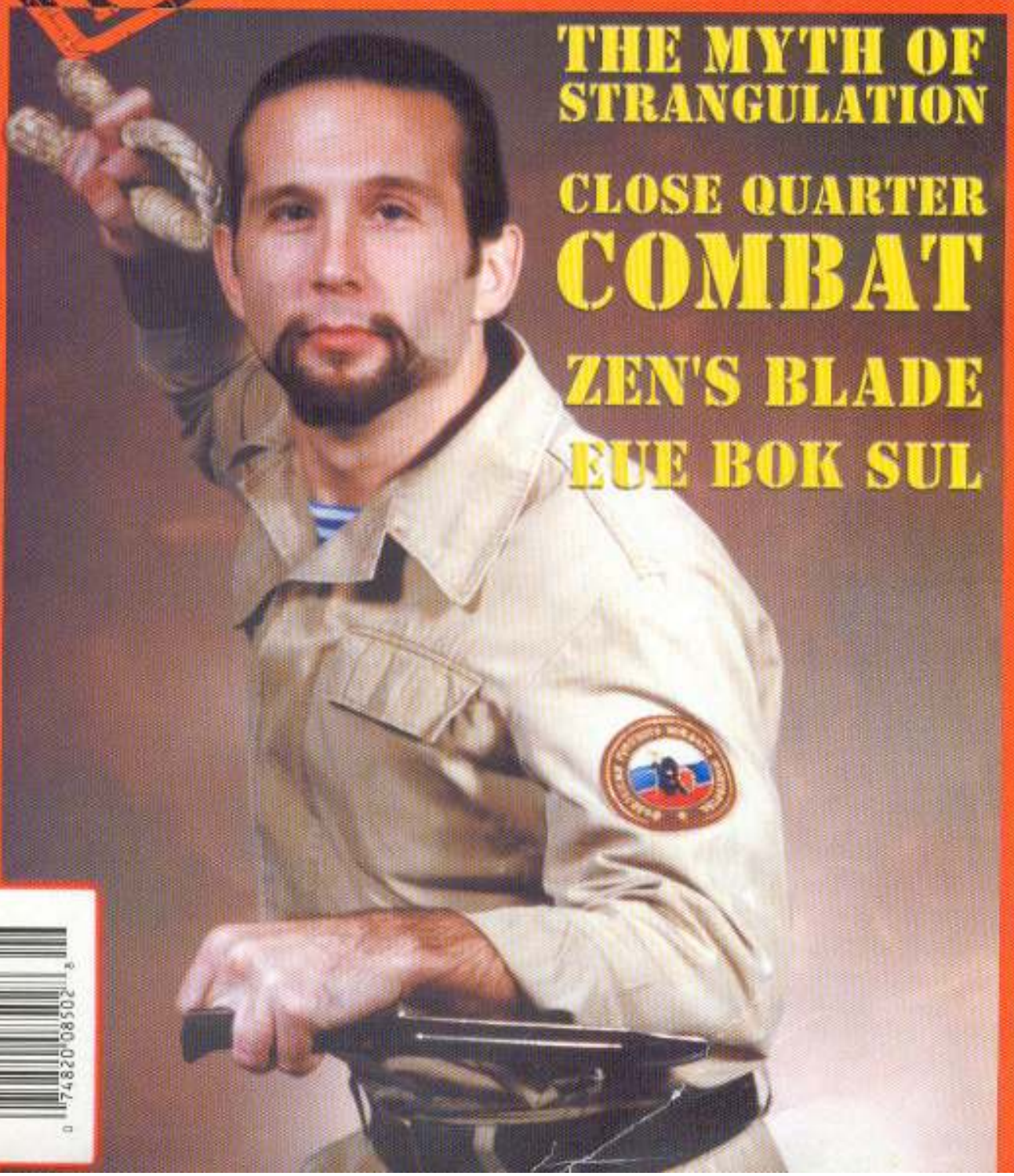
FREE INSTRUCTIONAL VIDEO GIVEAWAY INSIDE!

