

The Secrets of Power

Technology Versus Magic



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Based on the **QUAN LI K'AN** style of Martial Arts

By

Bruce Everett Miller

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The Secrets of Power

Technology Versus Magic

By

Bruce Everett Miller

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“One Man’s Technology
Is Another Man’s Magic.”

An industrial cutting laser may not be magic to a person of the late 20th century,
But it can make you just as dead.

INTRODUCTION

This book will undoubtedly make some people mad. They will believe I claim their methods are false and techniques unworkable. Others may try to use it to discredit the truth and power of martial arts.

Neither are true!

What I will try to do is present advanced concepts of how to both do and understand the principles behind some of the most advanced martial arts techniques known. In the techniques I present, I hold nothing back. I will attempt to explain techniques fully, both how they are used and why they work.

Because the vague terms used by some authors leave much confusion in the mind of the reader as to exactly which points on the body the author was referring, many good intentioned books have not helped the seeking martial artist as much as they should have.

I have tried to correct this problem by only using concrete terms in accepted definitions found in Western medicine. I have also limited my discussion to only those techniques, which I can support by proven Western medicine physiology.

Some may try to discredit this book, saying that Western physicians do not know everything. This is true. No Western medicine physician I know will claim to understand everything about medicine. However, this book is not limited by the average practice of medicine because it uses the full extent of Western physiology that is the basis for Western medicine. Those who try to discredit this book on that basis are fooling themselves. Western medical physiology is, by far, the most accurate and encompassing in the world. Even the Chinese have realized this and even most Chinese physicians are currently being trained in Western medicine styles in Chinese medical schools.

Western medical physiology has far more answers available than the average physician has time, energy, or need to know to practice medicine. Therefore, much confusion exists with the lay public who expect Western physicians to know the reasons why every advanced martial arts technique works. When they can't give proper answers as to why a fascinating technique works, many people think that Western medicine doesn't have the answer, or that the real answer is some sort of poorly understood magic.

My friends, I must refer you to the opening quote of this book: "One Man's Technology Is Another Man's Magic." Advanced martial arts techniques are not magic. To most practitioners, they are, usually, poorly understood examples of how to use the body's natural strengths and weakness to the utmost. Granted, most were discovered years before we had the present understanding of physiology, but that does not make the understanding any less valid.

MAN DEVELOPED A WORKING CALENDAR LONG BEFORE HE DISCOVERED THE WORLD WAS ROUND.

Combined with the fields of physics and mathematics, Western physiology has explanations of why even the most advanced techniques work. You just have to be able to search through the tremendous amount of other information to get to the parts you need. Remember, unlike Eastern medicine and its relationship to martial arts, there is no connection between the Western study of physiology and martial arts. Therefore, the answers to the "whys" have not been previously brought to the forefront.

This book attempts to do just that. It tells you why a technique works, BUT NOT JUST FOR ESOTERIC REASONS! I really believe that if you know why it works, you will not only be able to do the technique better, you will also be able to adjust the technique to your own needs. In addition, you will be able to expand on the few, limited points that can be shown in a book. With an understanding of why something works, you can exceed the limits of only parroting others. You can discover new strike points, new techniques and even breath life into old techniques.

To some people, especially those with an investment in the traditional ways, my explanations will be threatening. I am disrupting the tradition of never telling you why. I will be shattering the myths of magic and tremendous secret powers. Now anyone who has the willingness to study can learn advanced techniques. What's more, they will have the foundations to continue beyond this book. To

learn the reasons beyond other advanced techniques.

This book is based on the concepts behind the martial art style of Quan Li K'an (Circle of Fire and Water). In Quan Li K'an, it is believed that you cannot even begin to fully understand a technique until you have mastered the understanding of why a technique works. Those whose styles answer "it's traditional" to the question of why a particular move will learn that answer is short-hand for "I don't know" or "I'm not going to tell you" and is not acceptable among **Quan Li K'an** practitioners. Hopefully, you will learn to examine what you have previously learned in a new light. Not to discard that knowledge, but to understand it better. To truly answer your questions, which were just glossed over, as you were first learning.

EVERYONE HAS A SIMPLE WRONG ANSWER FOR EVERY COMPLICATED QUESTION.

My purpose in this is not to disrupt martial arts. My purpose is, however, to shatter the strangle-hold on information which keeps eager, mature students from learning. My purpose is to help martial arts grow. With a free flow of information we can learn new techniques, better concepts and a better understanding of exactly what the ancient masters left us. I do not discard, the techniques of the past, neither, do I discredit them. I merely re-examine them so that I can understand them. I refuse to accept simple incomplete answers to complicated questions or to believe that the masters of years gone by would have wasted their time on techniques that obviously would not work in real life. I seek to find the real meanings. Hopefully you will join me on this search.

Gaining this understanding will not be easy. It will not be that difficult, but it will take some amount of thinking, reading, and, in most cases, practice (at least of those techniques which are safe to practice). The difficulty in learning the new terms will probably separate the serious student from the power-seeking, immature personalities. This I consider good for the obvious reasons.

For the rest of you, welcome aboard a train which will open doors you never even knew existed. I will start with what you thought were the basics you already knew, and show you ways you can make your style, or any style, better. Then we will move onto fascinating areas, which, to my knowledge, have never before had the "why" explained.

Welcome aboard. My greatest reward will be if I can help you re-examine what you believe you already know.

You never know what you really know until you admit what you don't know.

VERIFICATION

One of the main precepts of Western science is that if something is valid, it is reproducible. Until advanced martial arts techniques can be explained in such a way that theories are clearly understandable and reproducible by others, not in direct influence of the person making a claim or advancing a theory, there can be no objective proof of what works and what doesn't.

Techniques which do get developed and passed down from generation to generation to a select few people, risk the danger of becoming garbled and without objective definitions, the true concepts may be lost. However, once an exact definition, testing, and recording of a technique is done, all who ask will be able to learn that technique and use that knowledge to build upon. Thus, future generations of martial artists will be better than we are because they will have not lost the true meaning of the concepts our generation attempts to pass on.

Because I really do believe this, I invite you to check out the facts and theories (at least those not causing harm to another person) that I present in this book. Look up the principles I discuss in other books, especially medical textbooks. Why do I invite you to do this? Not just to prove that I really do know what I claim (although that in itself is a valid reason!), but also so that, you can research questions you don't fully understand.

If enough people examine the questions and theories that I present in this book, then hopefully even more questions and the answers to those questions will come to light. In this way martial arts will be raised to the next level of understanding.

If you have questions about what I present here, you can write me at the following address. Time limiting, I will try to respond to all reasonable, polite questions. I will also admit if I don't know the answer.

BRUCE EVERETT MILLER
416 N 12th Street
Sartell, Minnesota 56377

EMAIL: bemiller@cloudnet.com

Please include a self addressed stamped envelope (that is if you want a reply with in this century.)
For my personal reference, please also include the type of style you practice.

History writers, like most good fiction writers, seldom get the praise they deserve.
(The official version of history depends entirely on who wins the war!)

HISTORY

There is no way that I can write this chapter without making someone mad. So I am not going to try to sugar coat it. If you don't like what I am saying, skip this chapter!!

I will state right up front that much of this chapter is based on hearsay. The facts that I present here have been collected from a wide collection of sources. most verbally third hand. Meaning, I cannot personally verify the accuracy of the facts presented here.

While it might seem irresponsible to present facts I cannot absolutely prove, I personally believe the history I will present here. You can make up your own mind. The specific dates I use are ones that I can and have validated. When I could not pin down a exact date I used general time references. Because I clearly identify this chapter as reports gotten third hand (or farther down line) I do not feel I have violated any claims of accuracy made elsewhere in this book!

Before I start this chapter I also wish to state that this chapter is going to be an overview. In some cases, deliberate over simplifications have been made. This has not been done, to slight any particular style, nor to slant the truth (subjective as it may be). It has been done to be able to give you a view of some of the significant events, which shaped or at least influenced martial arts in general and specifically those styles that are taught in the United States.

I will also be using the term of pressure points. In this chapter I mean the term to have the generic meaning, which include that collection of all higher Dan techniques that do require only minimal force (at least relatively) to accomplish their effects. These techniques are discussed in more detail later on in this and the next book.

The fact that martial art history starts with the Chinese is well known. (Whether this is actually true or if martial arts actually started in India is not open to debate here. At this point in our discussion

that question is irrelevant.) What generally has not been public knowledge is the major events which happened after the development of martial arts in China.

Shortly after the introduction of martial arts to China, martial arts styles began to be separated into those taught to the upper classes, those taught to religious orders and those taught to the common people. The common people got what few pearls of real training that seemed to trickle down from the other classes of society. (Contrary to television versions, Shaolin martial arts were not the first martial arts style to reach China. But admittedly Shaolin martial arts were definitely one of the more well know and significant influences.)

During this time of early martial arts history, many different styles where developed, combined or even abandoned because of new concepts and ideas.

Generally, simple popular styles became gradually more complicated (sometime described as flowery) with time, only to be replaced in popularity by simpler styles that with time became more flowery and complicated to start the cycle all over again.

The other extremely significant development was that the most effective and dangerous techniques (pressure point techniques) became the guarded property of the masters of each particular style. The real secrets of each style were not taught to any but the most dedicated students, and then, not until the very last, when the master was willing to turn over control to someone else. Knowledge in those days was power, as is true today.

In fact, to disguise the real moves and techniques in a particular style, masters commonly added numerous worthless moves into their forms. It was EXTREMELY common for the flowery (graceful?) moves that had no real meaning at all except to confuse the new practitioner to be added into the middle of sequences of deadly moves. Granted these added moves were given an explanation, but if the practitioner ever tried to do such on the street they generally got the worse end of the fight. Of course this was explained away as their need for further practice.

Not until they had proven their loyalty with years of practice and devotion would the student be shown the correct concise form without the added “extras” and the real meaning of the moves.

Because of this, some basic things happened;

1) Much knowledge (if ever really present in a particular style) was lost when grand masters of a style died without passing on all they knew to their senior students.

2) Many new styles, and schools were started by students, who were incompletely or inaccurately trained. Over the centuries many students, frustrated with the aspects of what they were learning in their old style, left their particular style of training and started their own school or style. Because these students had no idea of the real meaning of the forms of move they had practiced they passed along incomplete or erroneous information. (Like the idea that forms had no meanings except tradition)

Note: In some cases this breaking away from a school to start their own style was probably because the original style probably had not been effective. Because SOME of these new styles re-examined the basic questions of what they intended to do, or were combined with knowledge from other styles, new and even better styles were created.

Thus it was, that over the passage of centuries in China, there developed thousands of variations of styles and understandings of the martial arts techniques. Obviously effectiveness varied as did the number of styles. In fact, today there are over 11,000 recorded versions of Gung Fu (Kung Fu as it is called in the West). This does not even include the numerous completely secret styles or those styles, which have been kept entirely within familial lines and are thus not known to the public.

