THE BASICS OF THE SHOT

Manage the correct posture to construct the shot archer's trinity: target-bow-archer

Bow-arm pressing into the bow grip • drawing arm/hand (the writing hand)\* • hook-fingers — the three fingers fo hooking onto the string • drawing shoulder-blade/elbow (a the writing hand) • aiming eye — the drawing side eye • aiming point — the point anywhere on the target, either in the center or off-center ('aiming off' — deliberate deviation of the aiming point from the target center due to wind and rain) • central plane of the bow (the plane in which the string moves and the hookfingers are pulled off the string) coincides with the vertical plane above the big toes • the stance is side of the body towards the target, feet parallel to each other, without moving either

\* Text and illustrations refer to archers with **right** hand dominance

foot forward/backward

 $^{ot}$  learn to control the <code>BODY'S</code> <code>BALANCE</code> ullet learn to hold your breath in the middle of the exhale • learn to direct the movement of the drawing arm/hand • learn to regulate the amount of muscle tension • adopt the concept of the

distance between the aiming eye and the chin SENSE FE \*\* Determine the natural shoulder-wide position of - the position of the body placement of the feet in order to attain the correct in space: without leanin stance: without looking, to the left/right, forward: raise one leg, bending the backwards; knee, relax the foot and the chin pointing at th lower it into position aiming point; - teeth are in light contact

► PLACE: ► ROTATE:\* ► EXTEND: ► PRE-DRAW: ► DETERMINE:

- **teeth** in light contact (for archers with the right: maximum length, fixing level with the bow; and while pointing at

position *(by pushing the the drawing shoulder- your gaze, focus on the position and the position and the position and the position and the position are the position and the position are the position and the position are the po* 

elevate the drawing-

wrists away from the body blade/elbow; = 'breathe-think-do'

(facial muscles relaxed); writing-drawing hand)  $\frac{1}{2}$  the shoulders in the low elbow, while feeling  $\frac{1}{2}$  it with your chin and

into a vertical

CONTROL OF THE STARTING POSITION

DETERMINE:

with it

- the aiming point;

maintain eye contact

CONTROL:

the body: slightly rise on

the balls of your feet,

then drop the heels to

STARTING POSITION:

left side towards the target;

- feet shoulder width

apart (stability of a

cuboid shape);\*
- **feet** – in their most

- **teeth** of the upper⊊≦

and lower jaws in light

contact (makes the

natural stance;\*\*

consistent)

\* Controlling the

the resistance band,

folded in half, wrapped

around the bow hand

BODY BALANCE CONTROL ► TURN OUT: ► STRETCH OUT: ► LEAN: legs, back, neck – stretch them out to the soles of your **feet**, inside the shoes? out to full height, lean on the big toes unti with the big toes in 5 their maximum length;\* opposing directions; - the abdominal the soles of the shoes muscles\*\* – contract remain fixed in place them slightly (controlled body balance to the left/right) \* Stretching out to full height in conjunction with spiral-like leg muscle tension: prevents the knees from locking backwards out of alignment; fix the position of the hips; allows control of the body SENSE F balance while raising the

they press against the floor (controlling the body balance forward bow towards the aiming your full height; SENSE FE point and the shot process - support (body weight distribution) on the big in gusty wind conditions - starting with the feet toes – 60%, on the heels turn-out, the muscle tension in the legs and Conscious contraction - right side of the jaw in the buttocks feels like two of the abdominal muscles one vertical plane with the spirals – from the bottom big toes (to prepare space helps to prevent both up, inside out raising the chest and for the drawing wrist arching of the lower back while drawing the bow

FIXING THE SHOULDERS IN THE LOWERED POSITION ROTATE: ► RAISE: ► SPREAD: - **the left hand** with the - the arms; halt the spread when the wrists reach the same palm down – get used 🧵 vertical plane as the big toes, to taking the bow grip 👮 creating a trapeze shape with in hand with the thumb shoulders the shoulders (view from above);\* and the index finger,? come down - slightly 'expand' to the sides in reducing the area of order to control the fixation of contact and impact of the palm on the bow the lowered shoulders TRAPEZE / shooting triangle SENSE FE - movement of the right s shoulder-blade (closer 🔓 towards the spine); The action - shoulders fixed at low ₹ position; shooting triangle - wrists in the same 🤾 vertical plane with the big  $\subseteq$ \* Stopping the arms toes, the plane coinciding 🚬 spreading once the with the central plane trapezoid shape has been of the bow (the plane in

