

**WORLD JKA KARATE ASSOCIATION**



***Instructor Trainee's Report #12***

***Punching in Karate***

***WJKA (Canada)***

***Instructor Trainee # 002***

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Punching in Karate would seem to be the simplest of the techniques. From the very outset, we are teaching new practitioners to use both arms/hands to punch by extending one arm, withdrawing the other, and rotating both as they do so.

Of course, Karate is an *Art* because it envelopes simplicity and complexity: as the karateka grows, so comes the understanding that the well is deep. As Sensei Frederick Chernoff acknowledges:

*When we use the word punch or strike we can differentiate these actions fairly simply, and yet the more one studies them the more complex they become.*<sup>1</sup>

Before looking at the complexities of delivering the punch, it is important to look at the biomechanics of making one. A fist in karate isn't simply the process of closing the hand. In *Karate Science*, J.D. Swanson describes making a proper fist<sup>2</sup>:

*The first weapon seiken, or the forefist. This consists of the front knuckles of the index and middle fingers. In order to construct a correct fist, the fingers are rolled tightly, starting at the tips and progressively rolled downward into the fist. The fingers dig into the meaty part of the palm just above (not into) the first line in the hand, creating a strong, compact ball. The thumb then pushes down firmly on the middle knuckle of the index and middle finger on the underside of the fist. The strongest squeezing finger is the little finger...*

Swanson goes on to point out that the knuckles are not a ready made weapon but need to be conditioned to deliver a power blow. He also highlights a common controversy in wrist alignment<sup>3</sup> in karate as illustrated to the right. This highlights an issue that karateka sometimes face in that if they exaggerate keeping the top of the fist flat, in line with the top of the forearm, the punch can buckle downward on impact. Instead, according to Swanson and others, a slight upward angle is biomechanically the strongest impact position of the fist.

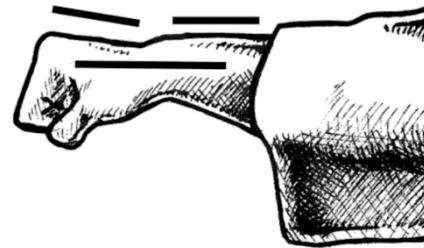


Figure 1 Fist Position J.D. Swanson

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<sup>1</sup> Simplicity and complexity of punching and striking in Karate, WJKA Newsletter

<sup>2</sup> Chapter 3. With What and How Do I Make a Hitting Surface?

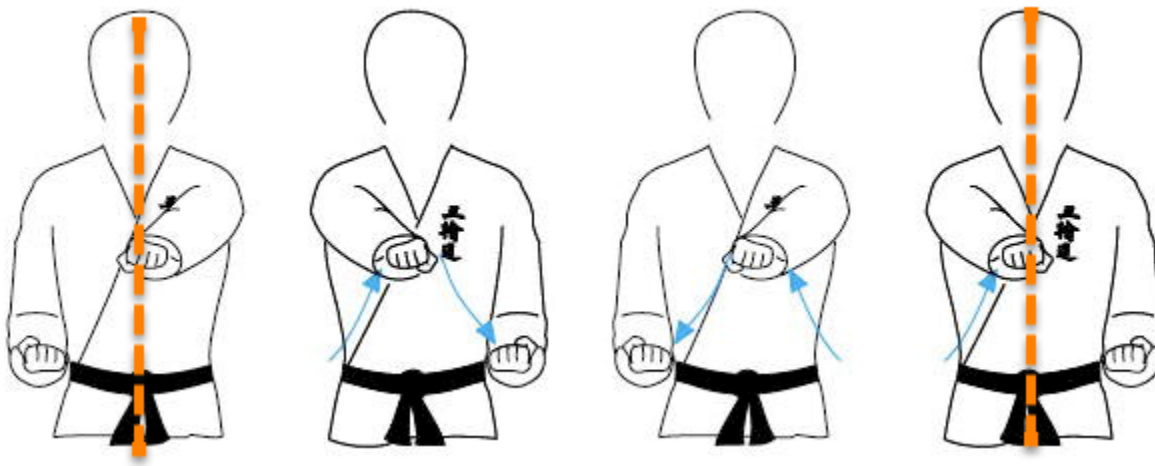
<sup>3</sup> Correct Wrist Position of the Fist

In considering the punching hand, the karate practitioner also studies the *ippopn-ken* (one-knuckle fist), the *nakadata-ippopn-ken* (middle knuckle fist), and the *Hiraken* (fore-knuckle fist).

Making the fist is the preliminary stage of delivering the punch, and subsequent to that is a consideration of where you are hitting the opponent.