It is also commonly known that after taking a firm hold in China, martial arts spread to Okinawa. Once there, the styles were adapted to the local needs and abilities. Now don't assume that just one style was brought from China to Okinawa. In fact, several styles were brought over. Depending on your personal train of thought, ethnic background, or style you practice, you can believe that the Okinawans improved or destroyed these versions of martial arts.

Still one thing remained the same in Okinawa as in China: the most deadly techniques were restricted to senior students. In fact, I have been told by some masters that the secrets of pressure point techniques were restricted to the point where they weren't even taught until the student was both over the age of 40 and a sixth Dan or higher. Also, of course, the student had to have the proper attitude. Again, this restriction of knowledge led to the forming of some styles, which did not have a complete knowledge base.

The next step in our story happened when Japan invaded Okinawa, and the Japanese were introduced to the martial arts. Having been successfully invaded, the Okinawans could hardly refuse the demands to teach the Japanese martial arts. However, at this point I must ask a basic question: If you were in the position of the Okinawans, would you teach your most deadly techniques to an invader?

Some historical references point to the fact that the Okinawans actually went one better than to just keep their hidden secrets (at least initially) away from the Japanese. There is some evidence that the Okinawans actually taught the Japanese improper fighting stances so that should any Japanese martial artist attack them, they could quickly and effectively kill them.

There are also references that the Japanese of that time treated the Okinawans as second-class citizens. "Nice to know but you sure wouldn't one to marry into your family" [this is explored in much greater depth in the book on Myths]

Whether the Japanese finally managed to secure the hidden information on pressure points and other deadly techniques from the Okinawans or some other source (or by figuring it out on their own) is not historically clear. It is clear that senior masters in Japan do know this information. It is just as clear, however, that most Japanese styles have kept the improper fighting stances that were originally taught to them by the Okinawans. Whether this is a result of traditions or some other reasons is not clear to me at this point.

The next major significant point in martial arts history is when the Japanese invaded and occupied Korea in 1909. The Koreans had by this time centuries of martial arts history. The Japanese, intent on solidifying their hold on Korea, forever banned the Korean language for official purposes (including being used or taught in schools), banned most Korean culture and even banned the teaching of Korean martial arts. In short, JAPAN imparted on a course, which in a short period of time (historically speaking), decimated the Korean cultural heritage.

Something is important here, at least as far as martial arts are concerned. The Japanese did not ban the teaching of all martial arts in Korea. Only non-Japanese arts were reportedly banned. Martial arts were allowed to be taught and, in fact, were taught to many Koreans, but those arts taught were of the Japanese variety with the Japanese viewpoints, not the Korean.

When the Japanese were kicked out of Korea after the end of World War II (1945), the Koreans were left with a huge culture gap. While they had a vast and rich past cultural heritage, most of it had been destroyed, (or at least severely damaged), by the Japanese during their occupation.

The Koreans, of course, set out to rebuild that heritage, although as far as martial arts were concerned, they had a problem. The Japanese had occupied Korea for over 30 years. Since effective martial arts are not well recorded on paper, they had severe shortage of trained masters upon whom to call upon to re-institute true Korean martial arts.

Herein comes a point for debate. Many claim (especially the Korean government official position) that the Koreans were able to do just that; that they were able to re-integrate their former martial arts to the culture of Korea. Other non-Koreans claim that because the Japanese had occupied Korea for over 35 years, all Korean masters who had a full of knowledge of the hidden techniques would have died. These same people show evidence that the Koreans, in fact, took Japanese techniques and forms, re-worked them and gave them Korean names. Those who cite this viewpoint state there is a definite similarity between many Korean and Japanese forms.

They also cite the fact the fact that Tae Kwon Do, which places it greatest emphasis on kicking (80% feet and 20% hands as I was taught when I achieved the Dan in Tae Kwon Do), uses forms, which are comprised of over 90% hand techniques. This is consistent with a style that uses the hands as its primary weapons (like the Japanese styles) not for styles that primarily use the feet.

It is also evident that Tae Kwon Do, at least as taught in the United States, is almost completely devoid of the teachings of advanced pressure points. Some schools broach the subject slightly, but never really give any in depth information. Most don't even bother to explain what the moves in their forms mean.

Either way, the official version is that Korean martial arts re-emerged in various forms in 1945. The official story being that Tae Kwon Do was developed from various versions of the ancient martial art of Tye Kwon and put together into one system by a man named Choi Hong Hi.(Tye Kwon having a history of being over 1300 years old and being introduced to Korea by the Buddhist monk Won Kwang). Permission for Tae Kwon Do to be the official name for this re-combined Tye Kwon being given by the Korean government in 1954.

Choi Hong Hi eventually became a general in the Korean military and spread his knowledge of Tae Kwon Do to numerous other countries including the United States. In 1966 the International Federation (ITF) was formed. A few years later because of a dispute that allegedly occurred because General Choi allowed a demonstration team of Tae Kwon Do to visit North Korea, General Choi left Korea (kicked out?), but did not abandon his organization.

The Korean government quickly set up a rival organization called the World Tae Kwon Do Federation (WTF) and set out to become the dominant force in teaching Tae Kwon Do in the world.

Both organizations developed extensive followings in the United States. Both organizations exist today. So do many different Tae Kwon Do spin off organizations. All, however, subscribe to the same basic techniques to generate tremendous amounts of physical power to overcome opponents and downplay or ignore (at least in lower Dan levels) the use of pressure points and other effects.

Either way, it is fairly certain that the Japanese did not teach the Koreans the secrets of their most effective techniques. By their own rules, a person had to be both over 40 years old (possible) and over the rank of 6th Dan (extremely doubtful in only 36 years). Nevertheless, the Koreans did possess or learn, whichever you believe, the secrets of the higher levels of martial arts, because while the art of Tae Kwon Do seems devoid of most of these secrets, the art of Hapkido is not, and, in fact, relies heavily upon them. Other Korean styles vary in the amounts of pressure point techniques which they use.

The next step in our story goes backwards again in time to Japan itself. For this part of the story the term Japanese will refer generically to both Japan and the island of Okinawa.

At around the turn of this century, when the Samurai were no longer a distinct political tool, the Japanese government decided that the martial arts, once restricted to the wealthy elite of the nation, were to be taught in the schools. What political pressures were brought to bear to accomplish this, I neither know nor care at this point. What it meant, however, was that the general Japanese population would be exposed to martial arts. Since Japanese karate was ONLY a killing art at that time, there was great concern on the amount of damage that these new learners/practitioners would do to each other. The bottom line here is that the Japanese masters changed certain aspects of their styles to lessen that damage. Specifically, they changed the punch to make it dramatically less

effective.

The problem with the changes was the same as what happened earlier (and was still happening) in China. Proficient and/or frustrated students learning this new (less powerful) techniques earned their Dan level and then went on to teach this new style, or even started their own styles based on this new information. In short, whole generations of people grew up thinking that what they learned was all there was to their martial arts.

It was this situation, which existed, in Japanese karate at the time of World War II. After World War II, besides being kicked out of Korea, Japan, including the island of Okinawa, were occupied by the U.S. military. U.S. service men soon set about attempting to learn the martial arts. Naturally, the Japanese were not exactly thrilled about turning over the secrets of their martial arts to an occupying military but had little choice but to at least go through the motions of teaching martial arts to these potential students.

I have been convincingly told (whether this is true or not is irrelevant, but I believe it) that US marines who entered Japanese dojos asking to be taught were told to do repetitive exercises like knuckle push-ups or pounding their fists against impact boards. The theory being they would soon give up and go away. These service men, however, did not give up. They did as they were told and continued to ask for more. Because they couldn't be denied, these occupying service men were taught the rudiments of forms and techniques of Japanese martial arts.

What they were not taught, reportedly, at least at that point in time, was the real meaning behind the forms and techniques they learned. Techniques that can easily cause a person to knock out or kill an opponent were taught with parts left out or with the explanations changed so that the meaning did not fit practical application found in real life. What they expressly lacked was that there was even another level of knowledge (called pressure points) which had been denied to them.

Many of these foreign students progressed to or beyond the Dan level without ever knowing the vital information, which was being denied them. When their time in service ended, they left Japan bringing home with them what they had learned. Whole systems of martial arts based on development of pure but controlled power. The concept that the higher a Dan level that you were, the more power you could generate, was born.

Soon, all over the U. S., people were being taught this new knowledge.

When U. S. soldiers returned from Korea after the Korean War, they, too, added to the more power is better concept by bringing the Korean martial arts skills they had learned back home with them. (Styles like Hapkido did not welcome Americans. It was Tae Kwon Do and the associated Korean styles that were open to the public of the world).

The third significant thing which affected martial arts as we know it today was actually an idea which originated in China.

To set the stage you must understand that the Chinese considered the human body sacred, not only in life but also after death. While there were probably a few isolated instances of using slaves or captured prisoners for medical experimentation, these episodes were extremely rare, especially as compared to the practices common in the rest of the world.

Instead, in an attempt to develop an understanding of the body, large amounts of observations were correlated. From attempts to explain these observations, elaborate rules about the workings of the body and the related parts of the body were formulated. For example there was an association made between pain in the upper right abdomen and loss of appetite with yellowing of the eyes.

Therefore one to one associations were made between the stomach and the eyes. (In reality the symptoms I presented here are suggestive of hepatitis, a common illness during certain times of the year in moderately heavily populated areas without modern sanitation techniques.) Similar associations were made throughout the body. (Another example being the pain that radiates down the right arm, possibly into the hand or even the little finger with severe angina or heart attacks.)

Now I am not attempting to dispute the Chinese in their associations but rather to point out that while the observations they recorded may have been valid, most of the rules developed from these observations were not valid. For example the Chinese developed complicated rules about the effects of certain wind directions with illnesses. In reality there is an association between certain wind directions and the time of year, especially when you live by or even close to large portions of water like seas. This is significant, because diseases like cholera are prevalent mostly only during specific times of the year. Again, their association of illness with a cyclic pattern may have been valid, but the rules for why were not.

With the development of the concept of Chi (the energy force of the body) these associations of related body parts were given what was believed to be rational explanations of many of the workings of the body. The Chinese developed lines between organs they felt were related and called these lines meridian lines. They also felt they could influence the body's organ functions along these lines.

Before you try to write this concept off as nonsense, I want you to know that there are certain points in the body that do influence other organs of the body. A perfect example is the carotid sinuses. If you stimulate the carotid sinuses you will cause a decrease in both pulse and blood pressure. This decrease is only about twenty points, but it is still definitely there.

With the meridian lines explanation, whole new systems of martial arts were developed. Even old styles and systems, which before had been relatively simple, added this new concept to their repertoire.

