

Why we use Pressure points in Karate.

1st Degree Black belt thesis

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Preface

I chose this the topic of pressure points because this was an area I did not have much background in and wished to learn more about. As I got further and further into my research, I found that knowledge of pressure points is very detailed and could easily be a field of study all by itself. With the Martial Arts aspect of pressure points only the beginning, and is part of the broader healing aspects of the topic. It is an example of the balance in the Ying/Yang symbol. With pressure points you have the ability to heal or hurt with the same knowledge, depending on how it was used. I have limited my scope to only the Martial Arts applications of pressure points. I am listing only those pressure points that seem to have an immediate effect on the opponent. I am not listing delayed death touch type pressure points unless I find it useful as a warning to avoid that location, as I'm not interested in killing anyone, and don't find the idea of the effect happening days in the future after the attack is over to be of any use to me in a self defense situation.

Pressure point strikes are used in most types of Asian Martial Arts due to our common background from Kung-fu and other Chinese arts; pressure points are stressed in some styles more than others. My research material came from my weekly classes in American Kenpo with Mr. Norm Rollando, the internet (as long as I could find different sites that verified the information) and books on the Martial Arts, Acupuncture and Acupressure.

I wish to thank Mr. Rollando, for the first hand knowledge in American Kenpo he provided me. Thanks to my wife Lynn for her proof reading and support in these many years of study so far. This is just the beginning! Thanks also to my three children Eric, Jacob and Megan, who from time to time agreed to be my opponent as I worked out one technique or another while earning my belt ranks and needed a "body" to work on.

Pressure Point concepts

According to traditional Chinese medicine, there are three sources of Chi. You are born with some, transmitted from your parents. The other two we get from the food we eat and the liquids we drink. Along with the air we breathe.

The different pressure points locations are known through Chinese medicine and their Acupuncture charts. They are grouped according to the organ they are associated with, and each group will run along different lines or meridians traveling through out the body. Chi flows continuously from one meridian to another. This has been proven effective to relieve pain and improve healing, Acupuncture and Acupressure. Any break in the flow creates an imbalance, thus a weakness or injury to the body. Meridians are not identical to nerve or blood vessel routes, (although a lot are located on them), or other anatomical structures known to western medicine. Meridians can not be seen when dissecting the body. Some pressure points are atop a nerve branch. Compare the spinal nerve diagram and Ulnar nerve – Radial nerve diagram with the diagrams showing the different meridians. The pains from these locations are severe because the pain is traveling to the brain on more than two nerves. Each meridian is associated with either Yin or Yang and has an element assigned to it as follows.

Heart – Yin – Fire

Kidney – Yin – Water

Pericardium (circulation or sex) – Yin – Fire

Liver – Yin – Wood

Lung – Yin – Metal

Spleen – Yin – Earth

Small Intestine – Yang – Fire

Bladder – Yang – Water

Triple Warmer – Yang – Fire

Gall Bladder – Yang – Wood

Large Intestine – Yang – Metal

Stomach – Yang – Earth

Yin and Yang need to remain in balance through out the body or illness will result. The Yang meridians relate to solid organs. The Yin meridians relate to hollow organs. With one Yin and one Yang per circuit (think electrical theory here, positive and negative). For example, the Lung and Large Intestine meridians are linked as a circuit. The Lung which is Yin runs down the inside of the forearm where it connects with the Large Intestine meridian which is Yang, which runs back up the outside of the forearm.

When looking at how sunlight shines onto the body while standing. It is easy to see the Yin areas vs. the Yang areas. The areas in shadow (ex. Arm pit, groin, below Pectoral muscle, back of knees, etc.) are Yin. The areas the sun shines on strongly (top of head, top of shoulders, Pectoral muscles, etc.) are Yang. Yin meridians have a negative flow of chi, traveling from the toes to the head. Yang points have a positive flow of chi, traveling from the head to the toes. The front of the body is Yin and the back of the body is Yang. The left side is Yin and the right side is Yang. The top is Yin and the bottom is Yang. In Western medicine the Yin/Yang relationship is known as the Sympathetic/Parasympathetic autonomic nervous system. Western Doctors know that an imbalance in this can cause illness or even death. Western scientists have measured electrical fields over the meridians.