PACIFIC RIM PUBLISHING PRESENTS JUNE 1999

World of MARTIAL ARTS

THE TOP SECRET

FIGHTING ARTS OF RUSSIA REVEALED



THE MYTH OF STRANGULATION

CLOSE QUARTER COMBAT

ZEN'S BLADE

EUE BOK SUL

WWW.TCMEDIA.COM 1-800-824-2433

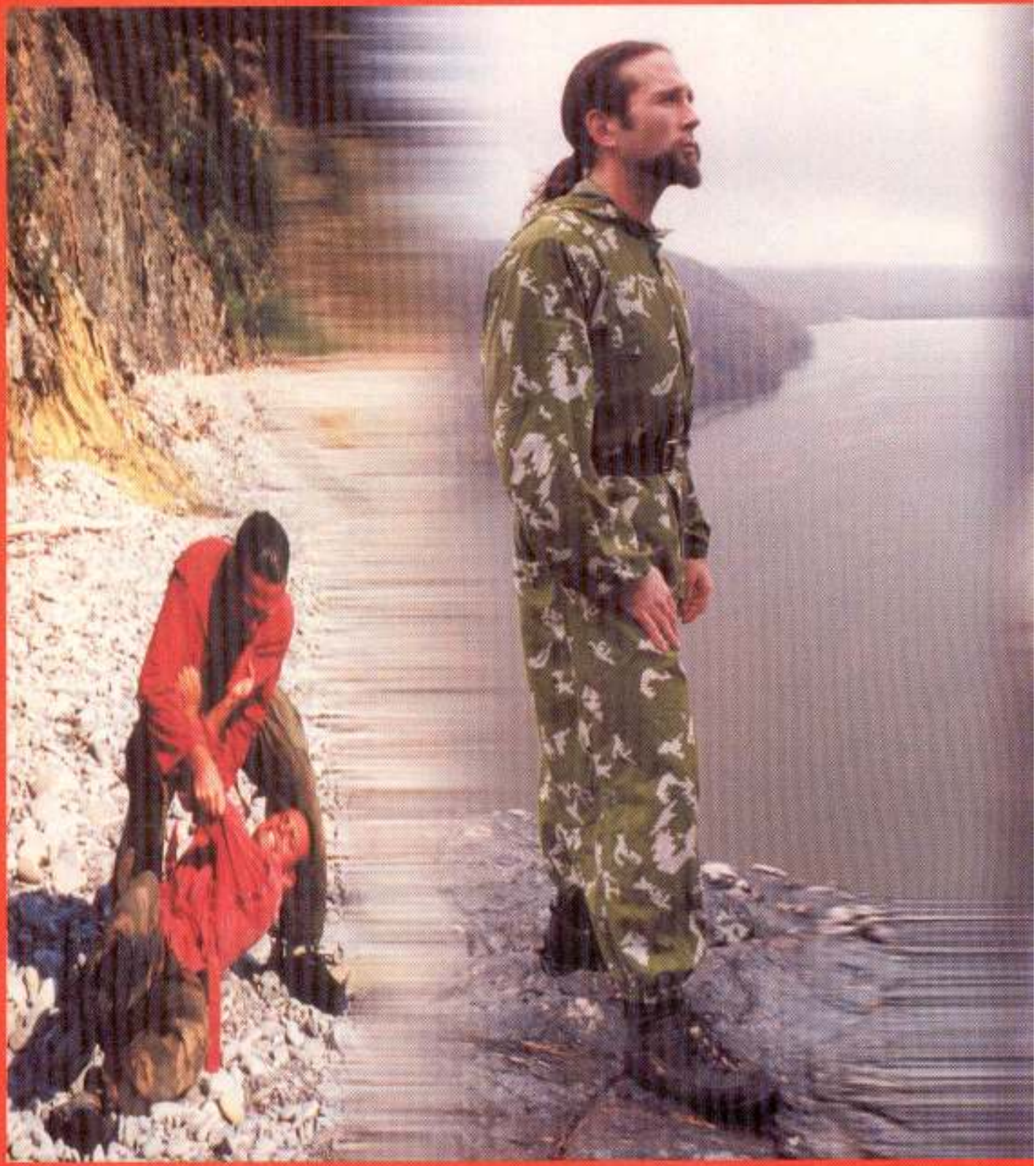
DISPLAY UNTIL JUNE 30

US $3.99 Canada $4.99

06

0 74820 08502 8

THE MYTH OF ST



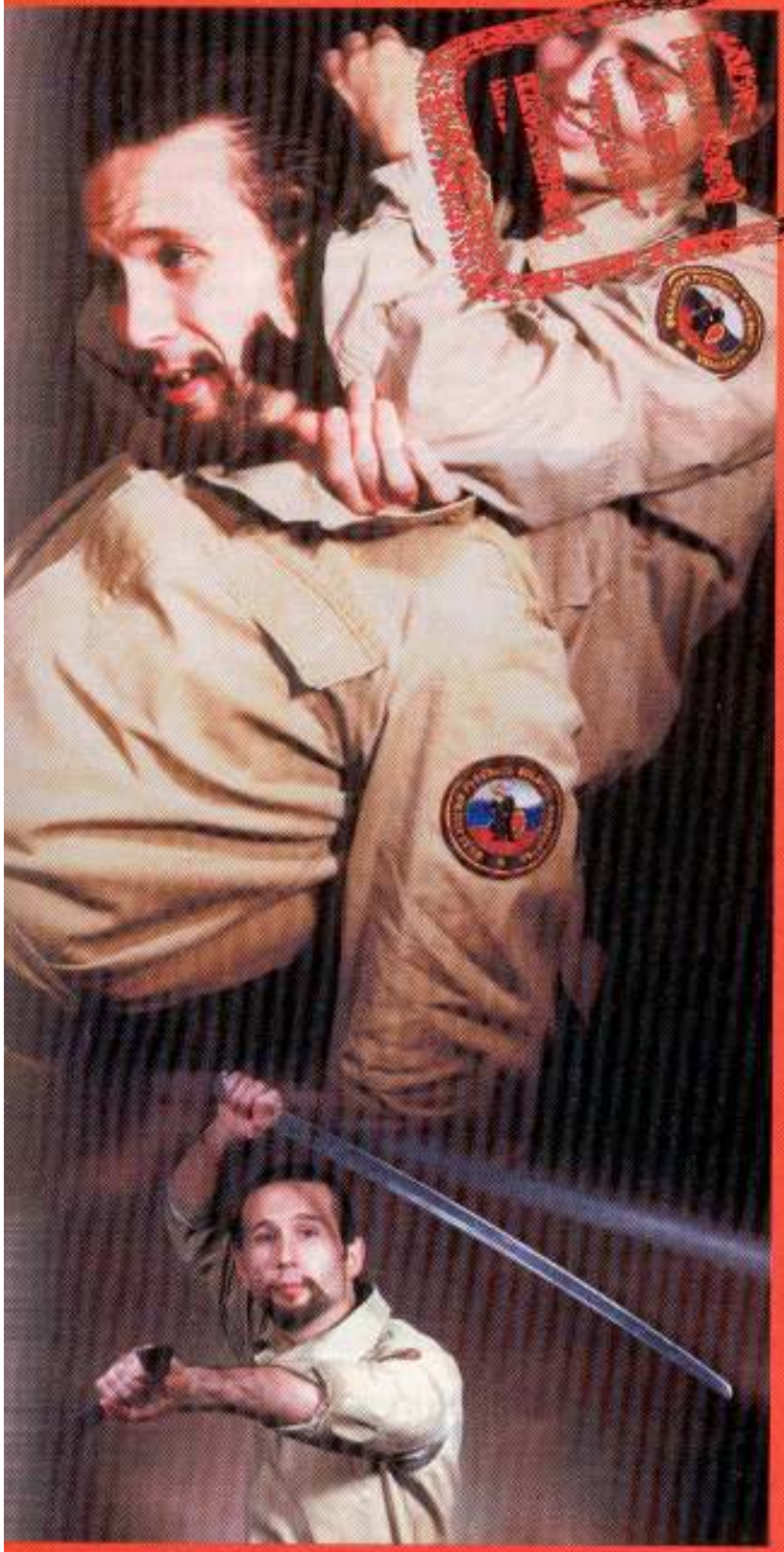
Photos courtesy of The American Academy for Russian Martial Art and Combat Skill

TRANGULATION

SECRED

The Nature of the Strangulation Process

By Scott Sonnon



Graphic Design: Patrick Lego

Intensive research done by the former Soviet Union, comprising of nearly 70 years of exhaustive study of psychophysiology in martial art, is finally accessible to Americans. In the Russian-Style Close-quarters Combat and Survival School the goal is to transform the practitioner through "human survival under extreme situations." This is critical for the Russian Special forces ("Spetsnaz") operator to ensure his survivability in conflict engagements, and to enhance his general wellness.

