

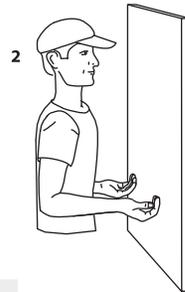
## These instructions will teach you the BASIC 3 BALL JUGGLING PATTERN called the CASCADE.

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These instructions are written for a Right Handed Person. If you are Left handed, please reverse the hand designations. Figures 6a to 9 are shown from the Juggler's Perspective.



**Fig 1.** Your upper arms should be at your sides, your shoulders relaxed, your arms bent with your elbows slightly back (See Fig. 2) and your forearms in a horizontal position. Imagine a plane, slightly above your hands, parallel to the floor. The balls are thrown from and caught in this plane.



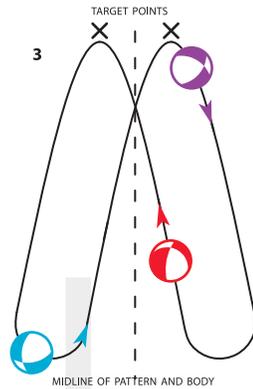
**Fig 2.** Visualize a vertical plane parallel to your body and passing through your hands. In the Cascade, the balls will travel in this plane. They are not thrown forward or backward.

**TIP:** Learning to juggle in front of a wall can be very helpful. It will give you a better sense of this plane, discourage throwing the balls forward and prevent you from walking forward as you juggle.

### Fig 5. HOLDING THE BALL.

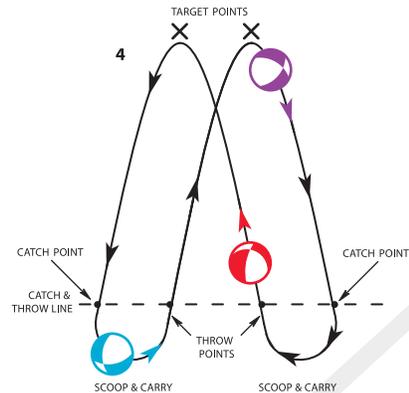


**Fig 5.** The ball is cupped in the center of the hand. Each ball is thrown and caught in this manner. Do not throw from or roll off of the fingertips.



**Fig 3.** The balls travel in a sideways figure eight pattern. The Three Ball Cascade pattern is symmetrical.

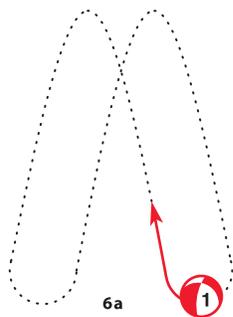
**Note:** The midline of the pattern coincides with the midline of your body. The balls are thrown to two imaginary target points (at the same height) approximately six to twelve inches above eye level and shoulder width apart.



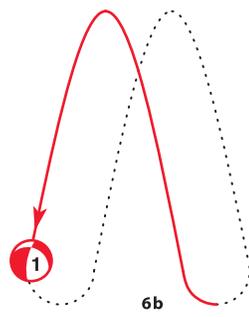
**Fig 4.** Each ball is caught slightly to the outside of the body, and with a *small underhand scooping motion* is carried to the inside and thrown to its Target Point (on the opposite side of the body). Each ball is thrown *under* the previously thrown ball (from the Opposite Hand). The movement of the balls is continuous, with throws executed in an alternating crisscross manner.

**TIP:** In all throwing and catching, keep your eyes focused on the top of the balls' arcs and *not* on your hands. If you look where the balls peak, you will know where they will land and where your hands need to be to catch them.

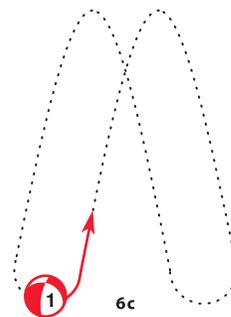
### Figs 6a-6d. ONE BALL: One Throw and One Catch.



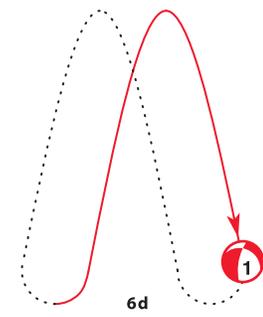
**Fig 6a.** Start with Ball 1 in your Right Hand. With an underhand scooping motion, throw it to your Left Target Point.



**Fig 6b.** Catch it with your Left Hand.  
**TIP:** Do not reach up to catch the balls; let each ball fall into your hand rather than reaching up to grab it (keep in mind the throwing and catching plane described above and illustrated in Fig. 1).



**Fig 6c.** Now, repeat and with the Left Hand, throw Ball 1 with an underhand scooping motion to its Right Target Point.

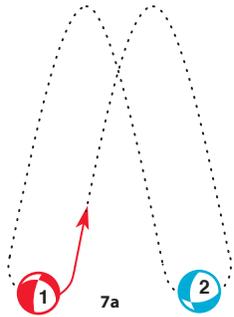


**Fig 6d.** Catch it with the Right Hand.  
**Continue this exercise (6a-6d) until you can throw the ball smoothly and accurately, throwing it to the same height and angle each time to reach your two Target Points.**

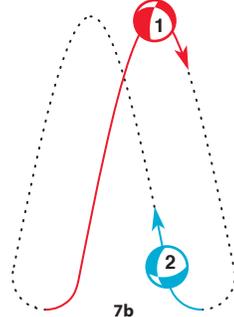
**Figs 7a-7d. THE TWO BALL EXCHANGE: Two Throws and Two Catches.**

In this exercise you will use two balls, one in each hand. **The most common error beginning jugglers make is to pass the ball across rather than tossing it up.** Another error is to fail to make all the throws the same height. Be sure to make your throws from your Non-Dominant Hand (Left Hand here) to the same height as from your dominant hand.

