

Basketball: Form & Technique

Knowledge Base

What the Game Demands (Short Description)

Basketball blends quick acceleration, sharp deceleration, vertical power, and repeatable upper-body mechanics. Elite play relies on efficient footwork, balance control, and shot creation via angles, elevation, and touch.

Universal Foundations

- Athletic stance: feet slightly wider than shoulders, knees soft, hips back, chest tall, weight on mid-foot/forefoot.
- Balance & base: landings and takeoffs in line; avoid drifting sideways unless intentionally creating space.
- Alignment: shooting side (eye-elbow-knee-toe) aligned to target; slight toe-in is acceptable if repeatable.
- Sequencing: ground → hips → torso → arm → wrist; smooth energy transfer without jerks.
- Eyes & focus: pick an aiming cue (front rim, back rim, or backboard spot) and commit to it through release.

Footwork & Movement

- Jump stop & stride stop: arrive on balance to shoot, pass, or pivot either foot.
- Pivots: inside/outside pivots to create passing lanes and shot space; keep pivot foot quiet.
- Decel mechanics: sit hips, lower center of mass, short braking steps to stop under control from speed.
- First step: explosive hip drive; rip the ball through the frame and attack the lead foot of the defender.
- Change of direction: cross-step, hip turn, and drop steps; maintain low shin angle for acceleration.
- Vertical jumping: load through ankles-knees-hips; arms swing up; land softly with knee/hip alignment.

Shooting Mechanics (Jump Shot & Set Shot)

- Stance: comfortable width; slight stagger ok; shoulders relaxed; ball pocket around chest/waist.
- Gather: controlled dip to load legs; hands set with guide hand light on the side.

- Lift: up first, then out—release near apex to reduce horizontal drift.
- Elbow & wrist: elbow under ball; forearm vertical; relaxed wrist snap for consistent backspin ($\approx 2\text{--}3$ rps).
- Arc & entry: target entry angle $\sim 48\text{--}52^\circ$ for many jumpers; flatter with higher release, higher arc over contests.
- Follow-through: fingers to rim, wrist relaxed; hold until ball descends.

Common fixes: front-rim \rightarrow add arc or power; back-rim hard \rightarrow reduce speed or arc; left/right \rightarrow check foot/hip alignment and follow-through.

Finishing at the Rim (Layups, Reverse, Floaters)

- Standard layup: outside foot last step; eyes on inside square; extend high and finish off glass with soft touch.
- Reverse layup: use rim as protection; aim above opposite corner of the square; keep body between ball and defender.
- Euro step: long lateral step then opposite step to avoid charge; keep ball protected across the body.
- Pro hop: two-foot jump stop through the lane; read shot blockers, finish off either pivot.
- Floaters/runners: one-foot or two-foot; higher arc ($\approx 55\text{--}65^\circ$ entry) to drop over length; soft, quick release.

Post & Mid-Post Scoring

- Seals: wide base, hips low; show target hand; meet the pass with two feet to rim.
- Drop step: pivot baseline/middle; shoulder through; finish strong off glass.
- Hook/skyhook: body side-on; ball high; long reach and soft wrist for high-arc release.
- Turnaround: inside shoulder fake; elevate straight up; square in the air before release.
- Counters: up-and-under, step-throughs; keep pivot foot anchored and eyes level.

Off-the-Dribble Shooting (Pull-ups, Step-backs, Side-steps)

- Pull-up: sharp decel into vertical rise; keep shoulders over hips; release at/near apex.
- Step-back: create space with long brake step and push-back; land balanced—not falling away excessively.
- Side-step 3: lateral hop to clear contest; square shoulders mid-air; same release as catch-and-shoot.

Ball-Handling Technique

- Hand on top/outside of ball; push the floor with fingertips (not palm).
- Change-of-pace: alternate speeds; hesitate then explode to shift defender's timing.
- Change-of-direction: crossover, between-legs, behind-back; keep dribble below knee under pressure.
- Protection: use off-arm and body; dribble opposite the defender's reach; keep ball out of the middle on drives.