A significant degree of research was conducted in the realm of "strangulation" to determine its efficacy for combative practicality. Study of the fields of Anatomy, Physiology, Kinesiology, Biomechanics, and Psychophysiology are integral elements of our training. The following information will shed light on this repository of combative knowledge, cultivated by the Slavic peoples, researched in the former Soviet Union, and systematized into its modern evolutionary state: R.O.S.S. Training System - the combat training program of Russian Spetsnaz.

Anatomy of Strangulation

To understand the nature of 'strangulation' we must begin with an anatomical assessment. The vascular system is comprised of arteries, veins, and capillaries. Arteries (high-pressure system) transport oxygenated blood out of the left side of the heart to organs and extremities. Transferring through capillaries to veins (low-pressure system), the oxygen depleted blood returns to the right side of the heart, where the cycle continues. In any particular moment, the total blood volume distribution ratio is:

* venous system	60%
* arterial system	25%
* capillarial system	15%

The nature of the vascular network is the supply of oxygenated blood to all bodily organs and tissues. The brain, a major organ, requires a constant supply of precisely pressured, oxygenated blood. Should the blood pressure

be reduced or increased, unconsciousness may occur. This "fact" is the accepted myth in conventional fitness/martial industry. However, as we see in all disciplines, this "fact" is dubious, faulty, and deceptive. Since professionals have set this "fact" forth from all corners of conventional health/fitness/martial culture, it has been accepted as an absolute truth.

The context-specific nature of strangulation is important to understand the prevailing myth regarding the concept of strangulation. Strangulation itself is not a myth. Strangulation can occur, if specific variables are present and presuming that particular requirements are satisfied. The process of strangulation is context-sensitive, yet it is taught to be context-free (an absolute truth).

The purpose of the research conducted in Russia was to yield an understanding of the psychophysiological mechanisms present in the process of strangulation, so that we may grasp the design necessities of context-sensitive education. Every moment is different; each set of variables fresh. As a result, in order to recognize debilitating myths, we must explore the nature of human design, then explore in our laboratory the physical realities of our particular design and that of others. With each new attempt to strangle, both engaged on us and by us, we cement the context-sensitive nature of reality.

I will begin first by detailing the prevailing psychophysiological mechanisms.

Arterial Compression

The popular understanding of strangulation is that it cuts off the blood supply to the brain by compressing the Carotid arteries which would induce surgical shock (unconsciousness). Many "investigations" were conducted to prove this theory correct. But as we all know, in the scientific method, once the "investigator" establishes a hypothesis, he biases the "investigation" (determines the results).

The Carotid arteries are not the exclusive blood source to the brain, as commonly thought. The Carotid arteries only deliver approximately 70% to 80% of the blood volume to the brain. This is greatly context sensitive. The remaining 20% to 30% is delivered via the Vertebral arteries to the brain. Should Carotid pressure be impeded by surgical or digital compression or obstruction, Vertebral arterial compression increases, which is why the blood volume delivered to the brain via the Carotid is context-sensitive. What percentage of pressured volume can be accommodated by diverting to the vertebral arteries is determined by the individual. There is an obvious threshold, but it is determined by the individual. For instance, vascular surgeons perform Carotid artery surgery on patients under local anesthesia (who are still conscious). Surgeons use this procedure to remove plaque increases at the bifurcation of the Carotid artery (where Internal and External Carotid artery meet). The surgeon clamps off the Carotid artery completely, which limits the blood flow to the brain to be exclusively delivered by the Ver-

tebral arteries. The interesting point is that the patient does not lose consciousness. Draw your own conclusions here. Physiologically, in strangulation, arterial compression of the Carotid alone is insufficient to cause unconsciousness.

