

BIOMECHANICAL GOLF CONDITIONING – An Overview

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**Posture, Flexibility, Static &
Dynamic Stability, Strength &
Power**

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**A Lower Handicap &
Prevention of Injury**

Introduction

Biomechanical golf conditioning will assist you to

- Hit a golf ball longer, straighter and more consistently and therefore reducing your handicap
- Prevent past or new injury occurrence

What is it?

- Functional exercise that is designed to restore balance, length, strength and coordination of golf specific movement patterns.

Why is it Essential?

1. To improve your performance

- Would you like to consistently hit the ball the length and direction you desire?

2. To reduce the likelihood of a new injury or reoccurrence of existing injury

- 53% of male and 45% of female golfers suffer from back pain.
- 30% of all professional golfers are playing injured.

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- Amateur golfers achieve approximately 90% of their peak muscle activity when driving a ball. This is the same lifting intensity as picking up a weight that can only be lifted four times before total fatigue. Golf is quite simply a highly athletic event.

What are the two most important factors that will improve your game?

1. Physical factors

- Flexibility and Muscle Balance = Static and Dynamic Stability

2. Ball flight factors

- Clubface alignment
- Swing path
- Angle of attack
- Hitting the sweet spot

- Strength and Power = Club head speed

What physical attributes are important for different golf shots?

Golf skill

- Putting
- Chipping, Pitching and Bunker
- Driving

Physical Attribute

- Static and Dynamic Stability
- Flexibility, Static and Dynamic Stability, Strength
- Flexibility, Static and Dynamic Stability, Strength and Power

The 5 keys of Biomechanical Golf Conditioning

- Prior to starting conditioning, assessment of posture, flexibility, stability and muscle balance must take place
- To achieve success from biomechanical golf conditioning each phase must be completed in the order outlined below. Each phase builds upon and complements the previous phases. Following this order will lead to optimal results.

Posture

- Development of good posture is the foundation from which all other conditioning phases follow.
- Postural alignment – When a golfer holds good alignment, his or her body will hold an optimal rotational axis, rotating much more efficiently. Without this the golfer will have poor shot consistency.
- Postural sway – As alignment improves postural sway does also. As postural stability improves, technical coaching has a better chance of making a difference to a golfers swing.

Flexibility

- All muscles throughout the body have an optimal length from which they allow the body to function most efficiently.
- Less than optimal flexibility can lead to compensations and overuse issues in other areas of the body. An example of this is lack of flexibility through the hips and shoulders which can lead to overuse and injury of the back, elbow and wrist.

Stability

- Static stability – this refers to making the trunk stabilizers stronger and more stable with static isometric exercises. It is essential to have good core stability during each and every golf swing. This is essential before adding moving arms and legs during dynamic stability.
- Dynamic stability – Refers to the ability to maintain optimal joint alignment at all times during each and every golf swing. The need to maintain optimal alignment of the head, spine and extremities while performing the swing is essential to this. A good analogy to this is a spinning top that maintains an instantaneous axis of rotation.

Optimal stability is a function of posture first, static and dynamic stability second; “You can’t fire a cannon from a canoe.”

Strength

The importance of strength training is highlighted in the following facts:

- The number one injury of golfers is back pain at 53% followed by elbow pain at 24%. Up to 30% of pro golfers are playing injured at any one time. 60% of those who have been injured are still having trouble with their injury.
- Elbow and wrist injuries are a function of lack of core strength where arms are being overworked. Arm and leg muscles are recruited from the core out.
- Put simply, GOLFERS NEED TO BE STRONGER TO SURVIVE THE SPORT.

Power

- Swing plane, clubface alignment and angle of attack are provided by static and dynamic stability. Club head speed is a function of power training.
- To develop power the following must be adhered to
 - Specificity of exercise (Exercises must have a high correlation to the actual golf swing).
 - Specific adaptation to imposed demand (Speed of movement must be as close as possible to that of the golf swing).
 - Exercise must be functional so movement skill, balance, coordination and speed can be further developed.

- Development of power is focused on the trunk, hips and rotator cuff.