Chinese medicine states that different meridians are more sensitive at different times of the day. Energy (Chi) known to the west as bio-electricity, flows from one area of the body to another ^{for example} ~~only~~ the meridian lines at set times each day. I personally don't know how much value this would be as I'm not going to be checking my watch during a self defense situation to pick my targets. But a more advanced student may find it helpful. Knowing the direction of Chi flow is helpful for follow up strikes or as a set up to a second meridian attack. The meridians and their associated times of day and direction of energy flow are as follows.

Gall Bladder – 11 pm to 1 am - traveling from head to foot.

Liver – 1 am to 3 am – traveling from foot to chest.

Lung – 3 am to 5 am – traveling from chest to hand.

Large Intestine – 5 am to 7 am – traveling from hand to head.

Stomach – 7 am to 9 am – traveling from head to foot.

Spleen – 9 am to 11 am – traveling from foot to chest.
Heart – 11 am to 1 pm – traveling from chest to hand.
Small Intestine – 1 pm to 3 pm – traveling from hand to head.
Bladder – 3 pm to 5 pm – traveling from head to foot.
Kidney – 5 pm to 7 pm – traveling from foot to chest.
Pericardium – 7 pm to 9 pm – traveling from chest to hand.
Triple Warmer – 9 pm to 11 pm – traveling from hand to head.

Western medical research has shown that most asthma attacks are in the early morning. The lung meridian is most active from 3 am to 5 am. So you can draw your own conclusions.

Pressure points are not to be confused with vital points. Vital points will cause death. Pressure points attack nerves, tendons, and Chi meridians to control the flow of Chi. Only some pressure points are also considered vital points. I am not a believer in the flow of energy, but prefer to think of it in terms of the flow of information. Where the meridians are like wires we can't see, and the muscles and organs are like electric motors and the brain is the computer processor.

A large percentage of the pressure points shown on the Acupuncture charts are for healing and not usable for self defense. Out of the 300 points on an acupuncture chart, 108 of those are used by Martial Artists. Of those 108 points, 36 are considered vital points; I am only listing a small sample of those that I think are most useful for self defense. As the complete listing would take a whole book. (See reference list.) Most pressure points are about the size of a pencil tip, but the areas around it that can be used to activate the point are about the size of a quarter, and lay at a depth of about $\frac{1}{2}$ to $\frac{3}{4}$ inch below the surface. Those on the back may be slightly deeper. The measurement used on acupuncture charts to locate each pressure point is called a "cun". It is about 1 inch or the length of your middle finger, between the 1st and 2nd knuckle when counting from the tip of the finger, with the measurement of 1 fen being 1/10 of a cun. Each pressure point has its own rule for activating. Some need to be struck, some pressed, some rubbed.

Believing that pressure points are not a valuable addition to your karate knowledge and that they do not make your Kenpo techniques more effective is flawed thinking. When used appropriately pressure points are an effective way to control an attacker without causing serious injury. Bringing to mind the old saying; “The more you know, the less you have to hurt your opponent.”