Vagus Stimulation

The Vagus nerve runs to the heart parallel to the common carotid artery. Its function is to regulate heart rate, which affects blood pressure. As a result, stimulation of the Vagus nerve can result in a decreased heart rate. An obsolete technique used by medics known as the "carotid massage" was used to decrease the racing heart rate of patients experiencing tachycardia. Cardiologists state that digital manipulation of the Vagus nerve can require up to 20 seconds for heart rate decrease. Decreasing heart rate lowers blood pressure and hence lowers the volume of oxygenated blood to the brain. However, once again, this is context-specific to the individual. Carotid massage is known by medics for its seemingly arbitrary success rate. What works on one, did not work on another. The individual determined the success rate of the manipulation (and this was precise digital manipulation by a medic, much different than a non-targeted application of a belligerent's soft-tissue forearm). Medics also found that the technique was virtually impossible on uncooperative patients (and criminals!).

Physiologically, in strangulation, Vagus Stimulation alone is insufficient to cause unconsciousness.

Venous Compression

Parallel to the carotid are Internal (delivering oxygen-depleted blood from the brain) and External (draining the facial vessels) Jugular veins. Both Jugular veins connect to the Superior Vena-Cava system, which is the final vascular network that returns oxygen-depleted blood to the right side of the heart. Arteries, which are the thick, tough muscled, high-pressure system, are distinguished from the veins, which are thinner and larger low-pressure system. As a result, veins are much more readily compressed than arteries, which is why during strangulation the facial veins "flush" (become engorged with blood). The vascular congestion of blood egress from the brain may result in unconsciousness, if factors permit. It is important to understand that without precise application of pressure to the Internal Jugular vein (context-sensitive application... a method, not a technique), and without the cooperation (albeit unwittingly) of the person to-be-strangled, unconsciousness is virtually impossible.

However, we must understand the difference between two concepts: first, a virtually impossible maneuver because of the uncooperative design is the random fact that 1% occur throughout all venues in life; and secondly, a readily accessible "technique" which is the belief that if one skillfully applies a strangulation "technique" it is only a matter of time until unconsciousness is produced (and furthermore the belief that the greater the skill with the "technique" the faster unconsciousness is produced) irrespective of the cooperation of the person being strangled.

Any honest law-enforcement officer will admit that attempting to apply a strangulation to a resistor has a limited-yield result in unconsciousness, and is dependent upon a certain degree of cooperation from the resistor. It is important to understand the usage of "cooperation" meant here. Vessels are not rigid immobile pipes; they are free-floating, sensitive tissues. Anyone that has had blood taken from them by physicians can attest to this: vessels move, even away from the precision-target insertion of steel lances, much less to the general targeting of a soft tissue body, like the forearm and upper-arm. The body by design moves away from dysfunction. Should it experience adverse pressure, it will (if not impeded by a violent reaction by the host) move carelessly away from the pressure, sometimes completely, sometimes marginally (but even then blood volume and pressure is naturally redistributed) - named the General Adaptive Syndrome (GAS) in Russian-Style.

What a wonderful system the human body is! The major pressure imposed against the Jugular veins is through leverage. The leverage is created by the (unwittingly cooperative) response of the person who is being strangled. The leverage occurs by the 'tensing' of the neck/throat muscles. The first phenomenon in strangulation is the flushing of the face. This occurs due to the 'squeezing' of the External Jugular vein by the tensed (hence, engorged) Platysma and Sterno-Cleido-Mastoid muscles (and a host of smaller accessory muscles), between which lies the External Jugular. Should the individual-to-be-strangled react passively (mindfully relaxing), the intensity and duration of pressure required to flush the facial capillaries is dramatically increased. It takes but a moment for these

Continued on page 28

Continued on from page 21: Strangulation

muscles to tense. You can do this by making the expression of both frowning and cringing (the expression you have precisely before regurgitation), which tenses the muscles of the neck and face. The External Jugular is compressed between these two muscles, rather simply.

