
The Parent's Guide to Teaching Your Kid to Shoot

A science-backed, progressive approach to building a confident, consistent basketball shot

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Introduction

If your child has ever come home from basketball practice frustrated about their shooting, you're not alone. Shooting is the single most important skill in basketball, and it's also one of the hardest to develop. The good news? With the right approach, any young player can become a confident, consistent shooter.

This guide is built on a progressive, ground-up methodology used by some of the world's top shooting coaches. Instead of trying to fix everything at once, we build the shot from the foundation up — starting with how energy is created, then how the ball moves through the body, and finally how to shoot on the move in game-like situations.

We've also drawn on peer-reviewed sports science research to make sure every recommendation in this guide is backed by evidence, not just tradition.

Key Principle: Shooting is a skill that can be developed by anybody who decides they want to get good at it. Over the next few chapters, we'll give you the framework — it's on your child to take that information, understand it, and implement it.

A Note from Alistair Perry, Founder of HoopsAI

I didn't grow up playing basketball. I hold a Bachelor of Science degree and competed as a professional athlete, but in a different sport entirely. Basketball entered my life when my middle daughter was six years old. She watched her older cousin play a game, fell in love with the sport on the spot, and demanded we let her play.

She quickly showed she had something special — not just natural ability, but an extraordinary willingness to work. Within a year, it was clear basketball was going to be a big part of our family's life.

In her second year, her team needed a coach — so I put my hand up. I was brand new to basketball, but I brought something valuable from my own sporting career: I knew how elite athletes train, and I knew how to learn.

So I went all in. I attended coaching clinics. I studied courses from experienced coaches. I read peer-reviewed research on motor learning, skill acquisition, and biomechanics. I watched hundreds of hours of coaching content. Season after season, I improved — both as a team coach and in helping my daughter develop her individual skills.

When COVID paused competitive basketball for two years, my daughter turned the break into her biggest opportunity — she spent those two years working tirelessly on her shooting. Every day, rain or shine, she was in the driveway putting up shots. When competition returned, she came back a different player.

What set her apart was work. She matched her love of the game with rare discipline — daily training, specific goals, and a willingness to be coached. Those habits compounded season after season and built a work ethic that talent alone can't provide.

Today, she holds a full-ride athletic scholarship at a Division I university in the United States. Last year, she was invited to the NBA Basketball Without Borders international camp — a recognition reserved for the top young players globally. Her journey was powered by love of the game, great coaching, and thousands of hours of smart, deliberate practice.

Along her journey, we learned from some exceptional coaches. I studied what made them exceptional — how they ran sessions, how they built confidence, how they developed skills that held up in games — and brought those lessons to my own coaching.

HoopsAI is the tool I wish I had when I started. It takes everything I learned over a decade of coaching — the science, the methodology, the experience — and makes it accessible to every parent and coach, at a price that makes quality coaching available to every family.

Our mission: fast-track the coaching journey for parent coaches and give young players access to quality, science-backed development tools — without the premium price tag.

Chapter 1: What the Science Says

Before we get into drills, it's worth understanding what researchers have discovered about what actually makes a good shooter. This isn't guesswork — it's physics and biomechanics.

Backspin and Accuracy

A 2022 study published in the Journal of Sports Sciences by Slegers and Love found that backspin alignment is one of the strongest predictors of shooting accuracy. Players whose backspin axis was consistently aligned with their shooting direction made significantly more shots than those with tilted or variable spin.

What does this mean for your child? It means the follow-through matters. A clean, straight release with the fingers rolling off the ball produces aligned backspin. If the ball wobbles or spins sideways, the release mechanics need work — and that starts with how the ball moves through the body, not just the wrist flick at the end.

Differential Training: Why Variety Beats Repetition

A 2025 study published in Frontiers in Psychology by Burkaitė and colleagues tested whether differential training — deliberately introducing variability into shooting practice — could outperform traditional repetitive training in youth basketball players. Over 8 weeks, the differential training group significantly improved their 2-point shooting accuracy compared to the traditional group. Even more impressive, those gains were retained at a follow-up test.