As I stated earlier, however, the rules explaining these meridian lines were extremely complicated and thus basically ensured that any martial art which encompassed them would be elaborate, confusing, and totally beyond the average person. Since this further separated senior students and masters from the average person it was considered a change for the good.

All in all, the Chinese explanations of medicine which became the basis for most of the Chinese martial arts, created an aura of confusion which spread with the Chinese systems first to Okinawa then Japan and Korea, then finally to the United States. Unfortunately, this concept is still alive today.

Before I close, I want to make three further comments about Chinese medicine. Advocates of the meridian line systems are very determined in their beliefs and are quick to point out that Chinese medicine has made many cures, which Western medicine has not heard of. This is true! However, when Western medicine does discover something that works, it is generally examined until the reasons why are found. A perfect example is when I was studying TRADITIONAL CHINESE MEDICINE [TCM], I was taught that a boiled poultice of specific parts of a certain sea eel applied at certain specific body points, at specific times of the day, would bring relief to inflamed arthritic joints because it countered a bad energy balance of too much energy. In reality, it has recently been discovered that this sea eel contains a poison that resembles methotrexate, which is one of the new

and more powerful anti-arthritic agents. The effect of the eel was the same as methotrexate and the rules about specific times and specific points of the body were garbage!

The second comment is about Chi itself. Chi and meridian lines are, despite the Chinese associations, quite different. Biological and electromechanical evidence exists which suggests that Chi exists. The rules for such have as yet not been fully worked out. (This subject will be explained in much greater detail in volume II.) However, the data uncovered to date, shows no evidence whatsoever of conforming itself to meridian lines and frankly contradicts the presence of such!

The third comment is that despite the emotional claims by those who wish to defend the ancient Chinese medicine system, the Chinese themselves are changing to the Western style of medicine, abandoning their old practice theories in favor of new concepts with an astonishing rate. I merely raise the question that if the Chinese believed the old system was so good, why are they themselves changing to the new?

Note: I wish to thank Buddhist monk and physician Dr. Lin Palo, for an insight into the histories of Chinese medicine, history and its effects on martial arts.

I also want to thank Mr. John Pell of California for filling in and confirming some of the details I stated. In all cases I want it known that the final interpretation of this data was mine and if I screwed it up the responsibility is totally mine.

Best you tackle the dragon in its lair
Than anger the wizard with his writs

TERMS

Before we can start, we must define some terms that will be in use throughout this book. Most books which try to instruct nerve points or other specific point techniques fall apart because they leave the reader guessing as to the exact location of the point in question. This book will do its best to resolve this problem by use of western medicine descriptive terms on anatomical locations.

I suggest that you get an anatomy and physiology book to accompany this book, for clearer understanding of the exact points I describe. Some excellent reference books are: Grant's Atlas of Anatomy, Netters, or Gray's Anatomy, but any good anatomy book will be of benefit. Also, you may want to buy a medical dictionary for definitions of words not defined here or for a possible better definition of these terms.

The terms you must know before we proceed are as follows:

These terms however are standard medical terms and not something of my creation. You can reference them or get even better understanding in any medical text.

ANTERIOR - Pertaining to the part of the body facing you when it is in the neutral position. The front part of the body.

ARM - Upper extremity from the shoulder to the elbow.

AXILLARY - Commonly called the arm pit.

CARPALS - Pertaining to the bones of wrist.

CENTRAL - Along the midline.

CERVICAL - Pertaining to the neck.

CONDYLE - The rounded part of a bone that comes in contact with another bone.

DEEP - Found below the surface, usually below the top layers, as opposed to superficial

DISTAL - Farthest from any given reference point, as opposed to proximal.

DORSAL - The back part of the body, or the top part of the foot.

EPICONDYLE - A general term referring to the part of the bone above or on top of the condyle.

FEMUR - Also known as the thighbone.

FIBULA - The small bone of the leg. Found along the lateral (outer) aspect of the tibia.

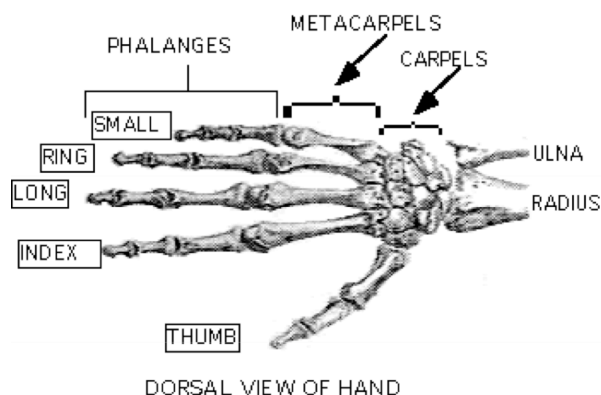
FOREARM - Pertaining to the part of the upper extremity distal to the arm and located between the elbow and the wrist.

HAND - Most distal part of the upper extremity. It consists of the following digits.

THUMB - Digit on the radial side of the wrist.

INDEX FINGER - Also known as the first finger Located between the thumb and the long finger.

LONG FINGER - The



second finger. Located
between the index and ring
fingers.

RING FINGER - The third finger. Located between
the long and small fingers.

SMALL FINGER - The last finger. Located on the ulnar side of the wrist.

HEAD - Also called Surgical Head. An enlarged area of a bone by which it articulates or moves with
another bone. this term does not just refer to a persons head.

HUMERUS - The bone of the arm.

INFERIOR - Lower part or below a part. {Usage: Inferior Vena Cava, Inferior to the Head of the
Humerus (below the humerus)}

INSERTION POINT - The point at which a muscle is attached to the bone.

LATERAL - Away from the midline and horizontal to the plane of the floor.

LEG - The part of the lower extremity from the knee to the ankle.

LIGAMENT - A band of fibrous tissue that connects bones or cartilages and helps to support and
strengthen joints.

MALLEOLUS - The rounded protuberance on either side of the ankle.

MEDIAL - Toward the midline as opposed to away from the midline.

MEDIAN - Located on the midline of the body.

METACARPALS - The bones of the hand between the wrist and the fingers.

PALMER - Pertaining to the palm side of the hand or the inner aspect of the forearm or arm.

PERIPHERAL - Away from the midline as opposed to towards the midline.

PLANTER - Pertaining to the sole of the foot.

POSTERIOR - Pertaining to the part of the body away from you when it is in the neutral position.
The back part of the body.

PROXIMAL - Nearest or closest to any given reference point, as opposed to distal.

RADIAL - Pertaining to the radius.

RADIUS - One of two bones of the forearm. Located on the thumb side of the forearm.

SUPERFICIAL - Pertaining to or located near the surface (the opposite of deep).

SUPERIOR - Upper part or above a part. {Usage: Superior Vena Cave, or superior to the malleolus (above the ankle).}

TENDON - A fibrous cord, which attaches muscle to bone.

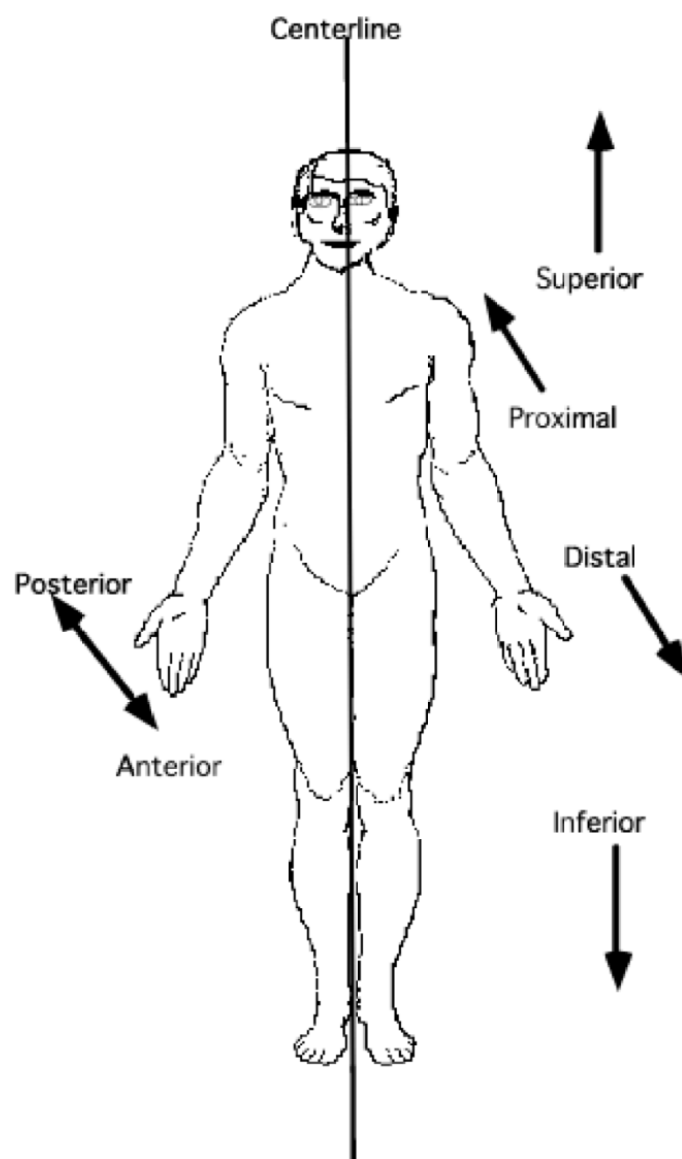
THIGH - Part of the lower extremity from the hip to the knee.

TIBIA - One of two bones of the leg. Located medial to the fibula.

ULNA - One of two bones of the forearm. Located on the small finger side of the wrist.

You must also understand how the body is positioned for what is considered the neutral (or starting or reference) position. This is also called the standard anatomical position. This position is with the person standing, facing towards you, hands to the side, palms towards you, toes pointed towards you. All terms of left and right, proximal or distal refer to the person being described, (not to the practitioner), in standard anatomical position. In the few examples in which I deviate from using the standard anatomical position I will make such clear.

This is a picture of a person in the standard anatomical position



Now that you have the terms down we can get to work!
Only the fool cannot learn from all around them, including the fool

The techniques behind How to punch

One of the more disconcerting things I have noted in talking to various martial artists, is the lack of knowledge in the extremely vital area of how to strike. Some students can go so far as quote me exactly how each hand strike was developed in their style. They can recite every name associated with each particular strike and what it is used for, but cannot explain exactly how the rest of their body is to be positioned to support the hand during the various strikes.

It has been said by various masters that the hand has 10 different weapons and that you do not know martial arts in its entirety until you can use all of these weapons. I agree with this, as probably would most serious martial artists. However, knowing the proper body alignment that goes with each type of strike is as or more important than what part of the hand to strike with. What concerns me is the fact that many younger (in terms of the number of years of practice) martial artists think that knowing where to hit and with what part of your hand is enough.

It is definitely not enough!

