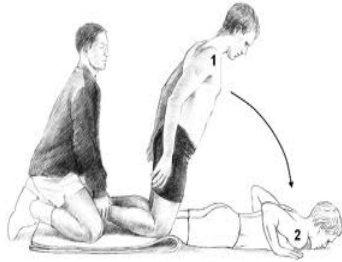
N.B. If you cannot complete the Single leg squat to bench or really struggle, use the Squat and/or Linear Lunge exercises from the warm up instead. Then once these are mastered go back to the Single leg squat to bench

No	Exercise	Session Tracking				
		1 / /	2 / /	3 / /	4 / /	5 / /
1	Nordic Hamstring					
2	Push Up					
3	Single Leg Squat to Bench	L	L	L	L	L
		R	R	R	R	R
4	Inverted Row/bent knees					



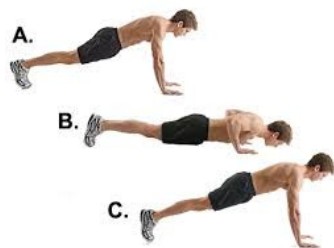
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Nordic Hamstring



Rest your knees on mat, As much as possible, try not to break at hips. Lower yourself about 1/4 of the way down, stopping, then pull yourself back to the top.
Be careful as a lot of people cramp up quickly because of the intense contraction of the hamstrings and calves to make this happen. If this happens, relax muscles and drop to floor

Push Up



Keep straight line ankle, knee, hip, shoulder & head throughout the movement
Keep hands directly beneath shoulders with fingers pointing forwards
Keep shoulder blades back & down
Elbows at 45 degrees when viewed from above
Body travels as one by moving hips and shoulders at the same time

Single Leg Squat to Bench



Set box at knee height or below, Balancing foot on stays flat at all times
Pull toe upwards on other leg and move straight up & down not side to side, Focus on knee stability
Keep tall, head & chest up, to keep neutral lumbar spine throughout

Inverted Row/bent knees



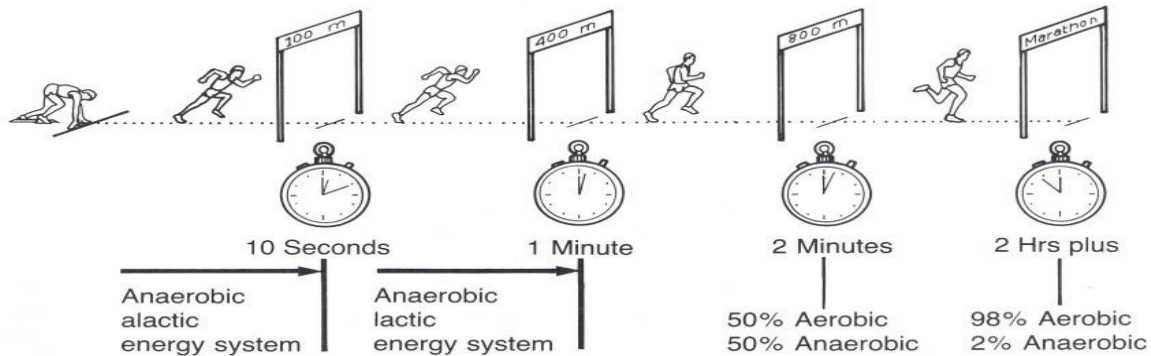
Hands directly beneath shoulders with underhand grip
Movement is initiated with upper back not with arms, Push chest forward and pull with long arms
move hips and shoulders at the same time so body travels as one, chest touches bar at top



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Conditioning

Energy Systems



Conditioning is the Key - Must do more Aerobic Work,

You have 2 Engines - 1 Burns Oxygen (Aerobic) / 1 Burns Anaerobic alactic/lactic

The longer you use engine 1, the more you delay engine 2 & lactic waste products

Task – What's your Minimum baseline for conditioning

4.2m per second = 100m in 23.8sec

How to train this, walk as far as you can for 15mins x 3 times per week. 7½mins out and back.

N.B. You must walk further each session. After 4 weeks you have a baseline for conditioning for competition.