The second phenomenon in strangulation is the unconsciousness that is sometimes hastily accredited to compression of the Internal Jugular vein, which is located underneath both of these muscles (not between such as with the External Jugular). The degree of venous compression required to the Internal Jugular is in direct proportion to the muscular reaction from the person being strangled. The more that these neck muscles are engorged and contracted, the greater the leverage of force to compress them. Total compression through strangulation methods even with a violent reaction is impossible. Even partial compression of the Internal Jugular is significantly difficult on the individual who refuses to cooperate by providing conducive reactions necessary for the strangulation process. Physiologically, in strangulation, Venous compression of the Internal Jugular alone is insufficient to cause unconsciousness.

Valsalva Susceptibility

Valsalva Susceptibility is caused by the severe, sudden increase or decrease of intra-thoracic pressure (pressurization of the chest cavity) created by either by holding one's breath and diaphragmic contraction, hyperventilation (short, rapid respiration) or forced exhalation. This intra-thoracic pressure impedes blood flow to and from the brain through the Superior Vena-Cava vessels. Valsalva is a very strong stimulator of baroreceptors (which control the blood pressure). A sudden increase or decrease in blood pressure causes a severe increase or decrease in cerebral blood flow and therefore a challenge to cerebral auto-regulation, which may result in unconsciousness (often referred to as Sympathetic Neurocirculatory Failure (SNF), with or without Parasympathetic Failure).

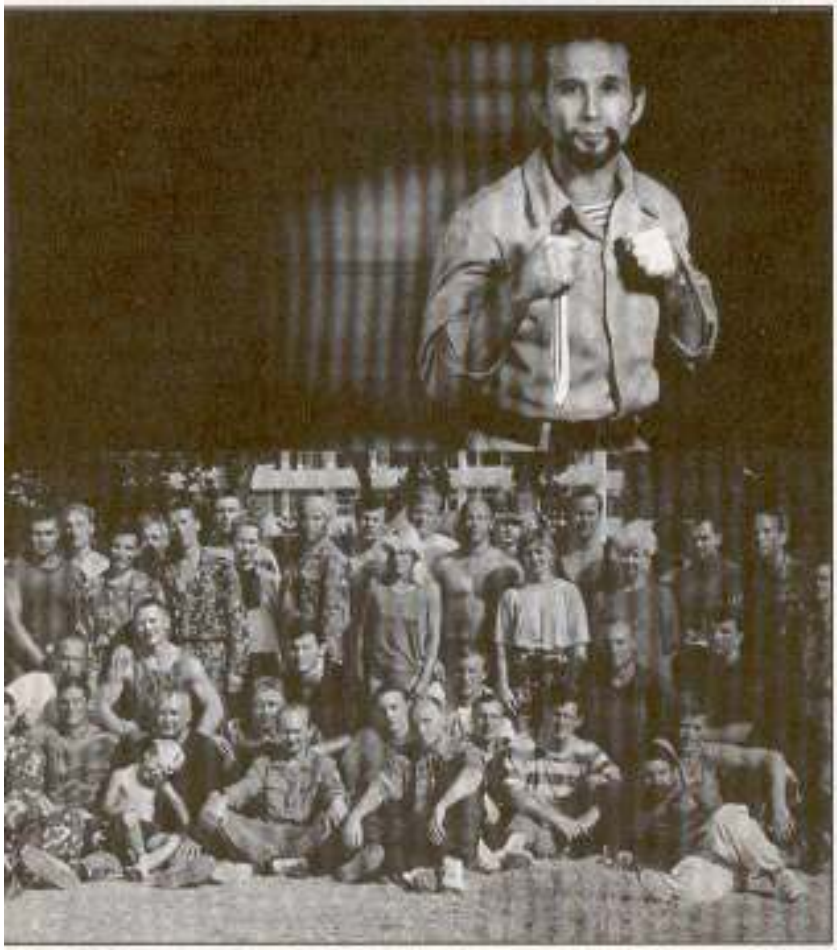
Arm-wrestlers and weight-lifters both experience this phenomenon quite often. Straining, without exhalation, creates internal back pressure of the venous system causing light headedness and eventually may lead to unconsciousness. When in a grappling exercise, the Russian-Style Master is often heard saying, "Relax and breathe naturally." Since this is a circulo-respiratory phenomenon, it is avoided merely by natural regulation of breathing patterns.