Using the technique ‘Lone Kimono’ as an example, in the first move you pin the attackers hand to your chest, while stepping back with the opposite leg (stretching out the attacker’s arm so it is straight) so he/she can’t pull away and it also allows you to brace his/her hand against an immovable object (your chest) so you can break the attackers arm with the upward forearm strike (or upward block if you prefer to think of it that way). It takes a much higher force to break the bone in your opponents arm than to activate the pressure point at the elbow. Instead of hitting with the flat top part of your forearm, just twist your forearm to hit with the inside edge (side nearest the thumb) and slide your arm up his/her arm as a rub. Activating pressure point TW11. Located just above the elbow. Allowing you to hyper-extend the elbow using less force. This is a golgi point. It relaxes the tendons around the elbow, so it can be bent past its normal limit without ripping muscle or better yet, move the strike location up the arm to activate pressure point TW12. Located on the back of the tricep muscle. This will cause your opponents arm to go numb and have a lack of strength. This will prevent the arm from being used temporarily if you were to release the pinning of his/her hand. It also, because of the lack of strength in his/her arm will prevent him/her from stiffening it to prevent your next move from being able to bend that arm, to bring your opponent forward toward you in the second move. By using this pressure point you are using the least amount of force to control the attacker, because you did not need to break his/her arm to get the reaction you needed. Then in the second move, as you land your downward forearm strike on top of his/her forearm hitting pressure point LI10 causing paralysis of the arm. You then roll your forearm or back fist in toward you, putting the emphasis on anchoring your elbow as you move. Which by itself without the use of a pressure point will cause the opponents arm to bend whether he/she wants it to or not. If you caused a temporary weakness in his/her arm in the first place by activating either of these two pressure points, the opponents arm will bend much easier, even if you forgot to anchor your elbow when

rolling and pulling in of your forearm. Hitting both pressure points will make the effect twice as strong. The third move in the technique calls for an outward handsword to the side of the neck. Without hitting a pressure point this may hurt some, but won't really stop an opponent. Instead of just hitting any area on the side of the neck, aim for pressure point GB21 at base of neck where it joins the top of shoulder. This causes the person to drop to the ground and the possibility of a knock out. This ends the confrontation without further fighting. This pressure point has the ability to not only knock out the opponent so you can run away, but can if hit very hard cause death in case you were in a situation where you know that person would cause future harm to you or your family (war?).

As you can see from the above example the technique Lone Kimono will work just fine without use of pressure points. But by using pressure points you make it easier to control your attacker without causing lasting damage (you show mercy), exerting less physical excursion on your part allowing you to not tire as fast as your opponent, and ending the situation quickly.

TW11 to TW12 follows the path of Chi flow on the Triple Warmer meridian from hand to head. This increases the effect of the second strike on that meridian. If you look at the destructive cycle, you will notice that these pressure points follow it with the activating of three different meridians in the proper order.

TW11 – Fire

TW12 – Fire

LI10 – Metal

GB21 – Wood

Self defense uses

In self defense we want to use the pressure points to disrupt the smooth flow of Chi in order to quickly incapacitate an attacker. The Self defense would use the Cycle of Destruction, this is the opposite used for healing. Hitting different meridians in order of the destructive cycle will cause the effect of the previous meridian strike to be amplified. The destructive cycle can easily be remembered as; fire ^{melts metal} ~~burns wood~~, metal cuts wood, wood digs into earth, earth absorbs water, water extinguishes fire.

It is believed that activating two points on the same meridian will cause the effect of the first pressure point activated to be greater than if it was activated alone. If you attack two different meridians following the Cycle of Destruction, pain will be increased and health decreased. Attacking three different meridians will tend to stun an opponent. Attacking four different meridians will tend to cause a knock out, and attacking five different meridians may cause death. Using the Yin/Yang theory, if you hit two points that crosses the body. It will disrupt the yin/yang balance, and thus cause sickness or other health problems.

The Cycle of Destruction is as follows.

Fire melts Metal.

Metal cuts Wood.

Wood penetrates Earth.

Earth dams Water.

Water extinguishes Fire.

Different points respond to different types of stimulation. Some respond to more than one kind of stimulation. They can be manipulated by striking, pressing, or rubbing. The angle of the manipulation is important. You can hit the correct location, but if you have the wrong angle the effect is the same as the same attack on an area of the body that is not a pressure point.

Stimulation or activation of a pressure point can cause intense pain. Thus distracting an opponent from seeing your next strike or even convince him or her to stop the attack. The pain will stop as soon as you stop stimulating the pressure point; Unlike pain caused by tissue damage. Some pressure points do not cause pain, but cause the body to turn, twist, buckle or suffer from temporary paralysis. Still others cause the flow of Chi to be disrupted until a revival point is activated. Some are dangerous enough to cause death.