A perfect example is the punch. Most people have a tendency to try to punch so that they try to hit with their knuckles. To do this, they tip their hand slightly, so that their wrist is slightly bent (which ALWAYS occurs if you try to hit with your knuckles), thinking this will cause their knuckles to hit the target first and thus do more damage. Well, hitting the target with their knuckles they accomplish, but at the price of inflicting severe trauma to their own hand. I have seen experienced black belts break their hand hitting objects, which should not have caused more than a minor stinging

sensation.

The main problem is that punching is not taught; it is picked up/ learned by most students (usually from other students) because the instructor assumes, just like everyone else, that they all know how to punch. Therein lies the problem! The standard, non-trained punch places the entire impact force on the distal one-third of the forearm and hand.

The reason for this is simple. When you focus on striking with the knuckles of your fist (it doesn't matter which knuckles) you automatically tip your hand down and move those knuckles forward so that they will become the striking force. Just what you wanted to do, right? Wrong. If you hit hard enough with your fist in this position, you will break a bone in your hand. Usually the bone you break is the small finger metacarpal. This condition is common and is called a boxer's fracture.

This is a extremely common situation for boxers. They have their hands taped during their matches and thus never spend the time to learn how to focus their energies into the correct alignment. They rely on the taping of their hands to do it for them. While this may work well in the ring they usually find out that it doesn't work so well on the street. Frequently the first hard, well-connected punch they land winds up doing as much damage to themselves as to their opponent. In fact most boxers are taught punches that almost guarantee a fracture on the street. Because of this, win or lose, they have sustained a needless injury that could and should have been prevented by adequate training.

What you really wanted to do is to strike your target with your fist in such a way that it delivers the maximum force but doesn't hurt your hand. The only way to do that is to ensure that the knuckles hit the target with the fist perfectly in line with the rest of the forearm.

NOTE: The name for the standard punch thrown by martial artists, (usually starting at the waist with the palm up and ending with the arm at full extension with the palm down), is the full twist punch.

The correct, full twist punch is delivered so that the top of the wrist is flat with the dorsum of the forearm. The best way to get your wrist and fist into this correct position is to locate the beginning of the webbing between the first and second fingers with the hand closed into a fist (black dot on picture above). Using that spot as a focus when you hit will ensure that your wrist is in the correct position. It may not initially seem as though you will be striking with your knuckles. But in fact, you will be striking with even more of your knuckles than you were before. This is because keeping your wrist flat ensures that your knuckles will be the leading edge of your strike.

Now that you have your fist aligned with your forearm, all you have to do is keep your forearm aligned with your arm. This way the force will be transmitted, (and thus dispersed), by your entire shoulder. In fact, if you keep the rest of your body aligned correctly, you can punch with your entire body behind the blow and with your entire body absorbing the shock of the blow. In this way, you will be able to deliver tremendously greater impacts, which only damage your target and not your hand.

The initial “secret” to align the arm with the forearm is the common technique of keeping your elbow inside the outer edges of your body planes. We will talk about this in greater detail in the next chapters, so I will move on to a theory (and personal irritation) of mine. The subject is deliberately deforming the fist.

We have all heard stories about how martial artists in the past (and possibly some dunderheads of today) used to break their knuckles so that the inter-knuckle areas would fill in and they could hit harder. I have heard the theory that they could and did do this because they were “professional warriors”. Maybe they were, but personally I doubt they were very good ones. They definitely weren’t very intelligent ones, because they were defeating the very concept they were trying to obtain by deforming themselves.

Let’s look for a minute at the basic formula for force as it is used in pressure as this will help you to better understand why deforming the fists is such a wasted, stupid gesture. Pressure (P) is defined as force (F) divided by the surface area (A) it is applied against.

$$P = F / A.$$

Now this is not a startling formula, and I sure didn’t invent it. You can look it up in any physics book, so I would assume that it must have some validity or they would have taken it out by now.

Anyway back to the fist. When you strike someone or something correctly with the knuckles, you actually are hitting with a small area on each knuckle, which makes contact with the target. Take a look at your hand and see what I mean. Now what happens when I fill in the area between each

knuckle? Haven't I increased the surface area? Therefore, according to the above formula, I have actually decreased the force per square inch I am delivering and doing less damage to my opponent.

My theory is that the great masters of the past who really knew what they were doing did not deform their hands. Instead, when they did exercises like knuckle push ups, it was to train their fists to strike with the correct angle. (Knuckle push-ups will give you the exact angle I described above.) Punching hard objects was done to desensitize the strike area. (It takes very little work to desensitize an area and even less work to keep it that way!)

Probably younger students, seeing their Masters strike objects for the above reason, misunderstood (probably because they were never told the real reason) and thinking that if a little practice was good, more would be better. Why not, they would reason, weren't they told that they should practice every other aspect of their martial arts as much as possible? Why not punch against hard objects as much as they could to develop their punches?

Well, develop their punches they did. But at a price! With the repeated pounding, their knuckles began to get larger. Knowing that the practice had improved their punch, they believed the increase in knuckle size was verifiable proof of their ability. This only encouraged them to make the damage worse. The fact is, only the practice accounted for the improved force behind their punches. Practice any technique enough and you will get better at it, but the damage to the knuckles took away a lot of their gains. (Please look at the formula above.)

Therefore, the best practice you can do to develop your punches is, in my opinion, against a soft target or no target at all (punching empty air). If you actually attempt to hit as hard as you can control the punch, and apply the correct follow through, you will learn very effective punching techniques, which will serve you extremely well. They will allow you to do everything you need to do, (and probably more than those who deform themselves), without deforming your hands. In short, those who spend time or energy deforming their body do not have any idea of the real concepts of martial arts. They will be confined to the meager limits of techniques, which rely on strength or toughness and will never be able to develop the real and awesome power of martial arts.

Some people manage by the book
even though they don't know who wrote the book
or even what book it is they are using.

Loftus's law

ADVANCED PUNCHING

The next important aspect about the fist strike is the angle at which the hand is held. With the exception of a select few styles, most martial artists punch with one basic punch that never varies. They may use different hand techniques, but whenever they throw a punch, it is exactly the same. This standard punch is what can be described as complete twist, or palm down punch. In this punch, the hand starts out at the hip with the fist clenched, palm up and ends with the palm down at the midline with the arm fully extended. This makes for a nice looking punch, but I must tell you in all honesty, it lacks a lot of destructive power it could have.

Now, before you give me all the examples of how many boards and/or bricks you or some friend can break with their powerful punches, let me tell you how to increase the power of even those punches.

First off, you must realize there is a dramatic difference between striking an inanimate object (i. e. bricks, boards, ice blocks, etc.) and a living organism. Besides the fact that inanimate objects don't care about being hit (or hurting you, especially when you do it wrong), they have not been designed to protect themselves. Most living vertebrate organisms, especially human beings, have been designed genetically so as to be able to resist blows.

In short, hitting a person may lead to minor or moderate (possibly even significant) pain, but unless the person throwing the punch has been specifically trained in ADVANCED martial arts, the likelihood of inflicting serious damage is remote. Hence, teenage boys, despite their attempts at bravado and machismo seldom do any permanent damage to each other in their fist fights.

Secondly, you are going to have to accept that there are different variations of the punch, which are intended to work best at different strike locations. The main reason for this fact is that the body has been designed to disperse force. In fact, the same force which will break a board (and a rare isolated fixed bone like the nose) will only lead to bruising in most cases. An example of this is a punch to the ribs. Striking with a force that would break a single rib is not difficult, but when you punch (with the standard full twist punch), you always encounter three, four or possibly even five ribs instead of just one rib, thus dividing the force amongst each rib and protecting all of them.

In order to get full effects out of your punches, you must overcome the body's natural protections. The easiest way to do this is to do what is termed a partial twist punch. If you accept the concept of the normal punch turning completely over between the start at the hip, with the palm up and the ending with the palm down at the target location, then you will see that your hand has turned through a half circle or 180 degrees.

In this chapter we are going to explore 2 different punches. These punches will be called the 1/4 twist punch, (also called the 45 degree punch), and the 3/4 twist punch, (also called the 135 degree punch).

Back to the punch: If, as you move your fist outward in a punching motion, your fist only makes three-quarters of the normal turnover, then your fist will be stopping at 135 degrees.

Also if your fist only makes one - quarters of that turnover, then your fist will be stopping at 45 degrees.

There are two reasons why the partial twist punches are better than the standard full twist punch. The first is that they align the force of your punch along the natural bodylines of your opponent. Let us demonstrate this point before we move on to the second point. Put your fist (preferably softly if you want to stay friends) against a friend's ribs (best demonstrated at approximately the anterior auxiliary lines or laterally to these lines) and turn your fist so that you are aligned with the ribs running across (perpendicular to) the middle of your fingers. Notice that this way you can deliver the force of a punch to fewer ribs than with the normal full twist punch. With fewer ribs to disperse the force, the damage to an opponent will be greater without changing the strike force at all (just the

angle of the punch). Your fist should now be in either the 3/4 twist or the 1/4 twist position.

[This will not be exactly true if you consider only the ribs as you get close to the center line but the 1/4 - 3/4 rule is not only close enough for an excellent generalization but when you consider the way the body's arteries and organs are arranged under the ribs the generalization becomes even more true.]

There is also something very important here. Look at which side of your friend's body you chose to attack. If you punched with your right hand and hit his left side, or vice versa, your hand would impact the fewest number of ribs with a 3/4 twist punch. If you crossed your friend's center line and placed your fist against the same side of his body as you threw the punch from, a 1/4 twist punch worked best.

Now, place your fist against your friend's eye. (Softly please, you do want to keep some friends.) Once there, turn your fist so that it fits best into the eye orbit. When you strike on your friend's opposite side but at 45° when you cross the center line and strike on the same side. (I suppose you could throw a 225° punch across the centerline but such a punch is weak and awkward- try it if you don't believe me).

So why the difference? Why does a 3/4 twist punch work better at one location and a 1/4 at another? The reason is the body's lines of protection against force.

The body has protective lines against force (or bone alignment if you are more comfortable with that term), which are angled downward, away from the centerline. In fact, the entire body is arranged this way, in its attempt to protect itself from damage. If you examine the following picture you can see how these lines follow the underlying bone structure of the body.

The point of this discussion is that if you strike parallel with these lines then you will inflict the maximum damage. If you strike perpendicular to these lines you will be decreasing the amount of damage you inflict. Note that this fact works for every type of strike but is particularly important for strikes which impact with significantly large impact areas - like the punch.

The second reason why the 1/4 and the 3/4 twist punches are better than the 180 degree twist punch is a minor but significant one. As you twist your hand over from palm up to palm down, the radial

and Ulnar bones cross. This happens in the area of the medial to distal third of the forearm. This crossing of the bones actually leads to a decrease in structural strength, making it easier for your arm to break. Still, this is a minor reason, because if you punch as I described before, your whole body will absorb the shock and fractures will be very unlikely. Therefore, this reason was included for completeness if not for exact practicality.

