

To:
Kevin Helliker
Wall Street Journal

From:
Ken Hutchins
President and Founder of the SuperSlow® Exercise Guild, INC

March 20, 2003

Mr. Helliker,

This letter is in response to your article in the Wall Street Journal on March 13, 2003. Thank you for permitting me to make a delayed response to your article. I know that you have already communicated with Dr. Barnett, Dr. McGuff, and perhaps Dr. Alexander. You should also hear from Gary Lindahl, a physical therapist, soon.

For many years now I have witnessed the confusion expressed by exercise physiologists regarding the source of excessive blood pressure during exercise, most specifically that one and only activity that our discipline regards as *exercise*, slowly performed weight training.

Accomplishing and conveying any advances in any field depends upon making progressively greater distinctions in technical language. Most laymen, as well as most exercise specialists, fail to make the distinction between *proper weight training*—a safe and productive way to improve and maintain health AND *weightlifting*—a violently dangerous sport that involves Val Salva Maneuver, the worst of several causative factors of spiked blood pressure. Both you, as well as the expertise you quoted, failed to make this critical distinction. Just because both activities might use the same tool—a barbell—does not mean that they can be compared. Just because one man uses a hammer to drive nails and another man uses the same hammer for personal assault, do not question the efficacy of the proper use of the hammer.

Also infinitely critical is your failure to factor in the major role of Val Salva.

Val Salva, superficially, is merely a highfalutin term for *holding your breath*. You should, however, appreciate that this is an oversimplification. It is actually possible to calmly cease to breath and not simultaneously Val Salva.

Val Salva is much more than breath holding. It is the application of an abdominal constriction against a closed airway (glottis)—a consequence of which is momentary blockage of venous return to the right side of the heart which alters cardiac stroke and output (Starling's Law). Another result of Val Salva is dramatically spiked blood pressure—two, three times normal or more—so high that it may register off the meter of the typical blood pressure cuff.

Val Salva is a momentary event. Its occurrence will not make one a chronic hypertensive and it is probably just as risky for a hypotensive.

Val Salva is also performed to a matter of degree. To some very slight degree, we all Val Salva by merely talking. Singers and wind musicians deliberately perform a controlled Val Salva. Over time, this can and does often lead to occupational injuries of sorts—hernias, kidney damage, hemorrhoids, etc.

Picture the human torso as a fuselage or a tube of toothpaste. As you squeeze it hard in the approximate center—thus mimicking an abdominal constriction—the vena cava is forcibly collapsed, thus pushing its contents away from the constriction. Thus the heart receives little to no input and the remainder of the system experiences elevated pressure. This pressure is naturally considered to be just in the blood stream, but realize that the effect is very generalized. The constriction pushes some torso contents superiorly and some inferiorly. If air is trapped in the pleura cavity—by a closed glottis—then a large pressure occurs in the thoracic cavity, thus hampering blood return to the heart yet more.

There are several other factors that contribute to dangerously elevated blood pressure during exercise. I have witnessed demonstrations of one-hand gripping that pushed blood pressure cuffs off the scale. This was performed by an individual trained to remain calm and relaxed in the remainder of the body.

Other contributing factors include grimacing, emotional panic, teeth gritting, and the tension of extraneous musculatures. The biggie remains Val Salva; however, I did not see any mention of this in your *WSJ* article published on March 13, 2003.

Proper weight training is performed SuperSlow. This—in most dynamic applications—means not only an approximate 10 seconds to perform the positive part of the movement as well as another 10 seconds to lower the resistance, but also other requirements and safety controls that are facilitated only by such slow speed:

- Continuous and free breathing including a dropped and relaxed jaw with the absence of guttural sounds, i.e., moans and groans indicative of Val Salva, and the absence of emotional panic and urgency.
- Relaxation of extraneous musculature including face grimacing, gritting of teeth, unnecessary gripping, and undue neck tension.
- In a low-humidity, cool, and well-ventilated environment free of distractions such as mirrors, music, and socializing.

Most of the above requirements for proper dynamic exercise are not engendered by faster protocols. In fact, these requirements are progressively obviated at progressively higher movement speeds. Movement is necessarily slow to potentiate three qualities:

- Better loading of the intended skeletal musculature through reduced momentum—what exercise is fundamentally about—thus leading to the stimulus of an adaptive mechanism of the body.
- Lower and thus safer forces on the body through reduced acceleration.
- Better intellectual awareness and concentration through greater time and studied patience to control the instincts during each contraction.

Observe the typical behavior in the typical gym. As a positive effort is made against resistance, the subject often *ons*—applies positive effort with a heave—AND simultaneously performs Val Salva. Then the subject *offs*—lets off the effort AND ceases the Val Salva by breathing... Then repeats... We refer to these dangerous discrepancies as Val Salva Sync.