An opponents sensitivity to pain, or being of a different size than you are used to practicing with (Men are easier to locate pressure points on than women. Due to men's larger size.), or drugs in your attacker's system may cause some pressure points attacks ineffective.

Pressure points can be broken down into 3 different categories.

Level 1 – Will sometimes cause pain.

Level 2 – Will always cause pain. But can be nullified by tensing the muscle affected.

Level 3 – Will always cause an involuntary movement. This is because of the body's pain withdrawal reflex.

Pain is useful to encourage an attacker to stop. Involuntary movement is useful to set up the opponent for a follow up attack. The majority of pressure points are level 1 and located everywhere on the body. There are fewer level 2 pressure points, and even fewer level 3 pressure points. Most level 3 pressure points are located on the centerline of the body and thus most easily protected. As you will see in the section that analyzes three sample techniques, American Kenpo uses all three levels of pressure points to varying degrees.

The effects can range from numbness or weakness in part of the body, dull, sharp or shooting pain, aching, burning, electric jolt, tingling along the nerve; Up to knock out (KO) or even death. These points when used to heal are gently activated, but if harshly activated will have the opposite effect. Some are said to include delayed health problems.

An example of a pressure point that needs to be struck is GB34. (Inside edge of the knee.) This is a level 2 point. Striking this will cause damage to the leg and also a possible KO. But this can be countered by tensing the knee muscles.

An example of a pressure point that needs to be rubbed is any of them on the spine. These are level 3 points. Rubbing downward hard on the spine will cause the body to move forward involuntarily to get away from the sensation. This move does not cause pain as much as it is just uncomfortable. But the body still reacts to it. *Rubbing upwards does not work as good?*

An example of a pressure point that needs only pressure is ST9 (Carotid Artery). This is a level 3 point. It is located on each side of the neck. This is not a nerve, but the arteries that carry blood to and from your brain. By putting pressure on one or both you trick the body into believing the blood pressure is too high. The body will react by altering its heart beat to lower the blood pressure. Causing light headedness, and confusion. This affects a person's ability to fight. If applied strong enough and long enough (3 seconds) you stop blood flow (and thus fresh oxygen) into the brain. This causes the person to faint. Of course if you keep the pressure on too long the brain will start to die.

An example of a level 1 pressure point that is popular in American Kenpo is the LV11. It is located at the top/inside of the leg in ^{the}crease next to the testicles. (Note, the testicles are not a pressure point, but are a vital point.) It causes sharp pain. But if a person is high on certain drugs he won't feel any pain and you will need to try something else.

An example of a level 2 pressure point is the CV9. It is located at the front center of the body at the waist. A strike here when caught unprepared will cause loss of breath and the body to bend forward. But if the person hit was able to tighten the abdomen muscles before impact, the strike will have no effect.

An example of a level 3 pressure point is CV22. It is located just above the Sternal notch at the base of the throat. Poking in the "V" at the base of the throat will cause a gag reflex, pain, shortness of breathe and make the person back up.

Healing

Chi flows through out the body along the meridians. This energy nourishes the organs. The meridians do not follow nerves or veins for their entire path. Using the elements for each group of pressure points, the Cycle of Creation is used for healing and is as follows.

Fire creates earth.

Earth creates metal.

Metal creates water. (Condensation)

Water creates wood.

Wood creates fire.

Chinese doctors use a variety of techniques to restore balance to Chi flow through out the body. Acupuncturists use needles or pressure to manipulate pressure points to restore Chi flow. Herbal medicines are also used to smooth the flow of Chi to help the body heal faster. The key to traditional Chinese medicine is that when Chi flows smoothly, blood flow improves. Allowing more oxygen and nutrients to reach the muscles and organs.

An interesting side note is that in the past, Chinese Acupuncturists would practice on an Ox. As the pressure point locations are approximately the same as the human body. The theory being that the Ox did not know how the pressure point was supposed to react. So when the desired effect happened. The student knew he or she activated the proper spot correctly.

By manipulating these points (think of them as gates in a pathway to be opened or closed) the doctor can increase or decrease the flow of Chi as needed to restore the health of the patient.

