

STROKE ANALYSIS

Chris Silva Forehand

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05

CORRECTIONS

04

PHASES ANALYSED

0:02

CLIP LENGTH

ANALYSIS BY

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AT A GLANCE

Key findings

5 corrections across 4 phases of the stroke. Each one is broken down on the pages that follow, closing with the overall assessment.



NO.	TIME	PHASE	FINDING	PAGE
01	0:00.00	Preparation	Split step with a wide, stable base	03
02	0:00.73	Loading	Unbalanced base · no right-leg drive	04
03	0:00.97	Acceleration	Premature trunk rotation · shoulders open early	05
04	0:01.17	Acceleration	Elbow leads the follow-through	06
05	0:01.07	Contact	Most of the power comes from the arm	07

PHASE 01 / 05

Preparation



01

Split step with a wide, stable base

A well-timed split step, landing as the opponent strikes the ball, pre-activates the leg muscles and uses the stretch-shortening cycle. With a wide base of support and a low center of mass, the player stays dynamically balanced and can react and move to the ball with less effort and a quicker first step.

PHASE 02 / 05

Loading



02

Unbalanced base · no right-leg drive

Body weight is poorly distributed across the base of support, preventing the right (back) leg from loading. With no pre-load there is no effective push-off, so ground reaction forces, the first link of the kinetic chain, are barely generated. The forward weight transfer into the ball is reduced, hip rotation lacks drive, and the upper body has to compensate for the missing power, at the cost of consistency and balance.

PHASE 03 / 05

Acceleration



03

Premature trunk rotation · shoulders open early

The left shoulder opens too early, dissipating the energy stored in the trunk. The rotation is lost before contact, so the right arm ends up generating all the power on its own.

04

Elbow leads the follow-through

Post-contact, the elbow rises and becomes the leading segment instead of the racket head. This breaks the proximal-to-distal release at the end of the chain: the forearm and wrist can't whip through, so racket-head speed drops right where it should peak, the low-to-high brushing action that generates spin is lost, and the stroke feels rigid. Keeping the elbow leading also concentrates deceleration in the shoulder rather than distributing it through a full follow-through.



PHASE 04 / 05

Contact



05

Most of the power comes from the arm

At the contact point, the kinetic chain is largely disconnected: limited knee flexion means little ground reaction force, and the hips and trunk show minimal rotation into the ball, so the proximal segments contribute little angular velocity. The non-hitting arm stays away from the body instead of folding in to brake and transfer the rotation. The stroke becomes arm-dominant, with the right arm reaching to generate power on its own, reducing racket-head speed and repeatability and concentrating stress on the shoulder and elbow.

CONCLUSION

Overall assessment

The stroke starts from a solid foundation: the split step is well timed, with a wide, stable base and a low center of mass that allows an efficient first step to the ball.

From the loading phase onward, however, the kinetic chain breaks down, and each issue feeds the next:

Loading: the weight isn't settled onto the right leg, so there is no push-off and almost no energy comes from the ground.

Acceleration: without drive from the hips, the left shoulder opens too early and the energy stored in the trunk is dissipated before contact.

Contact: with legs and trunk barely contributing, the right arm reaches for the ball and has to generate the power on its own.

Follow-through: the elbow leads instead of the racket head, cutting acceleration and spin short.

The result is an arm-dominant stroke: less racket-head speed and spin, less consistency, and more stress on the shoulder and elbow.

Priorities for improvement (in this order)

Load and drive with the legs. Settle the weight onto the right leg in the take-back (knee flexed, weight on the ball of the foot) and push off into the ball.

Drill: shadow swings pausing at the end of the take-back to feel the load, then drive into the swing; progress to fed balls.

Let the hips lead and keep the left shoulder closed longer. Start the forward rotation with the hips while the left shoulder keeps pointing at the ball a fraction longer; fold the left arm into the chest as the trunk turns.

Drill: hit with the left arm extended toward the ball until just before contact, then fold it in.

Release the racket through the ball. Keep the elbow relaxed and lower after contact and let the forearm rotate so the racket head passes the hand and finishes over the left shoulder.

Drill: slow-paced rallies focusing on a full finish "catching the racket" over the left shoulder, then increase pace.

Expected outcome

As the legs and trunk take back their role in the chain, power will come from the ground up rather than from the arm: more racket-head speed and spin with less effort, better control of depth and direction, and less load on the shoulder and elbow.

Next step: work on these priorities for 3–4 weeks, then record a new video from the same angle so we can measure the progress.

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Measurements from single-camera 2D video are calibrated estimates, most reliable when the athlete is on the same ground plane used to set the scale. They are intended for coaching comparison, not laboratory precision.