

Intro to Violin Technique

by Jeremy Bell

(revised Sept 2020)

This introduction to violin technique is a compendium of ideas derived from my teachers, all of whom share a reverence to the teachings of D.C. Dounis and Ivan Galamian. My teacher Metro Kozak studied with Galamian, David Zafer with Oskar Shumsky at Yale, George Neikrug with Dounis (for 15 years!), and Joyce Robbins was an assistant to Ivan Galamian at the Juilliard. The following draws from working with them.

Right Hand Basics

Wrist motion: Begin with jelly fish motion with wrist. Do slow up and down motions with the arm and watch your wrist wave during this motion. The wrist proceeds the arm. Now try this jelly fish on a diagonal as though bowing a violin. Never twist the wrist sideways in this motion or when playing the violin. This causes unnecessary strain to the thumb and top of the hand.

Find bow-hold at the wall: Go to wall and make a 90 degree angle with elbow. Make back of hand flush with the wall. Then make a circle with 2nd and thumb. Insert the bow at a perfect perpendicular. Then transplant the relation to the violin at the square of the bow (90 degree angle of the elbow).

Find bow-hold at balance point: hold the bow with just the thumb and second finger at the balance point, then let other fingers fall on the bow. Feel how you can wave your bow around like a magic wand. Now gradually inch your way to the frog. Practice mastering the bow crawl: Hold bow parallel to floor and without lifting a finger, slowly crawl to point and back to frog. Take care that bow remains stationary! Practice repertoire holding bow at balance point and also inverting the bow holding it at the tip.

Angles of the hold: Thumb and index make a 45 degree angle to the bow. Index touches between 1st and 2nd joint. The angle of this hold is a constant – tip to frog. Fingers should drop to the bow and be equidistant one from the other. This distance should be natural and not stretched, like fingers are soaking in water.

Angles of hair: Angled hair at frog, flat hair at tip. This is a major feature of Galamian bow arm that differentiates it from the Leningrad school. This idea of hair angle changing in the legato is necessitated by the fact that the wrist is pulling through the down bow and the wrist is never twisted but always straight line from the forearm. The hair angle at the frog should not flip at the bow change.

Bow change at the frog: Wrist does a circle, elbow does an oval. Wrist leads the motion, and precedes the down bow. Base of elbow and pinky tip should be roughly at the same height at the frog. Forte is produced by applying arm weight through the wrist and not through stressing the index finger.

Posture points:

The archer pose demonstrates line of shoulder at the frog. Learn to roll the right shoulder back as you approach the frog rather than grind it forward. Find frog angle by emulating an archer's straight-wrist pull of an arrow. Also find frog by landing straight down from a high reach of the right arm.

The ballerina pose demonstrates lifting arms from up-and-out muscle energy from the lower back. Arms rest on this energy from the ground up like a tree. The shoulder holds the elbow up giving a feeling of lightness to your arm; your shoulder comes up slightly out of its socket. The burden of the weight of the violin needs to be shared in a cultivated yin-yang sense between the thumb, shoulder, and jaw. Learn to use very little of your left shoulder so that it has piston-like potential to support briefly and drop completely (which should be most of the time).

The torso should be your centre of balance. Keep this part of your body strong when playing and not willowy. Move across your body like you would in a golf or baseball swing. Lunge from foot to foot without compromising the torso's integrity. Practice contrary motion and parallel motion with your scales.

Miming your ideal motions in front of a mirror without the violin is an important way to find natural muscle flow. 3 stages of miming: i) no violin, no bow. ii) just bow. iii) hovering bow over violin.

Super slow, super fast hovering bow: practice drawing a down bow as close to the string as possible and as slow as possible without touching the string. When you get to the tip go suddenly super fast to the frog, again without touching the string. Invert the exercise for up to down. Also practice repertoire above the string with the bow.