which the string moves

pulled off the string)

and the hook-fingers are

POSITION — SET DRAWING HAND:\* ELBOW HEIGHT CONTROL: BREATHING: unrestricted;
 as the drawing hand under the chin, form ass the drawing arms hook with three fingers elbow is located touches the head, hold breath\*\*\* of the writing hand between the shoulder between the should be tween the shoulder between the shoulder between the should be tween the sh (with the wrist straight); and the earlobe\*\* rotate the forearm slightly clockwise (the 💃 palm and the knuckles of 💃 \*\* With bow and arrow the hook-fingers joints are (Positon – Set), the elbow now vertical) is always higher than the arrow, as far as the length of the lowest of the threefinger hook allows (after it is fully hooked up to the bowstring) finger hook allows (after it \*\*\* At later stages, begin exhalation as the bow is drawn in the direction of \* The bow is drawn with • A slight forearm rotation the chin and nose. For the hand used for writing inward transfers the precise management of and drawing pictures. tension from the wrist to the culmination of the Consciously controlled the forearm; stabilizes shot, hold breath and delay breathing out as the movement – psychomotor vertical hook-fingers drawing hand touches the control – has the highest position during release priority in archery which facilitates the pulling of the three • The drawing side eye is hook-up fingers off the SENSE FE bowstring simultaneously, - forearm rotation is so thus minimizing string minor that it does not put vibrations extra strain on the biceps

POSITION — RELEASE DRAWING SHOULDER BLADE/ELBOW:\* - the **archer directs** the elbow (along with the shoulder-blade) around = the torso towards the back of the head; - **elbow pulls** along the \* The part of the drawing hook-fingers\*\* under arm between the bend of the jawline towards the the fingers and the elbow, forms a solid hook with constant muscle tension The final distribution of tension in the hookfingers on the string (top to bottom): 30% - 50% - 20% , without the archer's involvement in distribution The shape of the hook does not vary at release (invariant): pulling the fingers off the string changes the shape of the The muscles between hook to less pronounced; the drawing-elbow and after being pulled off the the spine function as a string, it regains its initial single unit with gradually shape immediately and of increasing tension its own accord

the hook is **passive** shoulder-blade/elbow is **activ** SENSE F - the active-drawing part pulls a passive hook off - the final position of the drawing shoulder-blade tight against the spine; - the final position o \ the hook-fingers − at the

- **breathing**; - relax **muscles** tension in the legs and was **minor enough** the buttocks sufficient to leave the biceps without added tension - whether the teeth of while bringing the wrist the upper and lower into vertical position; jaws were **lightly** in - whether the drawing contact during the shoulder-blade **moved** preparatory exercises, toward the spine or not; (Position - Release) - whether the rotation understand the process of TO BE – TO BECOME inquisitive novice beginner > advanced > unconsciouslyconsciouslyconsciouslyunconsciouslyinept, consciouslyable\*able skill set to define developing > developing > perfecting and solidify > Consciously able – means exercising conscious control and awareness of their movements (the longest of all stages of self-instruction)

- was the muscle of the drawing forearm

RECOVER (Breathing, Muscles)

RECOVER: ANALYZE:

mobility: immediatel raising the arms to the sides as compared to raising them first in front Practice holding the breath in the middle of the exhale with countdown: on the count of '3-4' – delay, continuing the count to '7' Master the movement of the drawing arm, standing with left side towards a mirror. Draw a vertical line on the mirror in lieu of a bow. Assume the Set position. While pulling the hook-fingers off the chin, observe the drawing elbow to the left of the vertical line