This confirms what motor learning researchers have long suspected: the brain builds stronger, more adaptable movement patterns when it has to solve slightly different problems each time. Practising the same shot from the same spot over and over feels productive, but varying distance, angle, and movement produces better long-term results.

The evidence goes back decades. Martens (1992) had players practise set shots either from one fixed distance or from four varied distances, then tested everyone from a distance neither group had practised. The varied group made more shots — and was still ahead three weeks later, with no practice in between. Varied practice builds a shot that adapts; fixed-spot practice builds a shot that only works from that spot.

Takeaway: Don't just stand in one spot and shoot 100 times. Move around. Vary the distance and angle. Your child's brain will thank you.

Strength and Shooting: The Leg Connection

A 2022 study from the University of Kansas by Cabarkapa and colleagues found a significant relationship between lower body strength (back squat) and shooting accuracy across free

throws, two-point, and three-point shots. Interestingly, upper body strength (bench press) showed almost no correlation with shooting accuracy.

This makes biomechanical sense — the power for a basketball shot comes from the ground up, through the legs and core. A 2026 study by Karaca confirmed this in 8–12 year olds specifically: shooting performance correlated with lower limb explosive power (vertical jump) and core endurance (plank hold).

This is why we teach energy production first and shooting hand mechanics second. The legs are the engine of the shot.

Muscle Coordination: It's a Whole-Body Skill

A 2022 study by Matsunaga and Oshikawa used electromyography to measure 16 different muscles during free throw shooting. They found that the coordination pattern — how muscles fire together as a unit — was fundamentally different between made and missed shots. It wasn't that one muscle was weak; it was that the timing and coordination across the whole body mattered.

This is exactly why the progressive approach works. When you build shooting from the ground up, you're training the whole kinetic chain to fire in sequence, not just teaching hand position in isolation.

The Right Ball for the Right Age

A 2024 cross-sectional study of 244 elementary school students (ages 6–11) by Samodra and colleagues found that shooting ability develops progressively with age, and that using modified (smaller) basketballs significantly improves shooting accuracy and mechanics in younger children. The research supports what many coaches already know — giving a 7-year-old a full-size ball forces them to compensate with poor mechanics.

Age	Recommended ball
6–9	Size 5
10–12	Size 5 or 6, depending on hand size
13+	Size 6 (girls/women) or Size 7 (boys/men)

How Distance Changes the Shot

A 2021 kinematic study by Vencurik and colleagues used 3D motion capture to analyse how elite youth players adapted their jump shot from 2-point and 3-point range. Key findings:

when shooting from further out, players flatten their release angle and increase ball velocity. Fatigue degrades these mechanics — the elbow and upper arm angles collapse, reducing accuracy.

The practical implication? Don't let your child shoot from beyond their comfortable range. If they have to change their form to reach the basket, they're too far away. Move closer, establish good mechanics, then gradually extend range as strength develops.

Progressive Overload in Skill Acquisition

Just like strength training, shooting development follows the principle of progressive overload. You start with the simplest version of the movement, master it, then add complexity. Trying to teach a young player to shoot a three-pointer before they can consistently make a shot from three metres is like asking someone to bench press 100kg before they've learned proper form with the bar.

A 2021 systematic review by França and colleagues in the International Journal of Environmental Research and Public Health analysed all available research on youth jump shot performance. Their conclusion reinforced the progressive approach: game-related conditions (distance, fatigue, defender presence) all significantly affect shooting mechanics, and younger players are more sensitive to these variables than experienced adults.

The program in this guide follows an 8-phase progression from stationary form work to full game-speed shooting off the dribble. Each phase builds on the last.

Chapter 2: The Ground-Up Approach

Most shooting coaches teach from the top down: hand position, elbow angle, follow-through. The ground-up approach flips this. We start with how energy is generated in the lower body and how the ball moves through the body before we worry about fine motor details like hand placement.

Why? Because if the ball isn't moving efficiently through the body, no amount of hand adjustment will fix the shot. Get the sequencing right, and hand and guide hand issues become far easier to fix.

The Core Concept: Leverage

Think of shooting like a chain reaction. Energy starts in the legs, travels up through the core, into the shooting arm, and out through the fingertips. The goal is to move the ball with great force but little effort — that's leverage.