Circles exercise: Feel that you are making a large circle in the air and the string happens to be part of the bottom of the circle. Take consecutive down bows on any open string and end each bow by lifting off at the point and have the tip of the bow pizzicato all the open strings as you are continuing the circle. Then try consecutive up bows pizzicato-ing open strings with metal screw at the frog.

Tone groove: practice 16th notes fortississimo with full open sound starting at the frog and travelling to the tip. Try open strings and then choose notes from your repertoire. You will find the frog needs to be closer to your body at the frog than at the tip.

Bow landings in the upper-half with Kreutzer 7

Take single down bows 1 inch from the tip, then 2 inches, then 3. Always hover then alight onto the string. Hover towards the next lower string – this promotes a curve-like entry into the string.

Fingers should feel like they are soaking in water in the hover.

Curve in when you alight. “Pat the dog” on the down bow, so that index wags

Froggy leaps with a four-point check: (precursor to martelé)

Begin by silently tugging string horizontally at frog and check:

1. Thumb muscle is supple, thumb and index are curved, like kneading bread
2. Pinky knuckle is supple
3. Wrist is flexing straight downward, like revving a motorcycle
4. Elbow is ready to swing out on diagonal, along the plane of the string level (like painting a stripe on your sleeve)

Then leap forward with bow down an inch and check all points again. Continue to leap an inch at a time and check points. The only thing that changes at each tug point is declension the wrist and the bow hair becomes increasingly flat as you approach the tip. Hair naturally becomes more flat as a result of straight wrist.

Kreutzer 7 martelé

Open sound, don't squeeze the sound and don't squeeze the tail of the note. Note should end without noise or 'advance scouts'. Catch and release. Stroke ends on new string level

Martelé variations:

Down-rest-up-rest-down-rest-up

Down, down-rest-up, up-rest-down,down-rest-up,up

At lower and upper half.

Spiccato

Begin by whacking string with bow. Let bow shiver in fingers.

Then do rough down-ups making sure wrist is going down on down-bow

Then do groups of 4. Begin to refine stroke, less height, bounce in same place, don't twist hair

Sautillé

Build sautillé by cultivating the 'eraser stroke'. This stroke emulates holding a pencil with the eraser end protruding from index and thumb and erasing a spot on a page. Begin by pronating at elbow counter-clockwise so that fingers can push the bow perfectly horizontally. Do very small strokes by pushing fingers in a perfectly measured distance and speed. Don't twist hair and make smooth bow changes. Increase speed gradually. Observe that the down bow is active and the up is rebound. Then try triplets. Here the active motion is down with two rebounds and an up with two rebounds. Always come back to the same place in the fingers. Notice that wrist is a hinge and thereby going up on the down bow. All fingers contact the bow and 2nd and third may wish to contact bow more at tips of fingers. Gradually lessen the pronation at the elbow so that finger energy is now oblique to the bow. A springing motion should be present. If not, try playing octaves over two strings starting down on the lower octave. Then gradually shift to the upper string. Try also bringing 2nd and 3rd fingers a bit higher so they contact the stick more. All fingers should make contact with the bow. In sautillé, your elbow is somewhat below the level of the string. Pull the bow in slightly with the pinky.

Jeremy's Violin Bow Flow Chart©

Tempo →

	collé	legato	spiccato	sautillé	tremolo
fingers	active	passive	passive	active	Can be active
wrist	Up on Down bow	Down on down bow	Down on down bow	Up on down bow (hinge)	Can be active
elbow	Inactive	Opens	Opens and scoops	Inactive	Can be active

In the spiccato, a slight toggle motion with the wrist and elbow will help to even the stroke and promote less tension. The toggle will essentially be a subtle figure 8 motion between the wrist and elbow levels.

Notice that similar relationships exist between legato and spiccato, as well as between collé and sautillé. These cousin strokes should be used when practicing fast passages slowly. So when practicing a spiccato passage slowly, use legato strokes; when practicing sautillé passages slowly, use collé.