Compare shoulder heigh

Achieve stability of the grip pressure point, utilizing the

directed muscular tension through the Three Point

of Support. Use a vertical

a bow, in order to observe

the pressure point during

transfer between phase

3. Look (Target) – Draw-

4. Three Points of Support

Master the correct

measure of elasticity of

the passive hook-finger

comparing the elastic

to-release/Release

– Holding

line on a mirror in lieu o

**Learn** to function in a conscious sequence of: breathe-adopt the concept of the main line of the shot: target-bow.

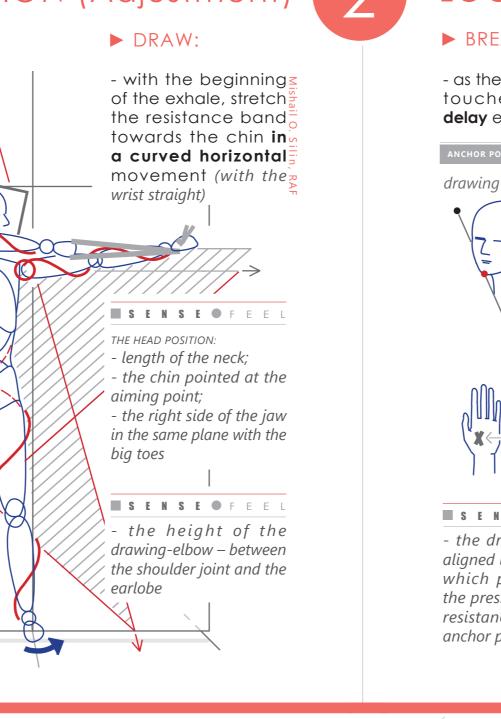
Pressure point of the bow hand (into the bow grip) • point of string contact with the chin — 'anchor point' • full draw length of the bow (the distance between the grip pressure point and the anchor point) • draw-to-release — the ultimate increase in the tension of the bow for pulling the hook-fingers off the string • the imaginary main line of the shot passes through the aiming point — the sight pin — the drawing-elbow (after release, through the hook-fingers to the earlobe)\*

\* While using a resistance band, instead of the sight pin, use 'grip sight' – the pressure point of the bow hand under the resistance band

Y Long, easily stretched resistance band; the first 4 years, use a long, low draw weight bow

through the pressure plane over **elbow** slightly – aligning the big toes) (\ \_\ it with the resistance - the resistance band pressed **into** the fold of \* Rotation of the bow the distal fingers joints (middle finger hooked - stabilizes the grip more than the others); through a fully extended - **the thumb** brought bow-arm (via the pressure closer to the upper part point); of the palm; activates the triceps little finger under the improving bow (sight pin stabilization; - ensures bow armbowstring clearance SENSE FE (protecting the arm from - spiral muscle tension: contact due to imprecise in the bow-arm – up to movement or a faulty the shoulder joint; in the arrow nock) drawing-arm – to the elbow joint Slight rotation of th drawing forearm prevents the bottom hooking finge

- turned out slightly, **noticeable** nod in big toes in opposing the direction of the aiming point (to alleviate excessive tension in the neck muscles; applies to • stretch out upwards (legs, archers with very short back, neck) contract the abdominal contact) muscles slightly with the body fully extended, lean on the \* This is the final head position, and also the last **Grip pressure point**: opportunity to adjust it while feeling the shoulders at the low • Consistent draw weight position, raise the fully from one shot to another extended bow-arm to depends on a fixed the aiming point (with position of the head and a resistance band, instead maximum extension of the of the sight pin, use the bow-arm (provided the pressure point of the bow bow-shoulder stays low) SENSE FE