	Target zone	% of max HR bpm range	Example duration	Training benefit
Maximize	5 MAXIMUM	90-100% 171-190 bpm	Less than 5 minutes	Benefits: Increases maximum sprint race speed Feels like: Very exhausting for breathing and muscles Recommended for: Very fit persons with athletic training background
Performance	4 HARD	80-90% 152-171 bpm	2-10 minutes	Benefits: Increases maximum performance capacity Feels like: Muscular fatigue and heavy breathing Recommended for: Fit users and for short exercises
Improve Fitness	3 MODERATE	70-80% 133-152 bpm	10-40 minutes	Benefits: Improves aerobic fitness Feels like: Light muscular fatigue, easy breathing, moderate sweating Recommended for: Everybody for typical, moderately long exercises
Lose Weight	2 LIGHT	60-70% 114-133 bpm	40-80 minutes	Benefits: Improves basic endurance and helps recovery Feels like: Comfortable, easy breathing, low muscle load, light sweating Recommended for: Everybody for longer and frequently repeated shorter exercises
Lose Weight	1 VERY LIGHT	50-60% 104-114 bpm	20-40 minutes	Benefits: Improves overall health and metabolism, helps recovery Feels like: Very easy for breathing and muscles Recommended for: Basic training for novice exercisers, weight management and active recovery



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5 Ways to Improve You're Conditioning

There's more to conditioning than simply training as hard as you can. Get the most out of your training by training smarter, not just harder

1. Use the High/Low Model

The principle component of this system is to separate your training into high and low days. This allows for the body to perform at its peak when it's ready to do so and then gives it a chance to recover in between hard training sessions.

On the high days

You'll want to perform high-intensity intervals and explosive strength type exercises while keeping the overall volume moderate.

On the low days

You'll instead keep the intensity much more moderate and give your body a chance to recover fully. The low days are a perfect time to include Skill technique work and drills, tactic walkthroughs and lower intensity conditioning like Aerobic circuits.

2. Include Aerobic circuits in your training

Lower intensity work can speed up recovery, improve aerobic fitness, and doesn't take as much of a toll on the joints as higher intensity interval training methods often can.

Try including 4-6 exercises such as shadowboxing, skipping, med-ball throws, cycling, bodyweight exercises, etc. for 5-10 minutes performed in circuit fashion each once or twice a week. Keep your heart rate between 130-150bpm throughout the entire training session for maximum results

3. Get a heart rate monitor and use it

Without this sort of objective feedback and information, a lot of your training becomes nothing more than guesswork. You can use it to get an accurate gauge of your resting heart rate, a good measure of overall aerobic fitness. Top GAA Players will have a resting heart rate in the low to mid 50's. You can use heart rate recovery to help manage your rest intervals when training.



When doing high intensity training to improve conditioning, an effective approach is to let your heart rate return to 130-140bpm before repeating an interval. This helps make sure you've recovered enough and are ready to push yourself to the max. It is absolutely essential to making sure your heart rate is in the right zone for conditioning methods. Without a heart rate monitor, there's no real way to know where you're at.

Training in the right Zone

Resting Heart Rate	Maximum Heart Rate	Heart Rate Recovery
Find Pulse for 20sec x3 or 10sec x6	MHR 220-age Male 214-(0.8 x age) Women 209-(0.9 x age)	Find HR after Activity then Find HR after 1min of Activity



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4. Track and Monitor Your Conditioning

Consistent measurement and monitoring is one of the most important steps to making sure your conditioning will improve. The easiest ways to measure and keep track of your conditioning are the following tests:

Resting Heart Rate	1.5 mile Run	Heart Rate Recovery
The right target resting heart rate range is in the low to mid 50's. Much higher than that, and it's a good sign that your conditioning will be lacking	Really well conditioned players will be around the 8 minute mark Although 8mins is the aim 9-11mins at the beginning will give you something to improve on.	1 minute following 1.5 mile run You'll need to be able to see your heart rate drop at least 30-40 beats within the first minute following the run.

5. Increase Your Training Frequency

One of the biggest mistakes when improve conditioning, is to do so only by training harder. While all this plays a role in conditioning, there is always a trade-off between volume and intensity. You can't train with both high intensity and high volume for long before you end up over trained and/or injured.

The best way to improve conditioning is to find the right balance between intensity, volume and frequency. Train 2-3 Days per week hard and 2-3 days per week easy. Follow the Rules to train by.