Now, here is something, which is important in using this partial twist technique. You will need to adjust your striking location. In the last section I told you to focus on the point where they webbing of your index and long fingers meet. This is correct for a full twist punch but not for a three quarters twist punch. Because you must keep the fist aligned with the forearm as discussed last chapter, the correct focus point for either 1/4 or 3/4 twist punch is the webbing intersection between the long and ring fingers. See the black dots on the pictures of the 1/4 and 3/4 twist punches.

Again, the arm should never cross the outer edge of the bodyline. This will insure that your hand continues to be in correct alignment for impacting maximum force without damage to itself.



ADDITIONAL HAND TECHNIQUES

The following chapter contains a collection of different points about hand techniques. The fact that I have devoted less room to techniques other than punching does not mean that I believe these techniques to be any less powerful than a punch. In point of fact, the palm hand strike I will describe shortly is definitely more powerful than a punch.

I have heard various reasons why techniques other than punches can deliver more force than a punch, but most of these reasons are total nonsense. The rest are just partial nonsense, especially those which deal with positive and negative energy. The real and only reason why a palm hand or other hand technique can deliver more force than a punch is body mechanics.

The muscles of the hand are stronger the more proximal you move. The stronger the muscle (assuming the same efficiency), the stronger the potential blow. Because the ligaments of the wrist are larger than those of the distal metacarpals, they are designed to absorb more force with the hand in the open palm hand than with the fist. A perfect example of this is the push up. Even done on a soft rug, a knuckle push up puts dramatically more strain on the wrist than does the standard push up. The same is exactly true for striking something. Try it if you don't believe me.

With that out of the way let us move on to explore some other hand techniques.

KNIFE HANDS

The next aspect of hand strikes we must discuss is the subject of knife hand strikes.

Every style I have been acquainted with uses the knife hand strike and almost every martial art student I have watched doing a knife hand strike, at least beyond the beginner level, knows the correct angle to hold their hand and what part of the hand to strike with. Unfortunately, while most students have been taught where to hit on the hand, most have not been taught how to position the rest of the hand, which is just as important. In fact, improper positioning of the fingers in a knife hand strike can, not only change the way force is delivered to the object being struck, but also affect how much damage you incur.

The most common mistake I see is hyperextension of the fingers in order to tighten the muscles at the side of the hand, called the abductor minimi digiti muscle. The correct assumption is that tightening the abductor minimi digiti muscle improves the strike and decreases the damage to the hand with which being struck. From the force formula we have already covered, this concept is correct.

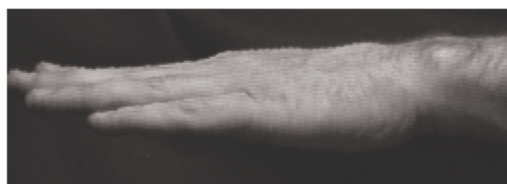
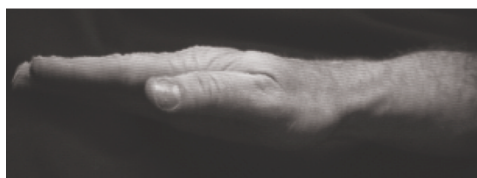
However, hyper extending the fingers does not do an adequate job of tightening the abductor minimi digiti muscle. In fact, it merely sets up the knuckles to slam against each other during impact which leads to increased damage to the hand.

The correct method is actually comprised of two very important but simple positioning:

- 1) The thumb must be held straight against the index finger metacarpal. This tightens the proximal part of the Abductor minimi digiti muscle. It doesn't matter if the thumb is held even with the index finger side of the hand or directly below, as long as the thumb is held straight.

- 2) The tip (to the distal third) of the small finger should be tucked under the lateral edge of the ring finger. This tightens the distal aspect of the Abductor minimi digiti muscle.

Together, these two positions will keep the knife-edge of the hand tight and thus achieve all the results you wished.



PALM HAND STRIKES

Palm hand strikes are another matter. Almost all styles use them, but they seem to violate the rule of decreased force with increased surface area. In fact, they both do and don't violate the rule of force per unit of area, depending on how you strike.

If, like most people, you strike with the central part of your proximal palm, you will only be able to tighten the muscles of the palm by tightening the finger and forearm muscles. However, this type of strike definitely follows the pressure force formula and being spread out over a large strike surface will dampen the majority of your force.

Instead, I recommend twisting the palm and retracting the fingers and tipping the palm so that you strike in the proximal lateral quadrant of the palm (opposite the thumb).

In fact, if you practice this technique, you can, with practice, learn to strike with progressively smaller and smaller areas until you reach the level where you can actually deliver all of your force into approximately an area the size of your finger tip. Because this is such a small area the force per square inch will be extremely high even with a small amount of applied energy. Thus, you will do significant damage to your opponent wherever you strike them.



Also, this area of the palm not only lines up the cuneiform bone to be the actual striking surface (covered, of course, by that aspect of the palm), but the rebound force line is directed diagonally through the wrist. This angling of the wrist actually locks the bones (tightens the bones into their least mobile position), disperses the force to the majority of the bones of the wrist, rather than just the cuneiform, and also tightens up both the muscles of the forearm and arm. Therefore, the entire arm and shoulder take up the shock, not just the wrist and forearm as with a centered palm strike.

GENERAL HAND STRIKE AREAS

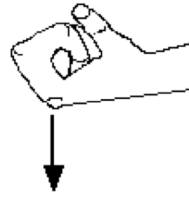
Each type of strike has its own particular use, advantage and weakness. Many of these will be covered in this book. Others should be obvious to the advanced martial artist.

There are as many different (named) positions in which you can hold your hand as there are stars in the sky. Still, if you examine the actual striking surface of these different hand positions you will find the active component (of any particular strike) to be covered by one of the following descriptions.

The 10 different ways to use the fist for striking (as I was taught) are:

- 1) The standard knuckle punch - striking with the knuckles
(as commonly done) best done as previously
Described.

2) Striking with the fore knuckles (the junction between the proximal and middle phalanges of the fingers). An example is a knuckle punch.



3) Using the top of the knuckles.

4) The knife hand strike. (shown previously)

5) The palm hand (actually palm heel) strike.

6) The back fist (different from using the top of the knuckles because it impacts on the majority of the metacarpal area)

7) The knuckle thumb. (different from other knuckles because it is best used in a movement directed back toward yourself, and it is directly supported by the index finger during the strike changing the way force is transmitted)

8) The spear hand / finger. It doesn't matter which finger impacts, supported or not. It is still one finger which takes and delivers the brunt of the force to the opponent

9) The side fist.

10) Palm Ji strikes.

It is amazing the number of people who get the saying “Mind Over Muscle” backwards.

Efficiency

In the last two chapters I talked about keeping your elbow inside your lateral body planes. It is time to explain exactly what I was talking about. I was talking about efficiency, both in the delivery of your strikes and how you disperse the rebound force of your body.

In martial arts, we have all heard stories of how small, reportedly weaker individuals have overcome larger, stronger opponents. This has been assumed to be because the smaller person was using superior fighting techniques. Meaning they knew martial arts while the larger person didn't or they knew a better style (if both parties knew martial arts).

In fact, much of the Chinese martial arts culture is based on the concept of a style being developed in order to be able to defeat other styles. There are well over 11,000 documented styles and discrete variations of styles in China, almost all of them developed with the baseline concept of having superior techniques so as to be able to defeat other styles.

I definitely don't disagree with the base concept of having a superior style. I agree with being able to defend oneself against and if necessary defeat other opponents who may also be trained in martial arts. However, I have serious doubts with the claim that the reason the winner won is because they came from a superior style is far too simple an answer.

The question here is really what makes a superior style?

At this point most people go off and give you the “whatever is best for you” answer. That's a cop-out! Or, they may give you the “this style is best” answer, meaning their personal style. This is also a worthless answer. The reason why both these answers are inadequate is that neither provides you with any concrete information.

In my opinion, the correct answer is, “The style which shows you how to be the most efficient with what you have, is the best.”

My personal opinion is that efficiency makes or breaks the effectiveness of everything you do. Sure, you can develop enough muscles to overcome most situations. However, if you are not willing to spend your entire life on the weight bench, I recommend you concentrate on efficiency rather than brute force.

Almost everyone who is in martial arts will agree with the generalized statement, “For a technique to work correctly, it has to be performed correctly.” What most schools don’t (or won’t) tell you is that a technique works because it delivers efficient and effective force to your opponent.

Let’s consider this premise: In a confrontation which leads to physical violence, the person who can manage the best control of their opponent and deliver the most effective power wins. Seems like a reasonable idea, even if long winded, doesn’t it? Let’s break it apart and see what it means.

Control of your opponent is generally meant to be keeping them from effectively striking you. This is generally a good idea.

Delivering power to your opponent means just that.

Now, before all the soft style artists cringe, please look at the power statement. Notice that I did not say strength. I said power and I meant power. Power is the amount of work you performed (or the amount of energy delivered per unit of area). Power is NOT the amount of strength applied to a blow.

So, what is the difference between strength and power, you ask (or at least should be asking). Strength is just the amount of muscle contraction force you apply, not the out-put of actual energy. For example, everyone (especially non-trained people) use only a fraction of their potential efficiency when they attempt to strike something.

Because the human body has two separate and opposing muscle actions to every movement, we are able to move extremities both away from the center of our body and then reverse the procedure and

return that extremity to the point where it started.

When we make these movements, we cause different muscles in the body to contract and others to relax, thus making the extremity move in the direction we wish. Seems simple enough, right? Well, as you guessed, it is not quite that simple.

The 'NOTHING IS AS SIMPLE AS IT SOUNDS RULE'

In order for a muscle to significantly contract, it must first get itself ready to contract. Not only must it receive a nerve impulse that tells it to contract, the body must contract all the associated parts of the muscle to be able to contract the muscle efficiently.

This takes time, even if it is a relatively short interval. However, as we all know, we don't have to think about going through the "get ready" stage every time we move a muscle. The reason is because the body keeps muscles in the "get ready" state. The way it does this is by keeping a small amount of tension on every muscle in the body, all the time.

Since every muscle has some tension on it, even opposing groups of muscles have tension. Thus, when we are not moving an extremity it isn't because we don't have any tension on the muscle groups responsible for moving that extremity. Non-movement is because there is (usually) small and equal contractions between the opposing groups of muscles that would move the extremity away from the body and those that would move it towards the body.

Since power is not the sum of contraction (called strength) but is instead the amount of energy actually delivered, you can easily see how these opposing forces can lower efficiency.

With normal movements, there is only a small amount of opposing muscle tension to resist movement and opposition by muscle groups is not a problem. We complete our movements without any really significant waste in energy. However, the average person makes the natural opposition between groups of muscles much worse when they try to do a powerful strike. Instead of trying to relax one group of muscles and concentrating on the group of muscles moving in the direction they

want, they contract both groups. Some styles even promote this concept- called total body tightness, to prevent their strikes from being deflected. To compound matters, opposing groups of muscles are roughly balanced in strength.