Practicing at the bridge is an excellent way to build string crossing efficiency and straightness in sautillé and any passage work with challenging patterns or crossings. Discipline yourself in this drill to not let the hair ever waver from the bridge so that the last hair closest to you stays right at the bridge. Practice in the area of the hair that you will use normally.

Exercise for the touch of the bow

Hold the bow with the left hand at the point. Place your fingers on the bow with your regular hold. Imagining that the stick is oiled follow the bow back and forth always keeping the same hold, same relationship of the fingers and thumb to the stick. Try same exercise with bow on the string holding with left hand and making bow straight. Try imagining fortissimo and pianissimo.

Left Hand Basics

Cultivate a rounded approach between index-thumb, just as is desired in the right hand.

Curve fingers and learn to find elasticity in the lifting of fingers keeping hammer-head shape of fingers a constant. Fingers should feel like they are curved the way one types on a computer. The lift of your finger is active and the drop is passive.

Fast playing requires higher angle of finger. Lyrical playing requires angling back on pads of fingers. Juicy liberated vibrato is found when finger is hanging on fingerboard rather than pressing from the back of the hand. Use arm weight to stop the string instead of exertion from the back of the hand.

Elbow scales:

Minimize contact at base of index and neck of violin

12-12-12-12- 21-21-21-21

123-123-123-123- 321-321-321-321 *block 3,2 on descent

14-14-14-14- 41-41-41-41 *block 2,3,4 or ascent and descent

1234-1234-1234-1234- 4321-4321-4321-4321 *block 4,3,2 on descent

Elbow proceeds new string level. Fingers should feel exactly the same on all strings. Fingers should fall to the string and not squeeze or bend around. Lift fingers to the same height and fingers should hover over the string when not stopping the string. There should be no twisting in the wrist from string to string. *Block fingers when descending so that fingers land at the same time in the formation needed. Don't adjust the frame after landing or prepare fingers late.

Practice 8 notes to a bow, 16 to a bow. And practice spiccato. In spiccato notice both elbows are preceding string levels simultaneously. Practice sautillé as fast as possible. Also lyrically with connected vibrato.

Keep transposing the entire exercise up by semitone at a time.

Independence of Fingers and Finger Dexterity

Knuckle bends: bring fingers tips in air-tight to the base of the knuckles. Extend fingers one at a time without moving other fingers. Then try combinations (ex. 1 and 2 together, then 1 and 3 etc). This is a muscle-building exercise so be careful not to over-work the hand muscles. This exercise may need the right hand's help to stabilize fingers in early stages.

Geminiani grip with slides: Put a finger on each string (index on G, 2nd on D, 3rd on A, 4th on E). Begin sliding fingers individually. Make sure thumb is loose and all non-moving fingers are motionless. Use a Zen-like approach and find the minimum amount of muscle contraction needed to move a finger. It is very important that there is no friction between fingers, especially at the knuckles. Buckling between index and second finger is common problem. This can be rectified by practicing with a pencil placed in front of index finger and weaved behind thumb and second. Once these individual slides are mastered, try sliding two fingers at a time (1&3; 2&4; 1&4) in opposite and parallel motion.

Tapping: in Geminiani grip tap fingers individually. Wrist should not extend away from you but rather flex slightly towards you. Find the electric lift and even slow fall of finger. Time the fall of the finger so it takes 4 seconds to land in a straight trajectory. The lift-off should be like and electric shock. Then try two quick taps, then four. Then do pairs of fingers: 1&3, 2&4, 1&4. Make sure the stationary fingers have no movement of any kind. Then try lifting fingers with as little height as needed but with same principles.

Doodleitis: this is a reflex exercise that requires blocking fingers. The lifting should be as fast as possible, snapping back the knuckles. Practice slowly at first with vibrato taking care that the two fingers drop and lift exactly together. Play in pianissimo so the rhythmic energy is concentrated in the left hand. In fast playing you do not have to think of every note in group impulses. Find this is in repertoire: you have to give one impulse with your brain to the first note of each group and train the other fingers to react automatically. When you run down stairs you don't think of every stair.