The key insight is this: the ball moves first, the body follows. The ball travels from the shot pocket (just above the hip, where every shot starts) up to the set point (hand directly under the ball, where the shot launches) while the body stays still — the hips engage only when the ball reaches the set point. This is the opposite of what most coaches teach ("bend your knees, then push up"), and it's the most energy-efficient sequence in shooting.

Think of it like this: "Just pass it to the basket." The less stopping in the shot, the more efficient and repeatable it becomes.

The 8 Phases

The program progresses through eight phases, each focusing on one element of shooting. Spend at least a week on each — longer if needed, there's no rush. This guide covers the concepts and sample drills for each phase; the complete program — daily workouts, video demonstrations, progress tracking — is in the HoopsAI Shooting Program.

1. Energy — How to generate consistent, efficient power from the ground up
2. Connection — Moving the ball up the body smoothly to reach leverage points
3. One Hand & Guide Hand — Isolating the shooting hand; understanding the guide hand's role
4. Movement — Adding hops, pullbacks, and dynamic footwork
5. Dribble — Shooting off the dribble with proper hand preparation
6. Momentum — Developing range through faster ball movement
7. Shooting on the Move — Catch-and-shoot progressions with a partner
8. Integration — Putting it all together in full workout format

Chapter 3: Building the Foundation — Energy

The first phase is all about understanding how the ball should move. Before your child takes a single shot at a hoop, they need to feel what efficient energy production feels like.

Yes, you read that right — no shooting at a basket in the first phase. When trying to understand something new, it's important to remove outcomes (making or missing) and just focus on the movement itself. Players who do this make huge strides because they're connecting to how the ball should move without the pressure of results.

Key Concepts

- The ball moves up the body in one smooth motion — no stopping or hitching
- Energy starts from the ground, transfers through the legs, and pushes the ball upward
- The shooting motion should feel like a single flowing action, not a series of positions

Try This: Ball Raises

Set your level first: drop into your shooting stance with knees bent, exactly as you would at the start of any shot, weight even across both feet, chest and eyes up. Hold the ball in your shot pocket, just above the hip. In one smooth, continuous motion, move the ball up to your set point — hand directly under the ball, shooting thumb around eyebrow height — while your body holds that level completely still. The knees stay bent; the hips don't fire; only the ball travels. Return to the pocket and repeat. Do 30–50 repetitions depending on age and ability, always one smooth flow — never pause partway.

This drill teaches the shooter to move the ball before they move their body. The hips shouldn't engage until the ball reaches the set point — that's the most energy-efficient sequence there is. No shot — just the movement pattern.

Try This: Shoot the Line

Straddle a straight line on the court (or tape one on your driveway) so it runs between your feet. Using your normal shooting form, shoot the ball straight up as high as you comfortably can — the ball should land back on the line, right where it started. This is the perfect follow-on from Ball Raises: now the hips fire at the exact moment the ball reaches the set point, and the release happens with no basket and no pressure.

The line gives instant feedback: lands in front and you pushed it forward, behind and you pulled it, left or right and the hand wasn't centred under the ball. The higher you shoot, the harder it gets. Aim for 30–50 repetitions.

Try This: Momentum Shots

Once the raise pattern is smooth, this stationary drill teaches moving the ball FAST into the shot — it builds rhythm, and over time it generates distance. Set your stance in the dropped posture with the ball in the shot pocket. Take ONE pound dribble — the ball stays around waist height — and as it bounces back up, take it straight through your set point and into the shot without letting it stop at the pocket. The momentum of the bounce pushes the ball through the shot line faster than usual. Eyes up the whole time, the ball never stops moving, and release on the way up — the ball rises before the body attaches to it.

Chapter 4: Connection and Hand Work

Once your child understands how energy moves through the body, the next phases focus on getting the ball from low to high efficiently (connection) and then isolating what each hand does.

Connection: Getting to Leverage Points

The more connected the shooting motion, the easier it is to reach leverage points — the positions where the ball can be released with minimal effort and maximum accuracy. Think of running: you don't think about each leg individually, the body just flows. Shooting should feel the same.

The key is limiting direction changes as the ball moves up the body. Every time the ball stops or changes direction, you lose energy and introduce variability.