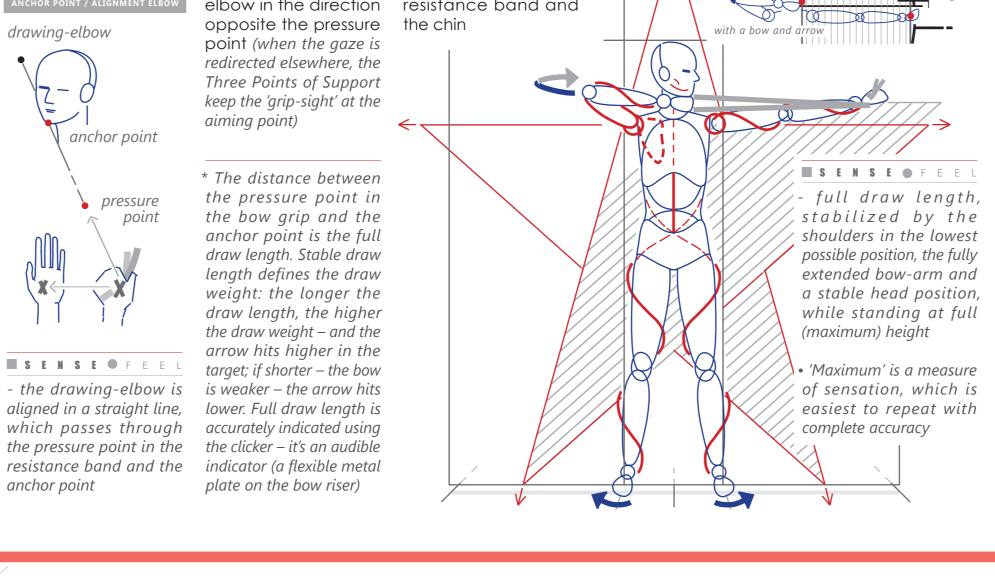


as the drawing hand - as the resistance band - align the drawingtouches the head, touches the chin, look elbow with the pressure **delay** exhaling at the pressure point point and tighten the in order to guide the contact between the elbow in the direction resistance band and opposite the pressure the chin point (when the gaze is redirected elsewhere, the Three Points of Support keep the 'grip-sight' at the aiming point) SENSE FE \* The distance between pressure the pressure point in point the bow grip and the anchor point is the full