0...20....20...20...0212 0212 0212 0.....
1....31....31....31....1323 1323 1323 1.....
2....42....42....42....2434 2434 2434 2.....
0...4341.....4342....4341...4340

Ultimate Hover:

01-121-10

1-12-2-21-1

12-232-21

2-23-3-32-2

23-343-32

Practise super slow, then fast in slow tempo, then fast in fast. All fingers should hover at the same height and lift to the same height. The only finger allowed to move is the one changing note. To create the mental untying of your individual fingers from each other it is important to do this a couple of times as slowly as possible. Concentrate on the stationary fingers pulling in the opposite directions of the moving finger.

Vibrato

Two important principles of the vibrato is to create a motion that goes straight along the string and is as horizontal as possible. This lessens unnecessary friction and greatly improves the continuity of vibrato when shifting. There is a difference in vibrato in lyrical playing as opposed to fast playing. In lyrical playing every finger can have its own balance. Feel an individual balance on each finger in slow playing. As the tempo increases there is less balance change. This continues until you get to fast technique which means you stay in the balance of your fourth finger. At this point there is an overall vibrato which is a continuous movement that is independent of the vertical dropping action of the fingers. Practice a fast passage with the left hand above the string. Keep a constant vibrato while pretending to touch the string with the fingers.

To cultivate an Arm-Vibrato:

Practice rhythms to vibrato bends that are initiated by the arm and work the first joint of the finger. The intonation should span an exact semitone. Listen carefully so that the top of the oscillation is the pitch desired. Do not vibrate over the pitch. Find a straight fall of the arm that forms a near parallel to the finger board. This will greatly reduce unnecessary binding in the biceps and triceps.

Practice entire finger bends.

Business card on string: Find even rhythm and amplitude, keep card straight along string. Then remove card and find this feeling on each finger in different positions. Maintain an amplitude that spans about 2 inches on the fingerboard. Maintain an even speed so it sounds like a choo-choo train.

Rocket Robin Hood Vibrato Exercises:

Using a wide glissando vibrato that allows thumb to slide along neck, ascend and descend with:

Slow vib in slow gliss

Slow vib in fast gliss

Fast vib in slow gliss

Fast vib in fast gliss

Rubbing exercise: With the left hand alone play a finger with harmonic pressure sliding it back and forth evenly, gradually rub it in adding more and more pressure until your finger feels hot from the friction then narrow the movement until your finger stays on one spot. This makes your movement parallel with the strings.

Cultivating the sizzle: Dounis refers to the first impulse of the vibrato as a sizzle. There is an initial electrical impulse to the vibrato. This is not the real vibrato but a spark plug that ignites it. The sizzle always has a forward impulse in the finger tip so the first motion is forward. The idea is to ride the sizzle so you aren't working or over pumping the vibrato continuously. A way to feel this is to hold your violin straight out in front of you with your left arm outstretched, the fingers on the finger board as normal, and the back of the violin facing you - then send a sizzle to each finger.

Shifting

There are four main types of shifts: Classical, Romantic, Stepping, and Jumping.

Classical shifts: (Also known as over-slide of French school) This type of shifting is mostly appropriate for classical repertoire and involves dropping a new finger into the note from a guiding finger's slide. A certain amount of anticipation with the wrist and thumb can be used to make this shift fluid. However, often times the frame of the hand is best to be left a constant in this shift. The larger the shift, the more the anticipation is useful for ease. Practice these shifts in Sevcik Op.8. Be sure to block fingers where possible.

Romantic shifts: (Also known as under-slide or Russian school) This type of shift is a slide into the note with the arrival finger. This shift is aided with an anticipation of the arm-wrist-thumb and the anticipation brings the sliding finger to the backside of the finger tip. Shift on the back side of the fingertip and then lean tip back in upon the arrival so that the vibrato initiates forward on arrival. These shifts can be practiced very slowly with an even speed, light finger pressure, but strong slow-bow pressure. Practice sliding scales thus: (index on A string in first position) B-C# C#-B; B-D# D#-B; B-E E-B; B-F# F#-B; etc. for two octaves on one string with one finger. Do all fingers individually in one bow and also two bows (changing bow on the shift). Start in different positions.