We are the only certifying agency in the world that has identified and named this event. This is also to say that the other major agencies are not even aware of the problem. If they were aware of Val Salva Sync as well as aware of the proper principles in exercise, they would be teaching SuperSlow Protocol and only SuperSlow Protocol. This is exactly why we have had to erect The SuperSlow Exercise Guild, INC.

On our website, We have openly condemned the lack of professionalism associated with exercise notions—Aerobics, plyometrics, isokinetics, other ballistic genre, functionality training, etc.—promoted by the *American College of Sports Medicine* and the *American Council on Exercise*. The exercise physiologists associated with these organizations are responsible for giving you such misleading information on proper breathing as I saw in the graphic on page two of your article. And while I agree that most personal trainers are grossly misinformed about proper exercise, so are those institutions and organizations who would lobby for improved education. They do not possess the necessary principles and sensitivities to make reasonable policies on exercise matters. It is unfortunate that the media, the medical profession, as well as legal system and insurance companies defer to them for information.

It is wrong to teach people to “Exhale as you lift, inhale as you return the weight.” Putting a scheme to breathing is incorrect. Doing so promotes Val Salva. You should merely breathe. And as the exercise becomes more challenging, breathe yet more with the notion in mind that *breathing makes it go*. This mentality will lend to eventually reversing the natural association of Val Salva Sync.

Another large bit of material for a health writer interested in stroke would be the bathroom. There are several major requirements for life including but not limited to:

- Eating and Drinking
- Sleeping
- Breathing
- Defecating
- Urination.

Obviously, we are only comfortable talking about the first three, while bathroom activities, especially defecation, are a major health issue, especially with regard to Val Salva.

One of the most common places to find someone dead, especially an elderly person, is in the bathroom. When emergency medical personnel get a call—with what limited information they receive through 911—that a person is unconscious and down on the floor in the bathroom, the EMT begins mental preparation based on what is expected to be found. One common possibility is that the person has fallen and hit his head. Another is that the person has been straining at a bowel movement, performing a Val Salva Maneuver resulting in spiked blood pressure that burst an aneurism. Now understand that an aneurism could be anywhere in the body. Very commonly, the event occurs in the brain which receives the designation of “stroke.”

Of course, a stroke doesn't have to occur in the bathroom on the commode. Many people are so weak and decrepit that they may Val Salva and spike the pressure dangerously enough merely struggling to get up out of a chair or out of bed. And if you observe your own behavior, note that you Val Salva in the kitchen as you remove the lid from a jar of pickles or when removing a grocery bag from the car.

Note that Val Salva is not the only bathroom danger either. The bathroom is a very dangerous place. It is a wet area usually with slippery floors as well as with a confined area in which there are many hard objects on which to hit your head. As they are half awake, people go there in the middle of the night, fail to turn the light on, and slip and fall and injure and/or kill themselves. Bathrooms are also a popular place to run and hide from embarrassing events such as bleeds of various kinds as well as a place to commit suicide in various ways and to administer both legal and illegal drugs. Is the *WSJ* going to recommend that people avoid bathrooms?

For those exercise physiologists who slam SuperSlow Exercise as a blood pressure threat, with the argument that moving faster is safer, I suggest that they consider the effect of faster defecation. It might seem that I am stating this with tongue in cheek or merely being crude, but I truly believe that this is deathly serious matter.

As the speed of either activity—weight training or defecation—increases, the forces increase, both internally and externally. What's more, the time to apply intellectual control of the offending dangers is lessened. Doing just about anything faster makes it less controllable and more dangerous from many perspectives. Either explosive weight training or explosive defecation will lead to life threatening injuries. Either will result in blown arteries, hernias of various locations and tissues, varicosities, and damaged organs.

Another argument that I sometimes hear from misinformed exercise physiologists is the notion that SuperSlow movement speeds keep the muscle in such a constant state of contraction that the blood flow is dangerously impeded. This is not true. Even in sustained static contraction, the muscles continue to fasciculate, thus propelling the blood toward the heart. The blood is not stopped.

In fact, we sometimes use a form of isometrics termed *timed static contraction* (TSC). This is a static contraction applied for two minutes and progressively staged with regard to effort. I often state that SuperSlow Exercise is safer than stepping off a curb on the way to your parked car, but TSC is safer than lying in bed.

Despite the good intentions of misinformed observers, TSC is one of the best and efficacious methods to rehabilitate—guess who—stroke patients. TSC, rather than dynamic weight training, best enables these patients to mentally focus on those musculatures that have been functionally compromised. With proper ventilation, it is often safer and yet better controlled than the SuperSlow for some rehabilitation applications.

Respectfully,

Ken Hutchins,
President