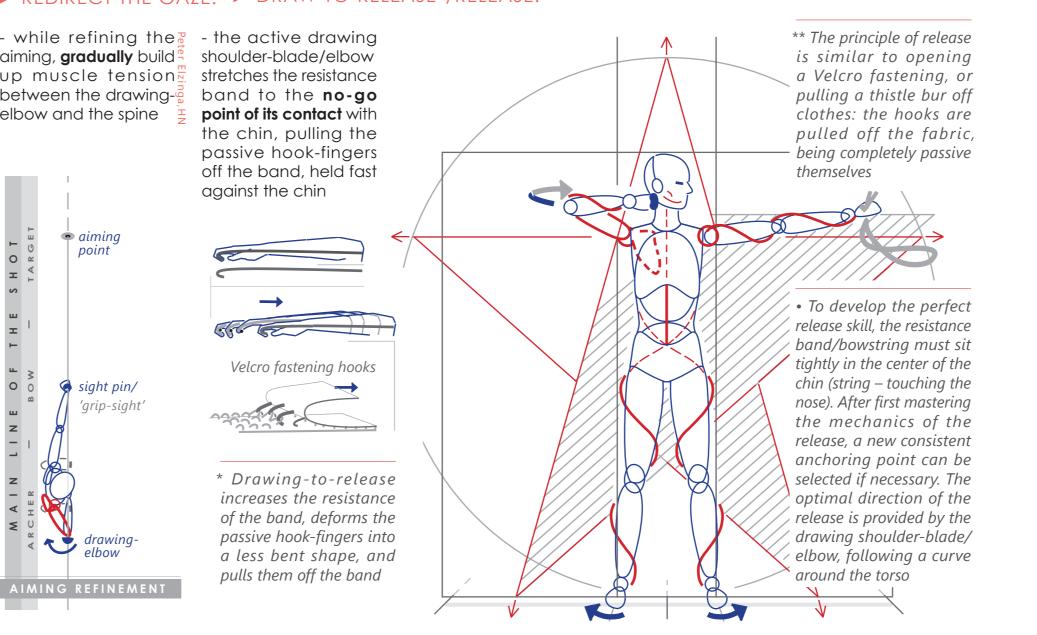
reached prevents raising

the chest and arching the

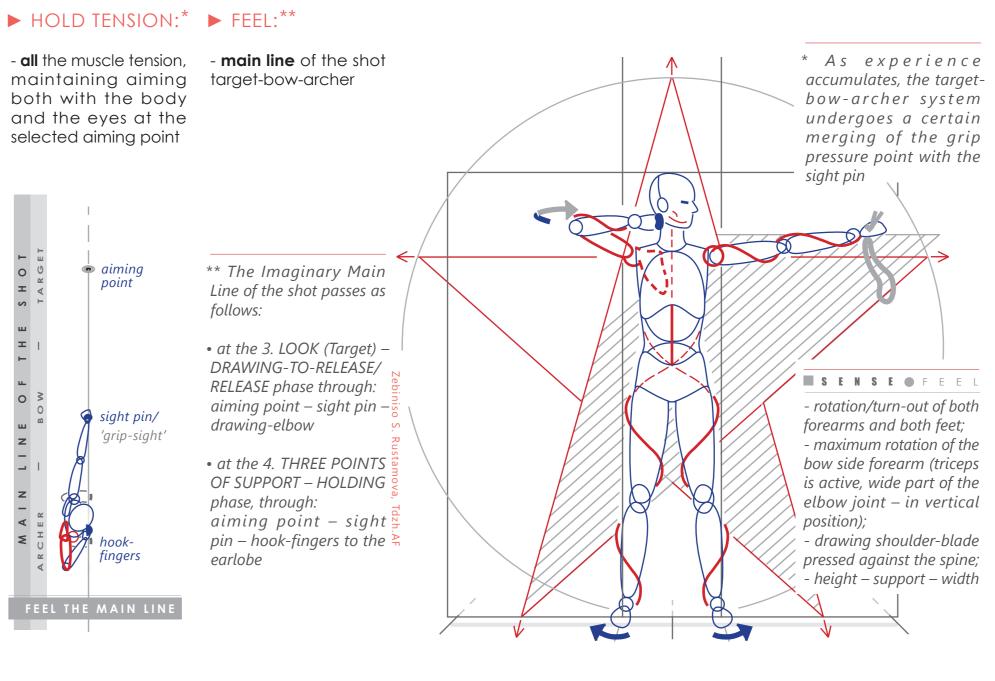
lower back



► REDIRECT THE GAZE: ► DRAW-TO-RELEASE\*/RELEASE:\*` - while refining the 🚆 - the active drawing iimina, **aradually** build <sup>e</sup> shoulder-blade/elbow



► HOLD TENSION:\* ► FEEL:\*



► RECOVER: ► ANALYZE: - whether the shot - succeeded in placing - relax the **muscles sequence** was the following along the which participated in accurately followed; straight line of elbow the shot simulation - whether the bow-alignment: pressure arm was maintained point of the bow hand, at **maximum** extension anchor point and the while raising the arm drawing-elbow;

towards the aiming - executed the model point and keeping both of 'breathe-think-do' in shoulders low and wide; the **correct sequence**? 1 - 2 years > 2 - 4 years > 4 - 6 years > 6 to 8\* years of at leastat leastat leastat least200 shots >400 spw >600 spw >800 - 1000 spw per week (spw) ^8 = first 2 years club level + 2 years national level + 2 years international leve + 2 years selection for the first Olympic Games

between followir exercises: pull the hoo fingers off the edge of table; pull the table from its spot. Place a full extended arm on the tal and hook the fingers on the edge. Feel the ed in the distal ioints of a three hooking finge Imagine that the tablet represents the central plane of the bow, in which the hook-fingers ar

pulled off the bowstring

It is recommended ≤ to stop gripping

will stand behind the

the bow, following draw-

Before shooting at

70 m, master the shot

similar shot perception  $\blacksquare$ 

to-release/release, into

**Learn** to execute every movement precisely • let down ■ the shot if the QUALITY OF MOVEMENT is below the desired level (return to phase 0 without releasing slowly) understand the concept of the two lines of alignment of the drawing-elbow position

The two lines of control of the drawing-elbow position: the vertical control line — alignment of the bowstring with the central plane of the bow (serves as a point of reference for the final alignment of the drawing-elbow) • the final line of the drawing-elbow alignment (prior to the draw-to-release) the line passes through the arrow point, the anchor point and the location of the drawing-elbow in the central plane of the bow

Arrows of sufficient length • practice bow (with bow sight, single long central stabilizer, clicker) • finger tab for hooking onto the string (with finger separator) • finger sling (to prevent holding the bow during the shot) • chest protector • arm guard

18 M — the official distance for World Archery Indoor tournaments

**Learn** to maintain the RHYTHM of the shot, defined by the competition rules and regulations and the weather conditions • control the consistency and quality of the movements • create a 'gold standard' for the shot

A sample of your best shot serves as the gold standard  $^{ackslash}$  (must be the individual archer's — the only one the archer can control) • exact replication of that shot (precise movement precise hit) • personal best (individual record) — the best way to win or to maintain high motivation if lost (curiosity)

 ${}^{\wedge}$  Arrows  ${}^{ullet}$  bow  ${}^{ullet}$  finger  ${}^{ullet}$  sling  ${}^{ullet}$  chest protector / & arm guard (protects from being hit by the bowstring due to a broken arrow nock or an inaccurate movement)