Try This: Ball Raises into the Shot

This is the bridge from Chapter 3's Ball Raises into a real shot, and it works as a two-rep cycle. Rep one: a normal ball raise — pocket to set point in one smooth motion, body still — then return the ball to the shot pocket. Rep two: repeat the ball raise, but the moment the ball reaches the set point, engage the hips and finish the shot. Alternating like this lets your child concentrate on moving the ball first, then on connecting that movement into the shot.

The Guide Hand

Here's something most parents don't know: the guide hand has two jobs — balancing the basketball AND balancing the shooter. It rests on the side of the ball with light palm pressure while the shooting hand does all the work, and the two arms mirror each other — elbows together, wrists together, both hands extending to the target through the follow-through.

Watch for two guide-hand faults. The obvious one: adding pressure — pushing, steering, or flicking at release, which sends the ball left or right. The sneaky one: pulling the guide hand off too early, which costs ball control and balance and gets worse the faster your child shoots. Keep its light contact as long as possible while everything extends toward the target.

Try This: One-Hand Form Shooting

From close range, shoot with the shooting hand only — the guide hand goes completely behind your back. Straddle a line on the floor (the free-throw lane line works well), shooting-side foot slightly forward on it. Start with the ball on the shooting hip and shoot straight up the line: the ball should land back on the line, fingers finishing pointed straight down it. With no guide hand to hide problems, the line exposes every left/right push. Work three close spots: right side, front, left side.

Try This: Guide Hand Slides

Start exactly like one-hand shooting — ball moving, close to the body. Now place the guide hand on the ball with the PALM only, no fingers, using as little pressure as possible. Shoot, and work on keeping that palm contact as long as possible while both hands extend toward the target. This teaches the guide hand to do its two jobs — balancing the ball and balancing the body — without ever pushing the shot.

Chapter 5: Adding Movement

Real basketball involves movement. Nobody stands still and shoots in a game. But before adding movement, the stationary foundation needs to be solid. If your child can't make stationary shots consistently, go back to the earlier phases — there's no harm in that.

Types of Movement to Add

- Forward hops — hop toward the basket, land, shoot
- Backward hops — hop away from the basket, land, shoot
- Pullbacks — take a step back and shoot (creates space in games)
- Lateral slides — move side to side, then shoot

Start each movement from close range. The goal isn't to make every shot — it's to maintain proper form while moving. If the mechanics break down, reduce the complexity.

Try This: One-Position Hops

From five spots around the basket (baseline, wing, centre, wing, baseline), hop forward into your shot and make 5 from each spot (25 total). Then do the same hopping backward. Focus on landing balanced and maintaining your shooting form through the movement.

Try This: Drop Shots

Start standing tall with the ball at your waist. Drop into your shooting stance while pulling the ball into the shot pocket — the drop and the ball arriving happen at the same time — then shoot. Game shots rarely start from a perfect stance; this trains getting under the ball quickly into the ideal starting position. Work from the free-throw line or further out.

Try This: Pull Backs

Start standing straight with the ball held straight out in front, arms extended. Drop into a half-squat as you pull the ball into the shot pocket — both arrive together — then shoot. Vary the angle you pull the ball in from: each angle simulates gathering a pass from that direction. Free-throw line extended or further back.

Chapter 6: Shooting Off the Dribble

Shooting off the dribble is the most complex shooting skill. It combines ball handling, footwork, hand preparation, and shooting mechanics in one fluid motion. This is where the progressive approach really pays off — if the foundation is solid, adding a dribble is just one more layer.

Hand Preparation

The biggest challenge in dribble pull-ups is getting the hand under the ball quickly after the last dribble. This is called hand preparation — transitioning from a dribbling hand position (on top of the ball) to a shooting hand position (under the ball).

Players who rush this transition often shoot with the hand on the side of the ball, producing sideways spin and inconsistency. The fix is practice — lots of slow, deliberate reps picking the ball up off the dribble into shooting position.

Try This: Single Dribble Shots

One hard dribble into the shot. The dribble times with your step, the last bounce lands between your feet, and the hands go early to meet the ball — go and GET it off the floor rather than waiting for it. Keep the ball close: think of the dribbling elbow attached to your hip. Work right-hand and left-hand dribbles evenly, from the free-throw line extended or further back. This is hand preparation made into a drill — every rep is a transition from dribbling hand to shooting hand.