Reference

The application of Biomechanical Golf Conditioning has been learnt and applied from The CHEK Golf Biomechanic Certification Intensive. This was developed and taken by world renowned corrective exercise and sports performance conditioning specialist PAUL CHEK. To learn more about Paul Chek and this programme, go to www.chekinstitute.com

This is what Bob Cisco (PGA Tour Instructor) had to say about Paul;

“ I’ve had occasion to work with some of the best physical conditioning specialists in the golf industry today with my players who want to stay ahead, and I can say without reservation that Paul Chek, his work and contribution in this field of golf, is right on the cutting edge. Biomechanical Golf Conditioning will take your game to the next level. “

Testimonials

- “The golf conditioning programme Robert offers is excellent and would be very appropriate for golfers at all levels and will greatly benefit many Canterbury golfers. The golf conditioning programme works on the specific needs of clients, developing greater flexibility and consequently improved golf results. From beginning the programme in July, 2005 playing off a handicap of 10, it is very rewarding to now be getting greater distance, more accuracy and down to a 7. These improvements are directly attributable to following the programme Robert prepared for me. I am sure many golfers of both genders will definitely benefit from a personalised golf specific exercise programme.
- Debbie Scott - Women’s Captain, Harewood
- Over the last 6 months on the Golf Conditioning Programme I have increased both my distance and accuracy in my driving and Iron shot. I have more stability in my swing and as a result a greater level of confidence on the course. I am hitting the ball great and my swing has never been better. My current scoring is average is even to 3 under as opposed to high 70s and low 80s prior to the golf conditioning programme. I appreciate what Robert Collier has done and will continually do for me and my career. – Aiden Berry - NZPGA Trainee
- Since commencing training with Robert Collier 6 months ago I have greatly increased my core strength and general fitness, allowing me to increase my driving distance by 15% and maintain performance under physical grueling circumstances. - Emerson Hall – NZPGA member
- After 5 weeks on the golf conditioning programme I increased my drive off the tee to 245 metres, a 45 metre gain. – Jenny Sim (12)

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- By doing the golf conditioning programme I wanted to become more flexible and have better core strength before receiving lessons. In taking this approach I am achieving greater swing consistency and better golf. – Steve Kilpatrick
- Five months into the Golf Conditioning Programme my handicap has come down 3 shots. I am hitting the ball longer and more consistently. I would strongly recommend this programme for general fitness, flexibility and golf specific exercises. – Chris Sweeney
- The golf conditioning programme has personally been an enlightening and beneficial experience – Don Forbes
- I had my best score for 5 years last Saturday (74 on a 9 handicap) which is a direct result of your conditioning programme coupled with golf lessons. Without the conditioning programme the lessons still wouldn't be effective. Your programme has been a good investment. Thank you. - Alan Calder
- Within 8 months on the golf conditioning programme I have increased my driving distance from 220 to 260 metres and my handicap has come down from a 12 to a 2. I look forward to further improvements - Soshi Harari, 16
- “Having completed the course, we just wanted to thank you again for the excellent programme you formulated us. Jocelyn and I consider our respective games have definitely benefited from the additional torso flexibility introduced into our swings by the programme in addition to the general muscle strengthening which has improved our ball address stance, combating lateral sway. Your readiness to adapt the programme at the individual sessions to allow for the frailties of wrinklies such as ourselves is also much appreciated. In short, we shall recommend your course to any enquirers.” - Jocelyn and Malcolm McKay
- I am 58 and have been playing golf since about 12 (46 years!) primarily in Bermuda where I attained a 9 handicap about 25 years ago. I have had numerous lessons and even attended a couple of golf schools. This game has been an important activity for me for a long time. Since November my handicap went from 13 to 16 rather quickly which was very discouraging. I met Robert Collier just before Christmas and adopted his programme right away. It has been 2 months now and I am very excited about my game again and hitting some of the best shots of my life! The combination of posture, flexibility, stability and increased strength has helped me tremendously and this is just the beginning! Well worth the 20-30 minutes a day invested and the dividends are certainly not limited to just golf!” - Brian C. Graham

References

Paul Chek. 2004 **CHEK Golf Biomechanic Certification Intensive** September 6-12, 2004. Auckland, New Zealand

Paul Chek, 1999 **Golf Biomechanic Certification Intensive – Course Manual**
Vista, California, USA

Paul Chek. 1999 **The Golf Biomechanics Manual – Whole in One Golf Conditioning** A CHEK Institute Publication, Vista, California, USA

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