But why does this happen you may ask? Valsalva Susceptibility is one of the phenomena associated with 'fight-or-flight' syndrome (Psychophysiological Arousal Syndrome), and is frequently seen in Panic Attacks and Anxiety Disorder. This panic response not only may result in unconsciousness, but actually heightens our susceptibility to the venous and arterial compression in the strangulation process which encourages unconsciousness.

As you can see, there is an array of psychophysiological prerequisites necessary to bring about unconsciousness through the Strangulation Process, and a number of theories regarding its causation. Awareness of these facts helps us temper the myth of the absolute truth of strangulation. For instance,

we all know that hanging by a rope was a means of punishment by death. There is a reason that the individual was hanged and not strangled by hand with a rope. In all of the wonderful movies that we have seen, what is the common response to being strangled from behind with some means of rope? Thrashing, flailing, etc.... the standard panic response. We unfortunately have been indoctrinated by the health/fitness/martial "industry" to believe that this is a natural, positive reaction (that our struggle will only benefit us).

As we have seen through this research our struggle works against us, for strangulation is virtually impossible if the person is prepared and refuses to cooperate (creating the above psychophysiological reactions necessary for the Strangulation Process). This is even why it was not being "hanged by a rope," but "hanged by a rope until dead." Being hanged by a rope is insufficient. If you hold on to your strong beliefs concerning the effectiveness of "skilled strangulation technique," research historical references: it is recorded that many people have survived even hanging, and many more have survived strangulation attempts by hand or garrote.



Technique

Now, as far as skilled strangulation... you notice from the above that not once have we discussed "proper application of a strangulation technique." You now know that this is because strangulation is not context-free, but context-sensitive: specific variables must be present in order for unconsciousness and eventually death to occur (called the Strangulation Process). The neck is not a solid mass, but a pliable tube of viscous guts. The physical application of arm leverage in tactile strangulation increases the ability to cause unconsciousness, yes. But this is most assuredly not a guarantee, and if the person being strangled does not 'cooperate' by providing the necessary psychophysiological reactions, unconsciousness by strangulation is virtually impossible.

This does not imply that the person being strangled merely sits complacently allowing the strangler to attempt his skills, but he is attentive to the variables that the strangler is attempting to solicit. We do this by being sensitive to our Psychophysiological Arousal Syndrome and to the application of pressure by the strangler's arm. Shifting, adjusting, tilting, gently squirming, occasionally remaining absolutely still (as the Americans call, "playing possum"), breathing naturally, the person being strangled knows that one or both of two results will occur:

1. The strangler will think that the application is incorrect and readjust to apply a 'proper' strangulation technique, thereby affording the opportunity to the person being strangled to negotiate into a position that decreases the psychophysiological variables introduced by the strangler.

2. The strangler will no longer be able to sustain the muscular contraction necessary for the technical application of strangulation (muscular fatigue; a human can only sustain, for instance, holding a fist for less than one minute.)

After this wisdom of how not to be strangled is reclaimed by you, you can begin to properly understand the nature of the Strangulation Process: the physical principles of levers and pressure application, the solicitation of Psychophysiological Arousal Syndrome in adversaries, and the manipulation of his environmental and bodily characteristics to increase the likelihood of unconsciousness. It's all about introducing variables, and 'requesting' your adversary to be inadvertent accomplice to his own demise.

The research conducted in Russian-Style continues on to tactical levels on how to solicit arousal responses that increase the susceptibility of an adversity to strangulation. This is a much more efficient perspective on the Strangulation Process. Instead of perceiving strangulation as either the successful or unsuccessful application of a skill, we alter our view to a continuum of factors increasing our opponent's vulnerability by manipulating through external (environmental, gravity, terrain, temperature, bodily position etc.) and internal (psychophysiological arousal level) leverage.

In researching martial art and health, the Russian-Stylist first sets about unraveling the myths in order to reveal the truth of mastery. If you feel that you have no myths to explore, you have begun. To believe that you have no mythology is the first myth to explore. As time passes, we will be able to offer more insights into the training and research conducted in Russia.