The Research on Catch-and-Shoot vs Off-the-Dribble

Data from professional basketball shows that catch-and-shoot attempts are generally more accurate than off-the-dribble shots. This makes sense — fewer variables, more time to set up. But the best scorers can do both, and the ability to shoot off the dribble creates separation from defenders.

For young players, prioritise catch-and-shoot first. Once they're consistent from a pass, introduce one-dribble pull-ups. Full dribble combinations come last.

Chapter 7: What to Expect at Each Age

One of the biggest mistakes parents make is expecting too much, too soon. Shooting development follows a predictable timeline, and rushing it creates bad habits that are harder to fix later.

Age	Ball	Focus at a glance
6–8	Size 5	Foundation only — coordination, fun, energy and connection drills
9–11	Size 5–6	Close-range form shooting, one-hand drills, basic tracking
12–14	Size 6–7	Movement shooting, off the dribble, free-throw routine
15–16	Size 6–7	Full range, pressure drills, film review

Ages 6–8: Foundation Only

- Focus on ball handling, coordination, and having fun
- Use a lower hoop if possible
- Energy and connection drills only — no distance shooting
- Success = smooth movement, not makes and misses

Ages 9–11: Building the Shot

- Introduce form shooting from close range (2–4 metres)
- Start one-hand shooting drills
- Begin tracking makes and misses to build awareness

Ages 12–14: Adding Complexity

- Movement shooting (hops, pullbacks)
- Shooting off the dribble (one-dribble pull-ups)
- Game-speed drills with a partner
- Begin free-throw routine development

Ages 15–16: Refinement

- Full range shooting (including three-point line)
- Complex dribble combinations into shots
- Pressure drills (timed, fatigued, competitive)
- Film review and self-analysis

Chapter 8: Structuring Practice at Home

You don't need a gym, a coach, or fancy equipment. A driveway hoop, a basketball, and 30 minutes is enough to make real progress. Here's how to structure a home shooting session.

A Sample 30-Minute Session

Segment	Time	What to do
Warm-up	5 min	Ball raises, shoot-the-line, backboard shots — calibration drills that get the body into shooting mode
Form work	10 min	Close-range form shooting, one-hand drills, guide hand slides. Focus on quality, not quantity
Game-speed drills	10 min	Movement shooting, catch-and-shoot (have a parent or sibling pass), pullbacks. Add pressure: "make 5 in a row before moving on"
Free throws	5 min	Practise the pre-shot routine. Shoot 10–20 free throws with the full routine each time

Keeping Drills Fresh

Kids get bored repeating the same drill — but the answer isn't new drills, it's new layers on the same drill. Add ONE change at a time: a different entry into the shot (a drop into the stance, a pullback from arms-length, spinning the ball out and catching it, a small hop, a turn), or a challenge before the shot that forces the hands to re-prepare — wrap the ball around your head or waist and land it in the pocket, fake a pass left or right then reset and shoot, or take one hard dribble into the pocket. Same drill underneath, brand-new feel — and every variation trains the hands to find the same pocket and the same set point from a different starting picture.

Practising Without a Partner

No rebounder or passer? The flip-out fills in. Flip the ball out in front of you with backspin so it bounces straight back, then catch and shoot in one motion — feet ready before the ball arrives. Flip it out to the side to simulate passes from different angles, alternating sides each rep — except in the corners, where you flip out to the inside only, because a pass never comes from behind the baseline.

For Older Players: Planning Around Game Weeks

Once your child is playing regular competitive games (typically the older age groups), shape the week around them. Days well before a game are for the deeper work — form changes, foundation drills, new challenges. The day before a game, keep it light and familiar: varied shooting at comfortable difficulty, nothing new. On game day, a short set of easy, confident makes close to the basket is worth more than a hard session. And after a game, rest counts as training too. Big technical changes belong in the off-season, when there are no games to protect.

How Often?

3–4 sessions per week is ideal for most young players. More than that risks burnout. Less than twice a week makes it hard to build muscle memory. Consistency over intensity — 30 minutes four times a week beats a two-hour marathon once a week.