Hopefully now you are beginning to see that a hulk with bulging muscles may look like they are extremely powerful but in reality they are only strong. Since they may not know how to use that efficiency, they may not be able to punch as powerfully as a much smaller person who is more efficient.

So, let's look at that premise again. In a confrontation that leads to physical violence, the person who can manage the best control of their opponent and deliver the most effective power wins. Haven't we just described that?

Let's take a different track. Take a 200 lb weight lifter who could lift 300 lbs if he could use his strength at 100 % efficiency. (I would consider this person relatively strong; I wouldn't even try to lift 300 lbs., even if I used all my muscles at 100% efficiency. All I would produce would be a hernia) Let us assume that he can only use his maximum strength with about 50% efficiency when he tries to punch hard. Actually most untrained people rarely get above 35% to 45% efficiency, but we will give him the benefit of doubt as he has done some weight training.

Now, there is an equation in physics, which will give us some numbers to compare:

Potential force multiplied by efficiency equals power output.

Plugging in the numbers for this weight lifter's power output we have:

$$\text{Potential force} \times \text{efficiency} = \text{power out}$$

or

$$300 \text{ lbs} \quad \times \quad 50\% \quad = \quad 150 \text{ lbs}$$

Now, compare that with a 150 lb person who could lift 200 lbs, if he used all of his strength at 100% efficiency. Let us assume that he can use his maximum strength with about 80% efficiency when he attempts to punch hard. Plugging his numbers into the equation reveals:

$$\text{Potential force} \times \text{efficiency} = \text{power out}$$

or

$$200 \text{ lbs} \quad \times \quad 80\% \quad = \quad 160 \text{ lbs}$$

So, now you have a 200-pound weight lifter whose power output is 150 pounds, and a 150 pound person whose power output is 160 pounds. I don't know about you, but I certainly would rather take my chances with the weight lifter than with the lighter guy. Ten pounds may not seem like much to you, but I know it easily could be the difference between a few broken bones and a lot of broken bones.

The thing to remember here is not how much force the person could deliver but what they actually do deliver. Most people actually do a great number of things that decrease their efficiency. Still don't believe me? Another common example is bending over to pick something up. Instead of using their stronger leg muscles, most people use the weaker lower back muscles, risking injury, even though most of us know better! Therefore a smaller person can deliver more powerful blows than the stronger person. The main factor is efficiency, not strength.

Ok, if you grant me that point, so what? How does efficiency affect you? Well, first off, you must apply the concept of efficiency to your techniques. A well-designed technique is one which naturally increases the efficiency of your muscles and plays against the natural inefficiency of your opponent's muscles. This brings you back to the statement of controlling your opponent. Neat how it all ties in, isn't it?

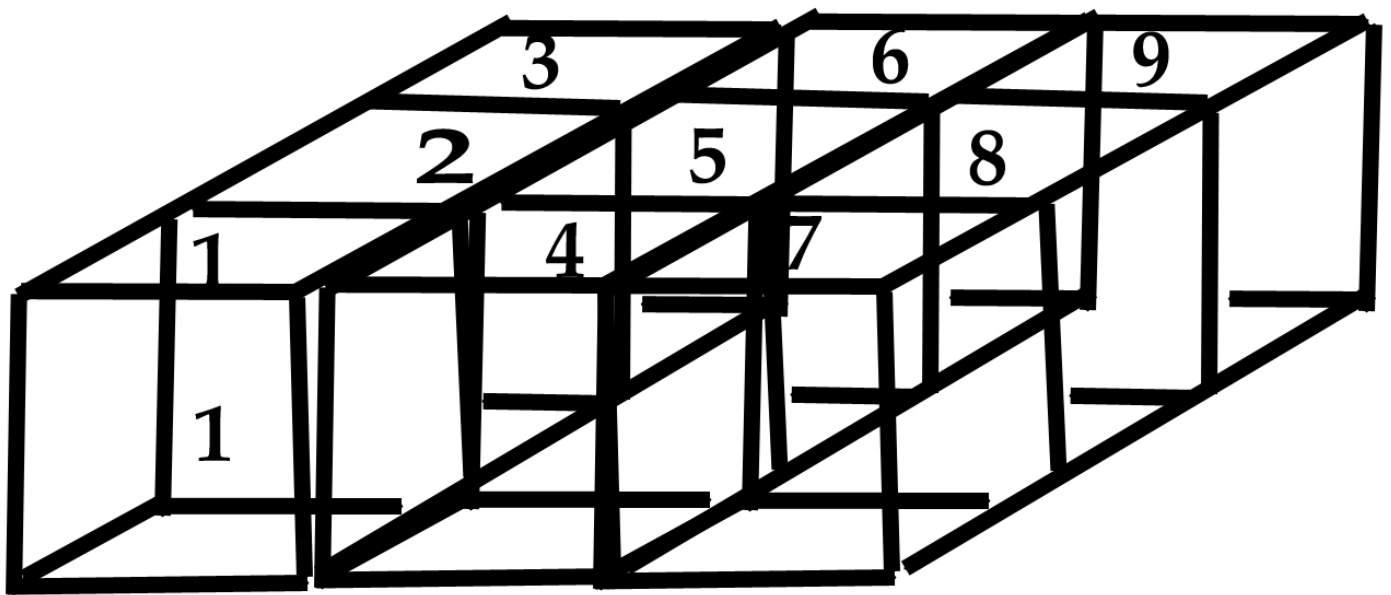
The main reason why a move in a technique is at a strange angle, is that it either causes you to move in a way where you are naturally stronger, or in a way where your opponent is naturally weak (or to

strike a weak area on your opponent).

Now we can finally get to the meat of our discussion! (Make mine steak please.)

OK I Admit these is a bit esoteric but bear with me please

In reality, the space around the body can be divided up into nine different areas as below.



These areas are made by drawing lines parallel with the sides of your body and the front and back of your body. Area number 5 is the area where your body exists. Area number 2 is directly to your front and area number 8 is directly behind you.

Now if you move your right arm through areas 2,3,6 and 9. You will find that you have fairly good strength in areas 2 and 6. A person attempting to move your arm will meet fair resistance if they are in areas 2 or 6. However, you will note that your ability to resist someone moving your arm and your strength have definitely decreased in areas 3 and 9. Again, this is because of efficiency. The body has naturally poor efficiency in areas 3 and 9 on the right and 1 and 7 on the left.

This rule also holds true for delivering blows to an opponent. Therefore, you should do techniques that allow you to force your opponent into moving their arms into low efficiency areas and yet keep you in high efficiency areas. By our previous example of the weight lifter, you can quickly see how you can nullify their strength and improve yours.

Another vital technique missed by most styles is the application of body mass in their punching. Most styles teach you to strike at the same time as you step down. This, in my opinion, is a mistake, and one that robs you of a great deal of added force and energy in your punches and kicks, for that matter. Think about it. What is happening when you step down. Aren't you really absorbing the energy of your forward motion into your foot and leg?

When you step forward, you push off with one leg and foot so as to move your central body forward and then absorb the energy into the other foot and leg. If you intend to stop after one step, all the energy is absorbed; otherwise we basically pass the energy along to the next step(s) until we decide to stop.

Wouldn't it be better if, instead of your foot and leg taking up that energy, you could deliver it to your opponent? The explanation of how to do that is quite simple. Simple make your punches strike their target before you step down. If your body is still in forward motion, then you will be adding the forward kinetic energy of your body to the energy of the punch. Sort of like throwing a ball forward, out the window of a moving car.

The difficulty in this seemingly simple technique is convincing your body that it does not have to have a fixed platform to punch from. This is not an easy thing to do and is the main reason why this concept has been overlooked in most styles. However, the nice part is that you don't have to beat your foot stepping down by much. Because gravity is pulling you down and causing your body to accelerate, your fastest velocity is attained just before (milliseconds before) your foot hits the ground. If you hit your opponent in this time period, you will slow your body's forward motion down by delivering the energy to him rather than your foot.

Earlier I said that you could use this technique for kicks also. What I mean is that you can use the energy in your forward movement to generate increased force. This is no surprise to those styles who kick forward off their back foot. (A very dangerous proposition!) They know the forward body

movement generates a huge increase in force.

You can, however, generate all the body force of the kick off the back foot with front foot kicks. What you must do to obtain this is to allow your self to fall, in a controlled way, into your kick. With practice, you will find that you will be able to let your self fall further and further, before your body requires you to stop your forward movement by catching yourself. With only moderate training you will be able to generate the same force as you did with kicks off the back foot without the dangerous pit falls.

If you accept or reject an idea based on whom it came from, you are judging the source, not the idea. A good idea needs no credentials.

Breathing

Breathing! The simplest art and the most important.

Breathing is the foundation of all life. Therefore, it is the foundation upon which all other aspects of life, including martial arts rest. Contrary to what you believe, breathing is a function that is rarely mastered by most people.

The concept of martial arts we've all started with is one of learning special moves and techniques to control the body. Soon, however, we learn that it is more than merely moving the body in special directions at the right time. We discover that there is an art form to be mastered. We learn that in order to make any progress in that art, we have to spend time learning to control our mind before we can control our body.

Most martial artists call their new abilities "mental focus" or "concentration", because that is what most martial artists do when learning about their mental abilities. There is, however, another equally important aspect of mind control that receives only lip services in most Western martial arts schools. That is the subject of breathing control. I will assure you that without full control of your breathing, you will never be able to obtain mastery of your mind.

Because breathing is such a simple, natural act to stay alive, most people assume they know all they need to know about breathing. A few more have learned that part of the concept is to breath slowly using the abdominal muscles. This isn't nearly enough.

You need to realize the underlying concepts behind breathing if you are ever going to master this simple art. You must realize there is a vast difference between breathing enough to stay alive and getting optimal levels of oxygen into the body.

The body can survive throughout a fairly wide range of blood oxygen levels. In fact the normal range for blood oxygen levels is from 80 to 100 mm of hg (millimeters of mercury - the way in which the amount of oxygen carried by the blood is expressed). Notice that there is a 20% variation of the maximum normal range before we even get beyond the levels considered normal. Survival is possible, however, with even lower levels of blood oxygen. Levels as low as the low 60's are common in only mildly symptomatic NON-ACTIVE patients. Some patients even survive with levels in the mid to high 40's if they have had sufficient time to adapt to lower but obviously not that threatening of levels and providing the severely decreased oxygen condition does not last for too long. Survival, however, is not what we are talking about.

What is important to know about how the body reacts to blood oxygen levels is how mild decreases in blood oxygen affect the mind, including the emotions. Initially, as the body's blood oxygen levels start to drop (for normal or other reasons), the sensory mechanisms within the brain and spinal cord trigger the first of a series of mechanisms to cause you to take a breath. That first, and for this discussion, the most important step is the creation of mild to moderate levels of anxiety.