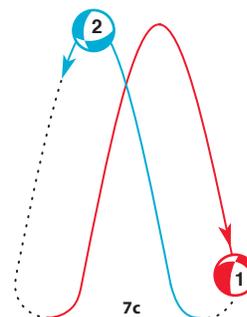
By making the first throw from the non-dominant hand, all attention can be focused on the more difficult throw before the second ball is in the juggling pattern. This is why we suggest starting with the Left Hand for the two ball exchange.



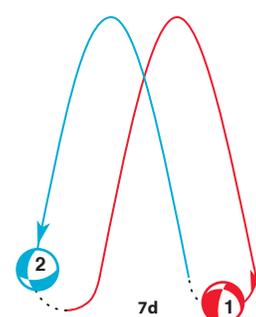
**Fig 7a.** Start with two balls, one in each hand. With an underhand scooping motion, throw Ball 1 (in Left Hand) to its Right Target Point.



**Fig 7b.** When Ball 1 reaches the Top of its Arc, throw Ball 2 (in the Right Hand) underneath Ball 1 to its Left Target Point.



**Fig 7c.** Catch Ball 1 with the Right Hand.



**Fig 7d.** Catch Ball 2 with the Left Hand. STOP! You are now back in the starting position, except with the balls in Opposite Hands.

**REPEAT THIS EXERCISE (7a-7d)—** until you can throw two balls smoothly with control, keeping them at the same height and in a flat vertical plane.

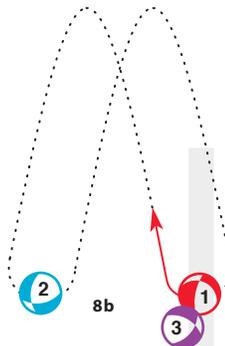
**Figs 8a-8f. THREE BALL FLASH: Three Throws and Three Catches.**

**Note:** The throws learned in Figs. 7a and 7b are identical in technique with Figs. 8b and 8c.

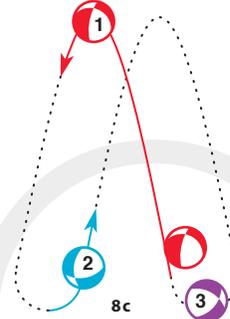


**Fig 8a.** Start with three balls, two in the Right Hand and one in the Left Hand. Ball 1 in the Right Hand is cradled with 3 fingers (thumb, index and middle) and will be thrown first. Ball 3 is held behind it against the heel of the hand with the ring and pinky fingers.

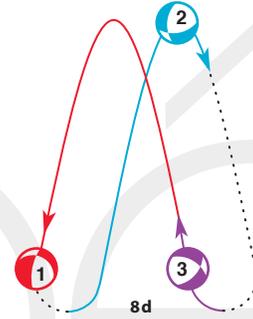
**Note:** In the beginning, there is a tendency to want to hold on to the balls rather than throw them. FOCUS ON THE THROWS. The catches will be easy. In the early stages of learning it is helpful to count your throws to help establish an even rhythm and gauge your progress.



**Fig 8b.** Throw Ball 1 (in the Right Hand) to its Left Hand Target Point.

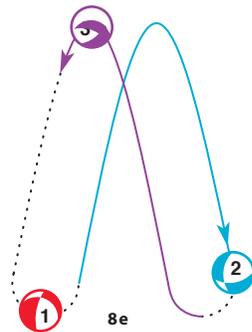


**Fig 8c.** When Ball 1 reaches the Peak of its Arc, throw Ball 2 in the Left Hand (underneath Ball 1) to its Right Hand Target Point.

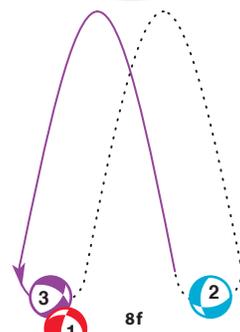


**Fig 8d.** Catch Ball 1. As Ball 2 reaches its peak, throw the remaining ball in the Right Hand (Ball 3) underneath Ball 2 to its Left Hand Target Point.

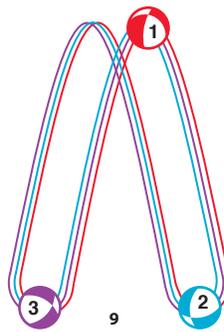
**Fig 9. JUGGLING THE THREE BALL CASCADE: Continuous Throws and Catches.**



**Fig 8e.** Catch Ball 2.



**Fig 8f.** Catch Ball 3 in the Left Hand (in a three finger cradle), finishing with two balls in the Left Hand and one in the Right. You have completed a "flash" of three balls: three throws and three catches.



**Fig 9.** After step 8e, throw Ball 1 (from the Left Hand) BEFORE catching Ball 3 (in the Left Hand as in Fig 8f). As Ball 1 reaches its Right Target Point, throw Ball 2 (from Right Hand) to its Left Target Point. Thereafter, as each ball reaches its Target Point, the next ball is thrown underneath it to the other Target Point.

**(Fig 9. cont.).** Continue this alternating crisscross pattern of throwing and catching—keeping only ONE BALL in either hand at any given moment—and you are JUGGLING THE CASCADE!

**OPTIONAL THREE BALL EXERCISE: Two Ball Exchange while holding a Third Ball as a "Rider."**

Some beginners are intimidated once they hold three balls. If you are having problems learning the 3 Ball Flash, you might want to try this optional exercise: Repeat the 2 Ball Exchange (Figs. 7a-7d) while holding Ball 3 in the Right Hand. **NOTE: Ball 3 is never thrown in this exercise—it just "rides" along in the palm of the Right Hand.** All throws and catches from the Right Hand are done with a Three Finger Cradle (see Fig 8a).