The Sleeper technique with pressure points.

Attack: Right punch, from front.

- 1) Left step forward into a left neutral stance with a left inward block.
- 2) Right inward diagonal inner-wrist strike to ST5. *May cause a knockout.*
- 3) Right crescent step, going behind attackers' right leg. Slide ^{your} ~~my~~ left arm up to ^{the right} left side of attackers' neck, staying ^{over} ~~under~~ the arm. Fold ^{your} ~~my~~ right arm inward so ^{your} forearm contacts ^{left} ~~right~~ side of the neck (ST9 on both sides of neck). *Putting pressure on the Carotid artery, slowing the flow of blood to the brain. Fooling the brain to decrease the blood pressure. Resulting in attacker fainting.*
- 4) Left step to 5:00 into a twisted stance. Untwist, allowing attacker to slide down to the floor. Drop weight and deliver a right punch to the face. Causing attackers brain to slam back and forth inside skull.

5 Swords technique, with pressure points.

- 1) Right step forward to 12:00, checking against inside of attackers' right knee, While simultaneously hitting LU6 *at a downward angle toward wrist* with left handsword. This causes an electric shock to travel down attackers' arm. And hitting LU4 *straight in to center of arm* with right handsword. In a double inward handsword block.
- 2) Right outward (glancing) handsword to LI18 *at a downwards and slightly inward angle* sliding down side of neck to go over LI17 *in a diagonal line ^{continuing} to opposite side of body.*
- 3) Left palm/heel strike to CV24 *straight in.*
- 4) Right uppercut to CV12 *straight in and slightly upward.* Causing loss of breath.
- 5) Left step back into a left rear twisted stance. Left outward handsword to SI16 *straight in to center of neck.*
- 6) Convert left hand into a hook around back of attackers' neck. Pull attackers' head down and forward with left hand. Follow with a right downward handsword to GV14 *inward to center of neck and slightly up toward skull.*

These pressure points do not follow the destructive cycle. Being almost all metal points. But they do alternate every two strikes from a Yin area to a Yang area.

LU6 – Metal – Yin

LU4 – Metal – Yin

LI18 – Metal – Yang

LI17 – Metal – Yang

CV24 - No element associated. – Yin

CV12 – No element associated. – Yin

GV14 – No element associated. - Yang

Bow of compulsion technique with pressure points.

Attack: Pinning of your right hand against his chest. From 12:00.

- 1) Pin attackers hand with left hand.
- 2) Right, ^{vert. inward} downward elbow strike to CV8. As you are hitting this point with your elbow and not a finger tip, and also not penetrating very deep, you will not activate the pressure point. So the result is slight pain and loss of breath.
- 3) Rip your right hand downward (pulling down out of his grip), to claw down front/center of his body, ^{past the groin.} You will pass over many pressure point areas here (CV17 – CV3), but not activate any of them. Result is just discomfort.
- 5A) ^{lift w/R up w/ ridge hand to the groin (CV1)} Right back knuckle strike to inside edge of his left knee. Hitting LV7 causing great local pain and loss of balance.
- 6) ^{hooking} Right raking smother punch to inside of his right knee. Hitting LV7.
- 7) Exit right over left, toward 7:30.

Conclusion

Knowledge of pressure points is a valuable addition to anyone's American Kenpo skills. An understanding of how the body works and how to heal using pressure points is needed to understand why the pressure points can also be used for harm. The base techniques we learn as we move up through the belt ranks all work very well by themselves. Using pressure points will make your opponent react strongly in the way you want to set up the next strike or to stop his/her use of a natural weapon. Thus allowing the technique to work even better.

General pressure points are not used as a primary means of choosing your targets. Your techniques will still work without hitting each and every pressure point that is in the area you strike or kick, as long as your basics are sound. If you are going to strike an area where a pressure point is located, (whose reaction would help you), hitting that pressure point correctly would improve how well your base technique worked. By overlaying the knowledge of pressure points on top of what you already know, you add another layer that will make your American Kenpo more effective. While allowing you to minimize or maximize the damage you cause as the situation requires.