70 M — official distance in the Olympic Games

finger sling between - - both forearms (feeling - the bow-arm to its - the bow up to the - the aiming point the thumb and the  $\frac{1}{6}$  the triceps of the bow-arm maximum length, while bow side elbow, and, keeping eye index finger – over the of its wrist) middle phalanx); - **feet** (shoulder width); - **arrow** on the string and on the arrow rest (index vane – perpendicular to **bowstring** in the distal while leaning of the bow the bottom limb against the inner leg the position of the hook-fingers on the

their lowest position shoulder-blade/elbow on 'breathe-**think-do**' the bow; pressure point string (only the index the bow, which allows the finger may touch the the aiming point with the • the pressure point\* in ■ S E N S E ● F E the bow grip, by sliding - the pressure point is the palm of the bow on the axis of the radial blade/elbow, which wil hand, between the bone of the forearm (the also participate in the thumb and the index thumb-side forearm bone) culmination of the shot finger, into the deepest part of the grip

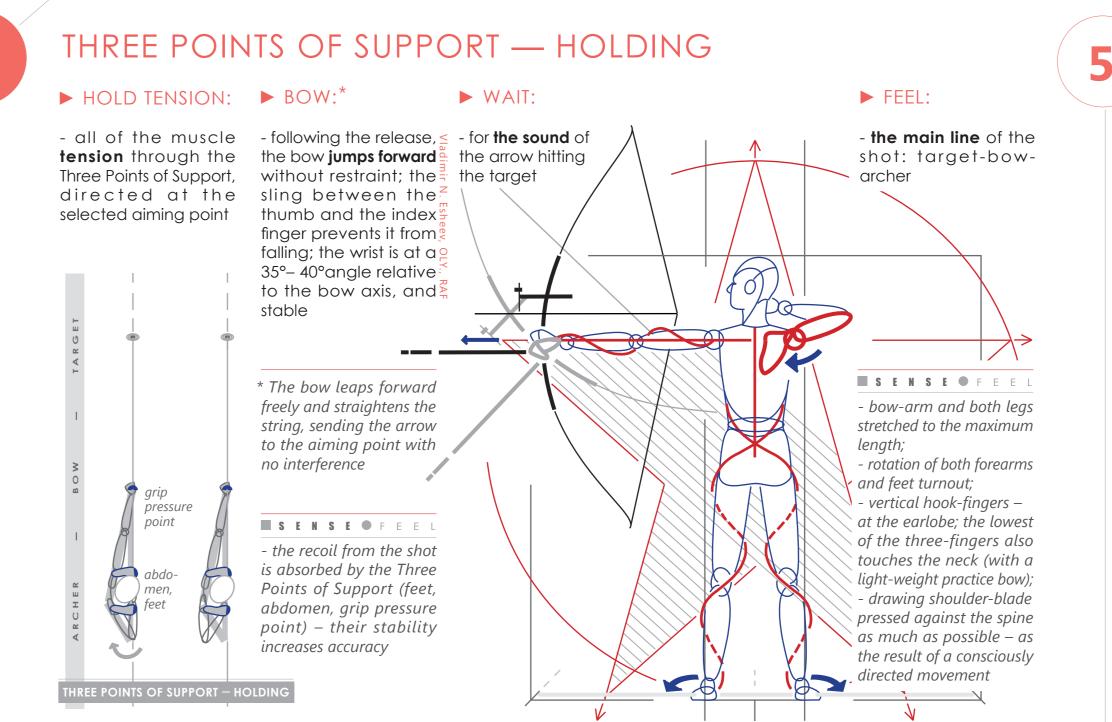
turned out slightly, controlled; **fixing the shoulders** at **activating** the drawing contact with it, focus Abdomen: stretch out upwards (legs, - breathing shallow, back, neck) contract the abdominal muscles slightly - with the body fully extended, lean on the - fixes the pressure point in big toes the bow grip, allowing the Grip pressure point: pressure point, raise - cancels out the feeling the fully extended of the physical mass of bow-arm until the sight pin coincides with the archer to raise it towards aiming point (the sight  $\sqrt{2}$ pin should NEVER stop BELOW the aiming point) most accurate movement; activates the shoulder-SENSE FE - height – support – width