The illustration below points out a fact that Hidetaka Nishiyama used in his teaching, as well as in his book, *Karate The Art of "Empty-Hand" Fighting*: A major consideration for the punch is the target. According to his teaching, and more general karate theory, a karateka should punch the target on the line as indicated in the image below (in orange) - the centre line:

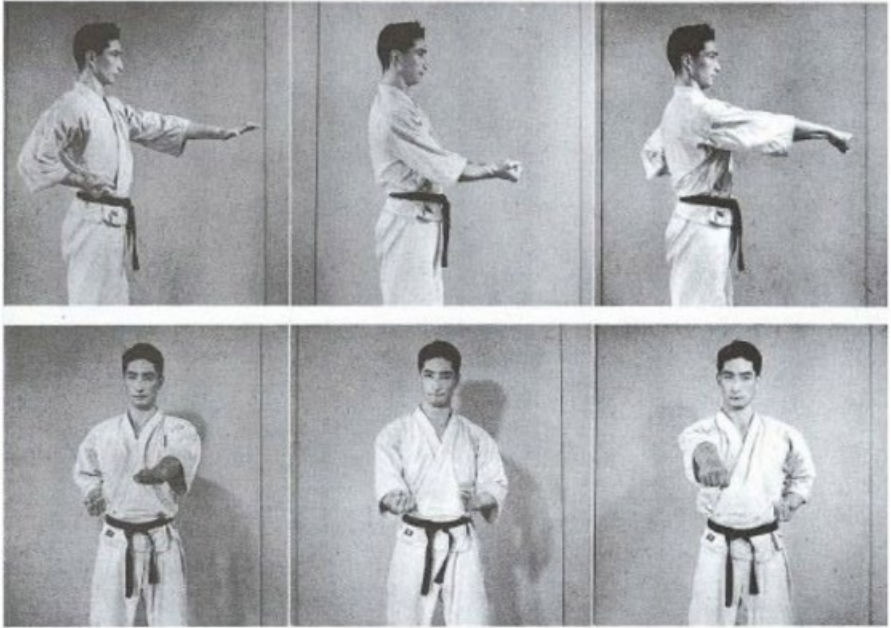
*A vertical line drawn directly in front of the centre of the body represents the area in which the greatest strength of the body can be concentrated. Whether aiming at the opponent's face or the stomach, the blow should strike this area.<sup>4</sup>*



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<sup>4</sup> Sensei Nishiyama taught extensively about maintaining a proper stance and posture in order to be able to take advantage of this principle.

Seen here (also from Sensei Nishiyama's book) is the seiken-choko-zuki or straight punch. As illustrated, rather than simply shoot out straight from the hip, the punch comes to the centre line. Therefore, keeping the opponent right in front of you allows you to generate the most power as well as to strike the center of your target. A punch, for example that hits the target to the right or left of the solar plexus is significantly less effective than hitting the most vulnerable spot in the stomach.



Also taken into consideration here is the idea that for every action there is an opposite and equal reaction<sup>5</sup>. Sensei Nishiyama illustrates the technique with a punching arm and a Hikite or draw arm. The principle is that pulling one arm back generates momentum for the arm that is punching out. Again, using the centre line as an axis we use the symmetrical halves of the body in unison.

The complexity comes into play here, as the practitioner must engage muscles at precisely the correct time. Sensei Nishiyama again:

*At the moment of impact, all of the muscles of the body, but particularly of the chest and back, must be momentarily tensed.*<sup>6</sup>

Understanding energy or Kime in a technique comes with repetition and careful self-study. Tense the muscles too early and the impact point is missed. Tense them too late and you miss your opportunity to affect the opponent. Keep them tensed for too long and you use more energy than is necessary.

A punch in karate is a unit of timing, accuracy, body control, connection to the floor, breathing and mental intention.

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<sup>5</sup> Referencing Newton's Third Law

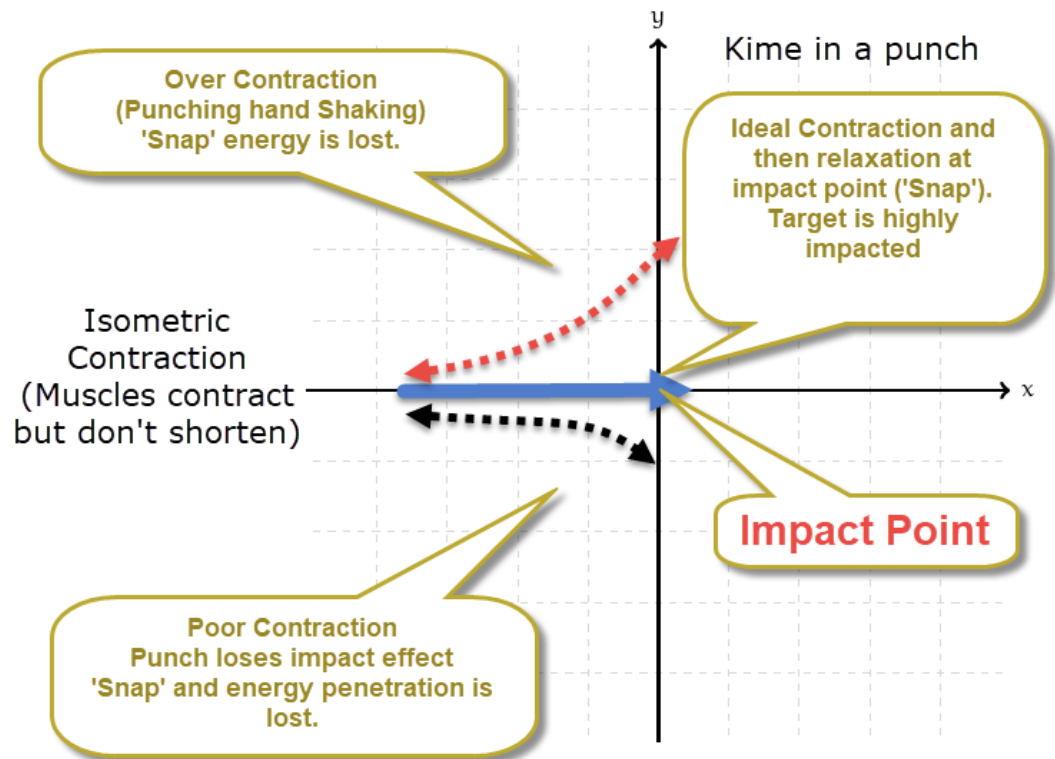
<sup>6</sup> Chapter 11, Hand Techniques