Passing Technique

- Chest pass: step into target; thumbs down finish for backspin.
- Bounce pass: aim two-thirds of the way; stay low; zip through narrow windows.
- Overhead/skip: strong core and feet to target; throw on a line over help defense.
- Pocket/live-dribble passes: off the bounce with one hand; keep seams controlled; read help early.

Rebounding Technique

- First contact: hit-find-fetch—make contact, locate the ball, go get it.
- Box out: low hips, wide base, forearm contact; turn and pursue on the bounce, not the catch.
- High-point: two hands where possible; chin the ball; outlet with pivot to the sideline.

Defensive Stance & Footwork

- Stance: low hips, chest tall, hands active; weight on balls of feet.
- Slides: push off, don't hop; keep chest in front of ball; short, quick slides to cut angles.
- Closeouts: sprint 2/3, chop 1/3; high hands to contest; brake under control to avoid blow-by.
- Containment: angle ball to help; absorb contact with chest; mirror hips, not the ball.

Angles & Trajectory Cues (Quick Heuristics)

- Catch-and-shoot jumpers: target entry angle $\sim 48-52^\circ$; higher arc if contested or shorter distances.
- Wing & corner: slightly flatter release than top-of-key; keep vertical jump to avoid drifting.
- Floaters/hooks: emphasize height and soft release; think 'drop in from above'.
- Banks: from wing/short corner, visualize line to upper corner of the backboard square; softer velocity widens acceptance.

Simple Drills (High-Yield)

- Form shooting: 25 makes from 3–5 spots at close range focusing on elbow under ball and wrist snap.
- Catch-and-shoot spots: 5 locations \times 10 reps; no drift; hold follow-through.
- Floaters: 3 lanes (middle/left/right) \times 10 reps; aim high over an outstretched hand.
- Finishing series: standard, reverse, euro, pro-hop—5 each per side.
- Ball-handling ladders: 60–90 s sets of cross/through/behind; eyes up, stay low.
- Closeout-to-contest: partner pass, sprint-chop, high hands, wall-up—10 reps each side.

Shot Angles & Entries — Sentence Reference

- For a standard layup off the glass from about 0.5–1.5 m, release the ball at roughly 30–45° to achieve an entry angle of 35–45°, aiming for the top-near corner of the square with a soft finger roll.
- For a reverse layup from 0.5–1.5 m behind the rim, use a 40–55° release for a 40–55° entry, letting the rim protect the ball and kissing it high on the glass.
- On a floater/runner from 2–4 m, target a 50–65° release to get a 55–65° entry so it drops in over shot blockers.
- From the short corner (baseline 8–12 ft), a bank shot works best with a 45–55° release and 45–55° entry, striking near the upper, near-side corner of the square.
- At mid-range (elbows ~15–18 ft / 4.6–5.5 m), favor a 48–55° release and 50–55° entry, often slightly higher arc when straight-on.
- On wing jumpers from roughly 5–7 m, use a 46–52° release for a 48–52° entry, keeping alignment since wing angles can make shots a bit flatter.
- For a top-of-key three (FIBA ~6.75 m), a 47–50° release typically yields a 47–50° entry if your release height is around 2.0 m.
- For an NBA above-the-break three (7.24 m), a 45–48° release aims for a 45–48° entry; taller release points allow slightly flatter arcs.
- For a corner three (NBA ~6.7 m), shoot with a 46–50° release to get a 46–50° entry, focusing on a clean swish or soft back-rim since there's little backboard help.
- A hook shot from the low post (2–4 m) benefits from a 50–60° release producing a 55–65° entry, prioritizing height and a protected, high release.
- A bank shot from the 45° wing (4–6 m) works well with a 48–55° release and 50–55° entry, visualizing a line to the upper far-side corner of the square.
- On a free throw (4.57 m), use a 50–55° release to get a 50–55° entry, keeping a soft wrist and consistent routine.