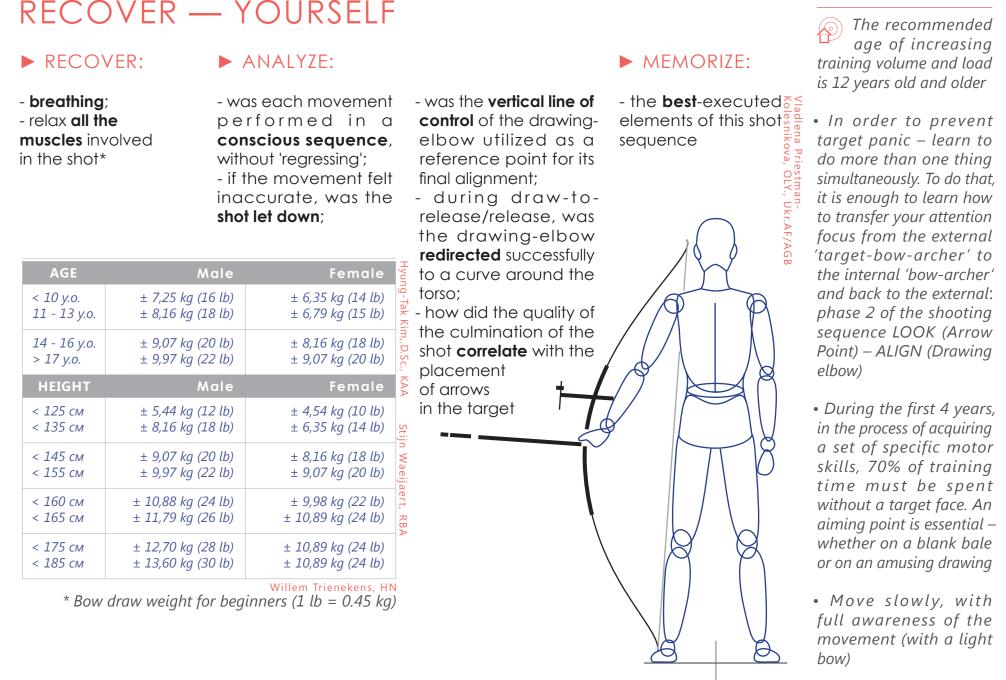
- height – support – width

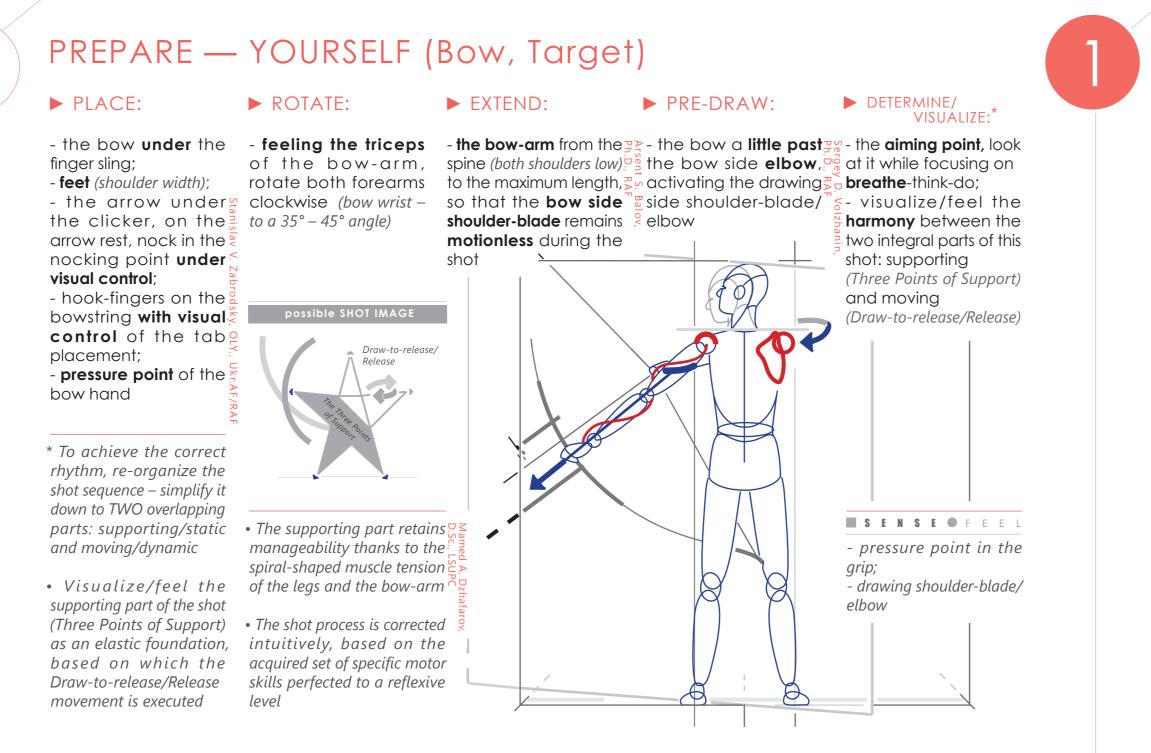
- through the sight with the beginning of the exhale, draw the pin, view the aiming big toes in opposing - teeth in light contact; bow, advancing the point clearly and the left eye shut; bowstring – **blurred** – **bowstring** to the chin \ and nose in a curved over a point at the top horizontal trajectory; of the riser or next to STRING ALIGNMENT \* Reference points for observe the string alignment: a the bowstring  $\setminus\setminus$  point at the top of the first deviating to \\\ riser, or the bow window the right, and then (bow sight cannot server) returning to the central \\ as reference due to plane of the bow (over windage adjustments and the centerline of the limbs) DEstabilized perception of the central plane of the