With a proper fist and proper technique, we add another level of complexity in the form of *Kime*<sup>7</sup>. Dr. Lucio Maurino defines *Kime* in a punch as follows:

- This means you must quickly tense your muscles (snap) at the moment of impact, but not so much that your muscles are shaking.
- Your ability to coordinate your muscles, and quickly relax before and after a technique, directly effects your *Kime*.

Punching using *Kime* and punching without *Kime* is analogous to being hit by a sponge brick or a stone brick. In fact, Sensei Nishiyama used to state that your arm is a river but [at *Kime*] your fist becomes a stone<sup>8</sup>.

The diagram<sup>9</sup> below illustrates the idea of over-contracting and under contracting muscles at the point of impact. The complexity comes in where the karateka has to find ideal isometric contraction and release – with perfect timing.



<sup>7</sup> In Japanese, means to Decide

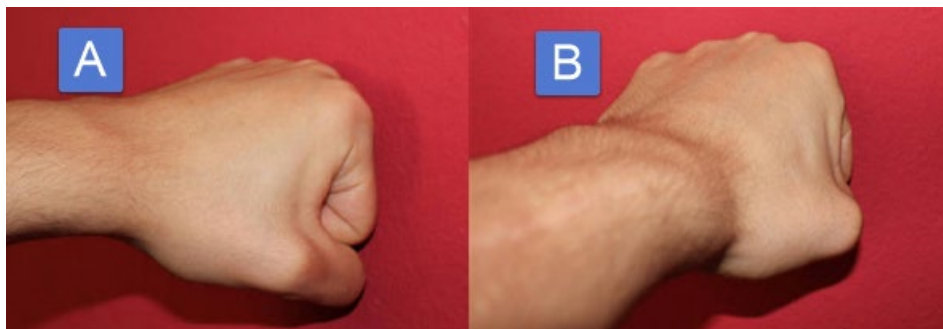
<sup>8</sup> Oral teaching from Hidetaka Nishiyama Sensei

<sup>9</sup> Illustration created by the author

As mentioned earlier, the fist is not a naturally formed weapon and there needs to be some consideration given to conditioning it as a striking unit. The simple practice of punching air as in Kata and basic Kihon should be augmented by introducing a striking surface to practitioners. Karateka who strike a heavy bag, Makiwara<sup>10</sup>, or training pads not only get a better understanding of action and reaction forces, they also better understand body posture and distance control.

As important, the bone percussion and muscle development gained from striking a resistant surface builds a stronger wrist and fist, allowing the practitioner to gain a better understanding of the proper way to strike.

Pictured here, the practitioner places his fist against a wall to illustrate an incorrect fist/wrist alignment (A) and then a correct alignment (B):



Position A is flatter against the target, hitting with the smaller knuckles. Hitting a solid target in this manner would possibly mean the wrist would jolt out of line, to the left. Position B is using the Seiken as the striking surface allowing proper alignment for the impact and reaction force to carry along the strongest path of the wrist and front two knuckles.

Having students stand back an arm's length from the wall and then place their fists in position B, they can try some wall 'push-up' techniques to get the feel of correct fist/wrist alignment.

In conclusion, as stated by Jesse Encamp<sup>11</sup>, *"You need to align all three components of shin-gi-tai (mind-technique-body) to perform at top level, no matter if you're punching, kicking or blocking."* Making a fist is the simplest piece of executing a punch. Your mental intention has to be clear; your technique has to be clean and concise, and you have to utilize your body's energy through muscle contraction, breath

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<sup>10</sup> A historical device essentially built as a striking post.

<sup>11</sup> Blog Post, How to get Power in your Karate Punches

control and keen timing. In addition, reaction force from the floor has to be the catalyst for the entire action.

The skillful Karate punch is a continual, swift chain of mental and biomechanical actions.

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