This anxiety is not like a light switch, however. The amount of anxiety produced by the brains reflex centers can be likened to a sliding scale which starts out with such a low level that we are not usually conscious of it on the higher intellectual level on which we usually operate. Quickly the anxiety levels increases with the passage of time (and decreasing blood oxygen levels), to the level where we can easily sense it. Then, if we still haven't taken a breath and blood oxygen levels continue to fall, we reach a point where the average person can't physically or mentally resist taking a breath as long as they are conscious or sleeping.

After we take that breath, there is a sudden relaxing of anxiety levels, which lasts for a short period and then begins again the crescendo of increasing anxiety until we once again breathe.

On top of the anxiety-producing reflex to breathe, there is another very definite anxiety producing reflex. That is the physiologic need to ventilate the majority of the viable lung tissue, called the Sigh Reflex. The important part of this reflex is that it has very little to do with having adequate blood oxygen levels. Even if you have excellent blood oxygen levels, your body will try to get you to go through a prolonged inspiration and prolonged expiration (called a sigh) usually three to six times every minute. The number varies slightly from person to person.

Because of the need to breathe reflex and the sigh reflex, a person who is breathing in a slow and controlled manner, but not keeping up with blood oxygen levels or the necessary sigh rate, will begin to develop small levels of anxiety. Now most people can overcome this situation by ignoring these low levels of anxiety, especially initially. In fact, that is what happens to cause most anxiety in the first place. The person is so busy concentrating on what they are doing they don't notice the levels of anxiety building in their body.

The price we pay for this should be obvious but usually isn't. By succumbing to this anxiety, we find we have difficulty relaxing, concentrating, and even doing those things which needed our undivided attention in the first place.

We have all had the experience of not doing as well as we would like while doing a form or during sparring because we couldn't relax. In most cases this is because we haven't been paying attention to our breathing. In fact, to most students, the only time they feel they should be concentrating on their breathing is when they are doing meditation practice, and even then they don't always take care of the anxiety produced by the sigh reflex.

Instead, I try to teach my students to listen to their body. It is not during passive mediation but during exercise that observing our breathing patterns is the most important. It is during exercise that blood oxygen levels begin to fall and cause the most anxiety. I try to teach students the value of maximizing their breathing techniques, and to look for and recognize the natural anxiety that occurs when we are not meeting the body's ventilation needs. They need to take those deep breaths whenever their body begins to give messages of oxygen need, but to also concentrate on breathing whenever they are in a stressful situation. To prepare their body for activity by ensuring their body oxygen levels are up to optimum, I encourage them to practice controlled deep breathing before their body becomes oxygen hungry.

I teach them that they should use their abdominal muscles to supplement their chest muscles in breathing. The reason for this is that when the abdominal muscles are used in conjunction with the chest muscles it ensures that an adequately deep breath is accomplished.

In summary, the correct breathing technique is that of deep controlled breathing (best done by using the abdominal muscles) at a rate that supplies your body with all the oxygen it needs and yet slow enough to perfuse enough lung tissue to satisfy your sigh reflex.

You should listen to your body. Try to understand the natural anxiety of needing to take a breath. Know how and why it is caused. Understand what natural processes take away the added Reactions to that anxiety and practice them and your body's anxiety can be dealt with simply and effectively, leaving you more relaxed and in control of your mind and body.

Man will occasionally stumble over the truth,
But most of the time he will pick himself up and continue on.

Churchill's commentary on man

FOOT STRIKES

If you understand the concept about straight line punching I described previously, then we should be able to proceed to kicking techniques.

Many times I see martial artists, especially black belts, kicking with what is commonly called a knife-edge kick. They turn their foot so that they strike with the outside edge of the foot back towards the heel. When I ask why their foot is angled like that, I am usually told that its to increase the striking force and/or “it’s traditional”. Now if the only reason you can give me for a technique is that “it’s traditional”, I must doubt you know the real meaning behind the technique. (Please note that when I first learned a knife-edge kick, I was only given the “it’s traditional” reason from my Sensei.)

As to the reason of increasing the strike force, I admit tipping the foot will decrease the surface area and, by our previous formula increase the force. However, there is another factor I believe we should look at. This is foot stability.

When you kick something with the knife-edge kick, the entire rebound force is absorbed in the ankle joint. Granted, for it’s degree of mobility, the ankle joint is a relatively strong joint, but would you really want to put that much pressure on a joint? Worse, if you strike farther up (distally) along the foot, you will be striking the metatarsal bones of the foot which will not only lead to a torquing action on the ankle joint, but are, in themselves, dramatically weaker and far more likely to be damaged.

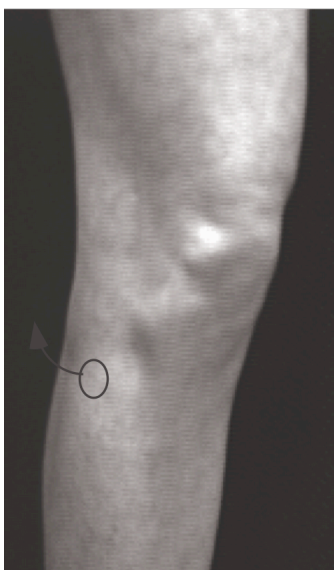
Consider instead, a kick striking with the proximal plantar surface heel. Not only is the talus bone extremely strong, but such a strike aligns your entire leg along the force lines, thus dispersing the force. If your leg is in proper position, so as to align the hip, you will be able to complete extremely powerful kicks and yet have the rebound force dispersed over the entire body that minimizes the

damage to you and your feet.

KNIFE EDGE KICKS

Now that we have covered the concept of tendon insertion points, we must go back and address the issue of knife-edge kicks.

Previously, we showed that the knife-edge kick was not appropriate for handling the large amounts of force involved in the various types of thrust (or side) kicks. However, the knife-edge kick does have a definite purpose - besides its possible use against the softer parts of the body. The knife edge kick is ideal for striking and rolling the tendons and ligaments at insertion points, especially those of the leg.



Because these areas are best hit with a glancing blow, so as to cause the rolling action, and because it does not require a great deal of force to cause the effects that you want at these areas, the knife edge kick is ideal. A perfect example of this is using the knife-edge kick against the lateral dorsal half of the knee. When struck in this location by a knife-edge kick in a glancing blow, the body releases all muscle tension to that area of the knee. If the person being struck were using that leg to support their

weight at that time, they would, mostly likely, wind up on the ground.

Knife-edge kicks can be used against any other tendon / ligament point (like the ankle). However, the knee generally causes the most dramatic effects.

“He was the strongest martial artist in the world,”
Said the priest over his grave.
“He just wasn’t any good at defense.”

PROPER FIGHTING STANCE

The best fighting stance is a cat/back stance. Many different styles propose different combinations, but I will state one fact definitely. Defense MUST come first.

I have no doubt at all of the claims by many styles that there more powerful stances than the cat/back stance. However, let me point out that power is worthless if it cannot be used. If you attempt to use a powerful punch or kick and your opponent hits you first causing significant pain, your body reflexes will sap all the power out of your technique even if you manage to complete it, which I doubt.

The stance, which provides the most defense for you, is a back stance. However, your front leg is vulnerable to attack (and breaking). To counter this threat, many styles use the cat stance. This is a good idea, as the leg can easily and quickly be moved out of the way of any kick. Unfortunately, there is a bad point to this stance in that you will have difficulty with using spin techniques, or you must accept the handicap of telegraphing your intentions by stepping down with the rest of the foot before you do a spin technique.

The perfect compromise is to place yourself in a back stance, but keep 80 percent of the weight on the back leg, instead of the normal 60/40 split. This way you can still move the front leg quickly and it doesn’t telegraph your intentions. Also you now have the ability to use the front leg to block with.

Actually there are three ways to do blocks with the leg. They are explained in order from the best technique to use (based on which causes the most damage to your opponent and least damage to you), to the worst (thigh blocks) which are better than being kicked full on. If done correctly, the last type of block can definitely decrease the amount of force you receive, but also will do no direct

damage to your opponent.

The first and best way (and by far the hardest) is to block your opponent's incoming kick with your heel - as if you were doing a kick with or without the force of a kick being applied. In most cases - or at least against a competently trained opponent - there is seldom time for this technique, but if there is time, this is a devastating technique, especially if you use force in your blocks.

The second and more common technique is to use your leg and/or thigh to block an incoming kick. Unfortunately, most people and many styles do it wrong. The principle of leg blocks is not to put your leg or thigh in the way so that the leg or thigh takes up the shock instead of the body. It may seem that this is a good idea at first, but if your opponent breaks your leg, they are going to have a relatively easy time of finishing you off and you will still get kicked in the central body. The proper way to block these kicks, if you can't use your heel is to deflect the kick, not to stop it. Redirecting the force means you do not take the brunt of it.

Most people who block with their legs just lift their leg and bend their knee so there is approximately a 90-degree angle between lower leg and thigh. This is wrong! There should only be a 45-degree angle between the posterior leg and posterior thigh. Also the the weight of the leg should be shifted laterally or medially at least at a 45 degree angle - in the direction away from where the kick is coming. This ensures that the leg meets the oncoming kick with 2 angles of deflection of 45 degrees each, thus causing only one-fourth of the force of the kick (at maximum) to be delivered to your leg.

This is expressed in the mathematic equation:

Force of kick times the sine 45 degree (reduction for first 45 degree angle) times sine 45 degree (reduction for the second 45 degree angle) equals the Force delivered to leg. This is simplified to the equation:

$$\text{Force of kick} \times 0.5 \times 0.5 = \text{Force delivered}$$
$$\text{Force of kick} \times 0.25 = \text{Force delivered}$$

To block with the thigh, point your knee just medially to where the kick originated. This will keep the angle between the force of the kick and your thigh as small as possible thus decreasing the

amount of force your thigh must absorb.

The technique I personally use (assuming I can't block with my heel) is to angle my knee as above with my thigh blocking and retract my leg at 45 degrees. This makes it easy as I don't have to decide which technique to use (leg or thigh) and it ensures that my leg will meet the oncoming leg with the best possible angle to me. As a side benefit, you will find with a small amount of practice that you can start a kick from this blocking position. I have found that I am ready to return a kick the instant I am done blocking and usually easily catch my opponent during their recovery time.

The other appropriate stance is to face your opponent straight on. At first this may seem as the worst possible position, but in reality this is not at all true. If you examine the possibilities for your defense, you will find that it is in this facing position that you have the most freedom of movement (and thus speed) of your arms and forearms and that your ability to detect and trace incoming blows is better than in a side-facing stance. The increased speed of movement of your arms and forearms makes blocking using circular techniques much easier and thus more accurate. With even a moderate amount of practice you will find yourself able to detect all blows directed at you.