Stepping: Step shifts occur in scale passages. The new finger should step into the new note. When ascending, a slight pivot of the hand inward allows for this exchange. The new finger should lift and drop in, pushing the old finger away. When descending the hand pivots outward. In both ascending and descending the arm, wrist and thumb anticipate the new position. This anticipation should be part of a flow, part of the tempo of the scale, not sudden and jerky. When shifting up from 3-1 or 4-1 (or descending 1-3 or 1-4), a contraction of the hand can be desirable in lyrical playing to make shifting seamless. In the contraction, the second finger gets up and out of the way so the new finger has room to push the old finger and drop in to new note.

Jumping: Jumping is often needed in fast playing to reduce friction and promote speed. If your chin/shoulder set-up is slippery (violin sliding away from the shoulder) then you will have a hard time with this technique. If you play without a shoulder rest, you should consider a chamois cloth to keep the violin from sliding on the shoulder. The jumping shift is practiced by stopping dead at the last note and being in super preparation for a reflex sudden jump to the next position. The bow and left hand move in a sudden reflex motion in this jump. Stop dead, wait and think, then jump with both hands at once. Practice three octave arpeggios this way for super speed.

N.B. The anticipation with the thumb in shifting will be a personal decision and depends on the situation encountered in the music. Some teachers promote anticipation (Galamian) while others do not (Auer). Remember though that the burden of the weight of the violin is a shared responsibility between the thumb, chin, and shoulder. Each will take a turn at different times to promote muscle flow and equilibrium. So being able to shift with just the thumb is a technique worth cultivating. Practice scales from time to time with no shoulder rest and without raising the shoulder whatsoever, using the thumb and gravity to aid the shift.

Practising tips

Practice fast technique in slow tempos: Lift fingers with electricity in slow tempo. Also stop suddenly before a shift and be immediately in preparation for the new position: wrist flexing to new position, elbow in anticipation, new finger up and ready to drop, hand contracted to new position, old finger in an upwards energy.

Practice in rhythms: applying practice rhythms to your passage work will gain coordination and reflexes. Rhythms can be done slow in the learning stages and then try slow but with super fast reflexes on the faster part of the rhythmic design. Galamian insisted on combining rhythms with bow patterns to challenge your coordination in passage work.

Box practicing. Box practicing should be done with a metronome so that you are building your reflexes and motor skills in relation to time. Choose an area that is troubling. Reduce a passage from two to 5 notes and repeat until you can play with ease 5 times in a row without any blemish or hesitation. Practice in the dynamic and musical energy desired. Make the box

bigger. Build tempo up in the chosen boxes by a few clicks on the metronome at a time from half-tempo until you are above tempo.

Practice passages super slowly: Super slow practice is essential to find the absolute least amount of muscle contraction needed to play. Combine with vibrato that only oscillates once at a distinct intonation of a semitone below the pitch and to the pitch only.

Other ideas: Play a passage with only the bow on open strings and focus on the original expression. Play a passage with only the left hand and sing all the different vibratos and let the left hand carry the expression. Hold the bow at the balance point and play – reverse the bow and hold it at the point so that the frog becomes the tip and play with expression. Play all the slow parts twice as slow with the same bowing and expression. Play and octave higher on the same strings. Transpose passages $\frac{1}{2}$ step higher and $\frac{1}{2}$ step lower (this is especially helpful with a big or challenging shift). Practice fast passages with harmonic finger pressure.

Practice melodic passages pizzicato to become more aware of how the vibrato enhances the resonance of the string.

Practice any passage with all separate bows and try to create the original phrasing. This will develop your expressive power and eliminate false accents. Also play rapid bowing passages in long slurs, concentrating on the musical expression. This helps eliminate the tendency to play separate bow passages in an overly uniform way.