Tracking Progress

Research shows that players who track their shooting data improve faster than those who don't. Even simple tracking — makes out of attempts per drill — creates awareness and motivation.

The HoopsAI Shooting Program automates this. Log your drills, and the app calculates your rating across six categories: catch-and-shoot, movement shooting, free throws, shot speed, swish rate, and fatigue resistance. Age-adjusted benchmarks show exactly where you stand and what to work on next.

Chapter 9: Common Mistakes and How to Fix Them

1. Starting Too Far From the Basket

Young players love shooting from long range. But distance before form creates bad habits — pushing the ball, side-arming, and leaning. Start every session close (2–3 metres) and only move back when makes are consistent.

2. Focusing on Makes, Not Mechanics

A shot that goes in with bad form will eventually stop going in. Early on, form matters more than results. Celebrate good mechanics even when the shot misses.

3. Too Much Guide Hand

If the ball spins sideways or curves left/right, the guide hand is pushing. Go back to one-hand shooting drills until the release is clean, then add the guide hand back as a passive balancer.

4. Skipping the Foundation

It's tempting to jump straight to game-speed drills. But without the energy and connection foundation, movement shooting will be inconsistent. Trust the progression.

5. Practising When Exhausted

Quality reps matter more than quantity. When fatigue sets in, form breaks down and the brain learns bad patterns. End the session when form starts to slip, even if you haven't finished all planned drills.

Chapter 10: Building Confidence

Shooting is as much mental as it is physical. The best shooters in the world have unshakeable confidence in their shot, and that confidence comes from preparation, not talent.

The Pre-Shot Routine

Every great free-throw shooter has a routine: bounces, breath, visualisation, shoot. The routine creates consistency and calms the nervous system. Help your child develop their own routine and use it every single time they shoot a free throw — in practice and in games. Free throws are also the one exception to the variety rule from Chapter 1: same spot, same routine, same rhythm, every single time.

There's a deeper layer to this. A 2025 study in PLOS ONE found that experienced players can sense whether a free throw is going in before the ball lands — an internal “feel” for the shot, built through thousands of focused repetitions with attention on how the release felt rather than just where the ball went. That feel is trainable.

Try This: Call Your Shot

During free-throw practice, have your child call “make” or “miss” the instant the ball leaves their hand — before they see the result. Score 2 points for a called make that goes in, 1 point for any correct call. Calling the shot forces attention onto the feel of the release, and over time it builds the internal model that lets great shooters step to the line expecting to make it.

Short Memory

Missed shots happen. The best shooters forget misses instantly and approach the next shot with full confidence. Teach your child that missing is part of the process, not a sign of failure. The shot mechanics don't change just because the last one didn't go in.

Your Role as a Parent

Be encouraging, not corrective. Resist the urge to coach from the sideline. Celebrate effort and improvement, not just makes. If your child is following this program and putting in consistent work, the results will come.

Remember: Shooting is a skill that can be developed by anybody who decides they want to get good at it. Your child's best shooting days are ahead of them.

Take the Next Step

This guide has given you the framework. Now it's time to put it into action.

The HoopsAI Shooting Program takes everything in this guide and turns it into a structured, trackable experience:

- Log every shooting session with detailed drill tracking
- Get an automated shooter rating across 6 key categories
- See age-adjusted benchmarks so you know exactly where you stand
- Track progress over time with visual charts and trends
- Get AI-powered recommendations built from your logged sessions and miss patterns

Whether your child is just starting out or looking to take their shot to the next level, HoopsAI gives them the tools to measure, track, and improve with confidence.

Go Deeper on hoopsai.com.au

Why Traditional Shooting Drills Fail Kids Under 10 (And What to Do Instead) —

hoopsai.com.au/blog/why-shooting-drills-fail-under-10s

How to Teach Kids to Shoot: The 1-2-Thru Sequence — hoopsai.com.au/blog/teach-kids-shooting-one-two-thru

Free Throw Routine: Build Consistency Under Pressure — hoopsai.com.au/blog/free-throw-routine

Why Variable Practice Improves Basketball Shooting More Than Repetition —

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