 bring the drawing-elbow touches the head, -coming into anchor, look at on to the straight line of delay exhaling and the arrow point in order to guide alignment, tightening th redirect your gaze to the elbow in the direction bowstring contact with the arrow point (the opposite the point cone the chin (keeping the elb Three Points of Support above the arrow) the aiming point) 2.2 LOOK/SEE: Beginner Archer (shooting using clicker) coming into anchor, the archer focuses on the drawing shoulderblade/elbow, which \* A straight line between he uses to bring the the cone of the arrow poin string to the chin and through the anchor point, and pull the arrow under the clicker to the end 2.3 LOOK/SEE: Master Archer \* Shooting with a clicker << the drawing-elbow (view from cone of the point; see draws the arrow under should start after gaining the movement of the the clicker till the very the ability to shoot arrows < SENSE OF E **clicker**: its sliding off the tip of the arrow point; in a group – it indicates - the string, pressing into the point cone towards the for him, the 'ready that the feeling of full' riser indicates **readiness signal**' arrives when he *draw length has become* § chin and touching the tip of for a smooth transition sees the clicker "split" consistent (approximately \} the nose, is aligned with the to the next phase of the arrow almost in half, 4 to 6 months since the central plane of the bow, as is lengthwise beginning of training)

- while refining the 3.1 Novice Archer - the vertical line o aiming, the sight pin *(shooting without clicker)\** control of the drawing should be blurry and - the active drawing elbow (the bowstring) the aiming point shoulder-blade/elbow **drawn**-to-release into visually more clear pulls the **passive hook**the central plane of t fingers off the bowstring which is tightly pressed While working on to the chin, by exerting technique improvement gradually increasing with a target (distance muscle tension 3-5 m), redirect your gaze from the aiming point to 3.2 Beginner Archer the sight pin – focusing (shooting using clicker) attention on the internal - after redirecting the ≤ Z 'bow-archer', instead of gaze to the aiming point, archer'. Thus, it is easier draw through the click; \(\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\tilde{\ti} SENSE FE for a novice archer/ drawing-to-release pulls - draw-to-release/release beginner to concentrate  $\,\,\,$  the hook-fingers off the  $\stackrel{>}{\scriptscriptstyle \sim}$ tighten the string-chin on interaction with the string contact to the no-go point; - drawing shoulder-blade/ SEE: A gently floating sight \\ elbow advance in a curve pin – more clearly than around the torso; the aiming point \ - vertical hook-finger. \_\_\_ the click \_\_\_\_\_ pulled off the string in the central plane of the bow a full draw length







- **head** position - with the beginning - view the aiming point - turned out slightly, controlled; of the exhale, draw more clearly than the big toes in opposing - **teeth** in light the bow, advancing **blurred** bowstring, the bowstring to the contact; returning to the central - **left eye** shut; chin and nose plane of the bow Abdomen: - **facial** muscles in a curved horizontal stretch out upwards (legs, relaxed back, neck) contract the abdominal muscles slightly with the body fully extended, lean on the big toes \* While shooting longdistance (70 m), in order Grip pressure point: to maintain full drav - feeling the pressure length and clicker position, into the grip, raise the slant the torso a little from fully extended bowthe hips in the direction arm until the sight pin opposite the target. When overlaps the aiming specializing in shooting 18 \\ and 70 m only, the body vision, observe **the** slant may be compensated bowstring returning by moving the clicker to to the central plane corresponding position of the bow, from right precisely marked in advance (18 m and 70 m SENSE FE height – support – width; - breathing shallow,

