

CASE STUDY



Daniel Gray
Lake Nona

*Slope-Based Training
and Force Dynamics*

ZEN
GOLF

Coach: Daniel Gray, Zen Master Coach

Technology: Zen Swing Stage and Swing Catalyst Dual Plates

Player: Charlie - Elite Amateur U18yrs

INTRODUCTION

Daniel Gray, a golf coach at Lake Nona, has been exploring the integration of the Zen Swing Stage and Swing Catalyst Dual Plates to address common swing challenges. This case study focuses on Charlie Kitchen, a talented young player whose ball-striking inconsistency stems from inefficiencies in lateral shifting and rotational torque. By leveraging advanced slope-based training, Daniel demonstrates how data-driven techniques can improve performance.

OBJECTIVE

1. Diagnose Swing Inefficiencies: Address early rotation, excessive torque, and limited forward pelvis movement through the strike.
2. Utilize Slope-Based Training: Explore the impact of uneven lies to optimize ground reaction force (GRF) application.
3. Leverage Advanced Metrics: Use Swing Catalyst data to track progress and refine training strategies.

CHALLENGES IDENTIFIED

- Early Rotation and Torque Issues: Charlie's excessive torque and prolonged rotational forces hindered his ability to maintain forward movement during impact.
- Vertical Push-Off Timing: A strong vertical push caused his lead foot to lift prematurely, reducing stability and creating ball-striking inconsistencies.
- Lateral Shift Deficiency: Limited horizontal force generation made it difficult to achieve a balanced and efficient swing motion.

TRAINING INTERVENTIONS

Upslope Drill with the Zen Swing Stage:

Objective: Increase horizontal force while controlling torque to improve impact stability.

Execution: Positioned Charlie on a steep upslope to naturally encourage a higher horizontal force peak and an earlier force application.

Results: Horizontal force increased significantly, providing greater stability during the backswing and downswing. Torque peaked earlier and flattened out, preventing prolonged spinning and enabling better sequencing. Vertical force slightly decreased due to the slope, but impact position improved as pressure shifted forward.

Right Foot Push Drill:

- Objective:** Enhance lateral shift and balance through impact.
- Execution:** Focused on sliding and pushing off the trail foot to promote efficient pressure transfer toward the target.
- Results:** Increased horizontal force peak. Cleaner, more consistent impact positions with 80% pressure on the lead foot at impact. Reduced reliance on elongated torque forces, contributing to smoother and more repeatable ball striking.

OUTCOMES

Improved Impact Position: Training on the upslope and with right-foot drills shifted Charlie's weight distribution, ensuring 80% pressure on his lead foot at impact—a marked improvement in his stability and power.

Optimized GRF Application: The drills helped balance horizontal, torque, and vertical forces, leading to a more efficient swing.

Enhanced Consistency: By targeting specific inefficiencies, Charlie demonstrated more reliable ball-striking performance.

INSIGHTS

Slope-Based Training Benefits: The Zen Swing Stage provided a realistic environment to replicate uneven lies and challenge Charlie's movement patterns, encouraging adaptive GRF strategies.

Quantifiable Improvement: Data from Swing Catalyst validated the effectiveness of the interventions, ensuring an evidence-based approach to coaching.

Practical Applications for Coaches: This case illustrates the potential for GRF-focused training to address common swing inefficiencies, offering actionable insights for golf instructors.

CONCLUSION

This case study highlights how combining the Zen Swing Stage and Swing Catalyst Dual Plates enables coaches to assess, address, and refine a golfer's swing mechanics. By incorporating slope-based training and biomechanical feedback, Daniel Gray helped Charlie Kitchen achieve greater consistency and efficiency in his swing.



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