Some important things to remember about-facing your opponent straight on are:

- 1) Never even attempt to block kicks aimed at your legs with your hands. Even if you can reach the incoming kick, you will be over-extended, have little power and will be definitely off balance. Use your legs to block any incoming blows from the lower abdomen down. The hands can be used to help for groin strikes, but the primary defense is your legs. A good general rule is hands block hands, legs block legs.
- 2) Keep your hands down when you are not actively blocking. The strongest, easiest block you can make is an upward circle block with your forearm. Holding your hands loosely crossed just below the belt line makes it easy to initiate this block. It also makes it easy for you to stay relaxed, which is an important aspect of being able to block fast. This position has the added advantage of not appearing as if you were ready to perform a martial art movement, thus it can be used to guard yourself when you don't wish to attract a lot of undue attention.

Disadvantages of facing your opponent

Straight on are:

Like everything else, both stances (front and side) have their advantages and disadvantages. I have already listed the advantages, here are the major disadvantages of the front fighting stance

- 1) The amount of target area, which you present for attack. As I said earlier this is not really a problem if you learn the zone defense (no, I don't mean football), but unless you are practiced in such you can quickly get lost and over extended and wind up trying to cover a zone best covered by a different part of your body. Example: hands trying to cover areas that are best blocked by the legs.
- 2) The loss of the majority of the circular kicks. In the front stance you have a wide variety of kicks you can use however most of them take too long to execute. For example: spin side and spin heel kicks are sure death from this stance. The only kicks, which are appropriate in terms of time for execution, are variations of the front and crescent kicks.

Other reasons why you can do circular kicks from a front stance (and live to tell about it.)

- a) In a front stance you have to cover another 90 degrees of turn to get to your target. This allows your opponent more blocking or moving time. It also diminishes your power, as the arc you must move through is too long!
- b) In order to initiate a spin/ circular kick you must shift all your weight onto one foot. this is very obvious in the front stance and thus you telegraph your intentions before you even begin to move. In the side position you can hide this movement to some degree. In the front stance the movement is open for the world to see.

The more you sweat in training the less you bleed in war

Ancient Chinese proverb.

PAIN WITHDRAWAL REFLEX

A physiological fact that we must cover before we proceed with the rest of this book is the reflex called the pain withdrawal reflex. The pain withdrawal reflex is a complicated (as opposed to simple) reflex

In short, the pain withdrawal reflex is the reflexive action your body uses to get you away from a sudden onset of pain. If you accidentally touch something sharp with your hand, your hand will be moving away from the source of the pain even before conscious thought has identified why you are experiencing pain. Your hand hurts - it pulls back. You don't have to think about removing your hand from the site of pain. It just happens.

Normally, if you experience pain in your finger, the nerve impulse carrying the message of the pain goes from the fingertip to the spinal cord. At the spinal cord, the nerve impulse carrying the pain message stimulates two different and separate nerve impulses. The first of these newly stimulated nerve impulses is called the reflex arc and nerve impulses are stimulated and sent back to your arm muscles. The second impulse is the message about the pain, which is directed up the spinal cord to the brain. It is extremely important to this concept that you realize that messages telling the muscles what to do are traveling down the arm from the spinal cord reflex arc at the same time as the nerve impulse telling of the pain is still heading for the brain. Because of this, the physiological fact of the matter is when you experience a sudden onset of pain, you actually have no control over the reflex action your body initiates to remove itself from the painful stimulus.

Note: If the pain does come on slowly (and here we are talking about pain onset over the course of a time greater than approximately .75 seconds) then you can, in fact, over-ride the stimulus, depending on your will power. This is because your brain can be placed in a trained/conditioned

state where it can ignore almost any stimulus.

However, if the response time is less than .3 seconds then the responses for action do not come from the brain but from the spinal cord itself. The time between .3 and .75 seconds is the gray area where some people will respond and others will not depending on the type of nerve you stimulate and the sensitivity of the area. Since the spinal cord has no thinking ability in itself, only response ability, you get a very predictable pain withdrawal reflex.

The pain withdrawal reflex is well known to medical science, but seems to be poorly understood by most martial artists. The truth of the matter is that pain withdrawal reflex is the explanation behind almost all circle techniques and pressure points! In fact, there are actually several different levels of pain withdrawal reflex actions that can be used to control or overcome an opponent.

The most simple is of course the withdrawal from pain described above. It is simple, predictable, and mildly useful. The next step, however, is the level called the crossed extension reflex.

SECOND LEVEL REFLEXES

Crossed extension reflex action is where, moving one side of your body away also causes the opposite extremity to move in exactly the opposite direction. Now this is HARD wired – for example your shoulders,,, if you rotate forward one side goes forward by the other side rotates backwards

An example would be again to stick the finger of your hand with a pin. Not only does the finger and arm move away from the pin but also the other arm tries to extend to push the offending object away from you. This is useful because you can use it to predict the movement of your opponent. If you should strike them so as to cause significant sudden pain in one arm then you can know in advance that you will cause them to withdraw the painful arm, and cause their other arm to move in the opposite direction, towards you, reflexively.

Now reflexive movement is very seldom-efficient movement, especially in a fight situation. Thus, their arm may be moving towards you, but you can count on the fact that it will not have either the correct orientation for an effective strike or will not be able to cover any openings on their central body.

If this sounds like something that is useful, it is. Frequently experienced black belts “make their openings” this way. They simply strike their opponent in a non-vital area (like an arm or leg) with a quick jab causing pain and then look for the opening that they already knew (from experience) was going to appear. This explains why they always seem to be able to find non-existent openings and make those vital area strikes which ends the fight.

THE GOOD STUFF

The third level of pain withdrawal reflex is even more useful than the second level from a grappling point of view. In the third level, the body not only does the above-mentioned motions but also moves the body mass in the direction, which will decrease the pain.

The reason why this third level of pain withdrawal reflex is as significant as it is, is that it is entirely reflex and it affects the entire musculoskeletal system.

Being a reflex, there is no thinking portion to the action, which is initiated. The reflex is as straightforward as the levels described above. You hurt and your ENTIRE body mass moves as fast as it can in the direction, which decreases that pain. It doesn't matter that by doing such it may cause the body to lose its balance and fall, bounce off a wall or other object, or set the person up to receive even more pain. Thus, like any other non-thinking movement, it can (and frequently does) get the person out of the frying pan and into the fire. A perfect example of this is a lateral downward twist of your opponent's thumb. Not only do they move their entire arm in the direction you are twisting, but also the other arm moves in the opposite direction and both knees will bend. In fact, a quick enough motion on the thumb joints (notice I said quick, not necessarily strong) will have them bouncing off the floor.

If, on the other hand, (pun intended) you twist the thumb upward you can watch your opponent try their very best to stand on their toes, maybe even propelling themselves into the air in an attempt to lessen the pain.

The vital thing you must know before you rush off and try these techniques, is that you must not only initiate the pain quickly, but you must also continue to move the joint to which you are applying

pressure in a direction which will ensure the pain continues. In fact, you must constantly be increasing the (pain producing) pressure on a joint if you wish to keep control of your opponent.

The reason for this is that that body pain receptors (nerves) respond more to changes in pressure, than just to pressure itself. Thus if you move your opponent's thumb backwards, it is the sudden change in pressure which generates the most response from them. They may well stay at the angle you place them, if you lock the stretch receptors of the joint, (we talk about stretch receptors in an upcoming chapter), but their most enthusiastic response will be when you first started twisting, not when you are just holding constant pressure on the joint.

So frequently I see students start a maneuver that initiates pain, causing their opponent to react with their body but then fail to keep enough pressure on the joint. Thus, they don't understand why suddenly the opponent of whom they had temporary control, now has them in a compromising situation. In short, once you start applying pressure to a joint, don't decrease that pressure, (if in doubt increase it), until you have acquired the next significant joint lock or have them unconscious.

The strongest thing in the universe is the circle.....

It is also the most complex.

Quan Li K'an proverb

TENDON AND LIGAMENT ATTACKS

THEORY:

Tendons are the cords, which connect muscle to bone. Ligaments are the cords that connect bone to bone at the joints. At the point where these tendons attach themselves to the muscle (called insertion points), where the tendons joins the bone, and along the length of each tendon and ligament there are specific receptors, which produce significant pain if stretched. The function of these stretch receptors is to prevent tendons and ligaments from being over-stretched and ripped free from either the bone or the muscle to which it is connected.

Rule #1: There is an inverse pain rule that applies when attacking tendon or ligaments. The rule is that the smaller the joint you attack the more pain you will produce from the same force. This is because the force is divided amongst a smaller amount of ligament surface area, producing greater stretching and thus greater pain. Therefore it is easier (in terms of force) to produce greater pain by attacking the distal phalanx of the fingers than the tendons/ligaments of the arm.

Rule #2: When attacking a single or even a grouping of tendons or ligaments you must also grab the structures on the opposite side of the extremity you are attacking and move them in the opposite direction. This works perfectly if you learn to roll the tendons of ligaments you attack instead of trying to push or pull on them.

In order to utilize these stretch receptors, you must, obviously, stretch the ligament. The body's normal way of stretching these tendons is pulling them along their LONG axis, which is usually a significant distance. It is not an easy feat to overstretch a tendons along the pathway that it was designed to move.

Because there are stretch receptors situated along the entire length of all tendons/ligaments, you can also stimulate the tendon/ligament stretch receptors if you can stretch any part of the tendons /ligament sideways. However, in most areas of the body, this can require considerable movement before you get to the point where stretch receptors are stimulated, especially with the body's longer, more prominent tendons /ligaments (which are designed to travel significant distances). These longer tendons /ligaments are easier to get to, but hardest to stretch to the point where the stretch receptors produce pain.

Luckily, there is a way around this quandary. At both of the insertion points and at any bony prominence, tendons & ligaments can be trapped and stretched with a rolling motion. A rolling motion causes the tendons /ligament to move and stretch along directions it was never intended to move, therefore, the stretch receptors are stimulated.

A perfect example and location to demonstrate this principle is just distal to the distal head of the radius and ulna. In the picture below, the gray dot on the lateral wrist indicates the correct point. Note, however, that there are two MAIN tendons in this area and the corresponding number on the opposite side of the wrist. When you attack the tendons at this point you have to use the rule of opposites described previously. In other words, trap the anterior tendon on the thumb side (where the gray dot is) and the dorsal tendon on the small finger (or medial) side of the wrist and twist both the same direction (counter clockwise)

This area is the location of multiple tendons that control hand movement. There are also bony prominences with which to trap these tendons (and therefore decrease the distance the tendons before stimulating the stretch receptors.)

The proper technique with which to trap most tendons or ligaments is:

- A) Place your thumb and index finger around the wrist at this area - have the web spacing between the thumb and index finger loosely against the wrist.

B) Wrap the thumb and index finger moderately tight, not so tightly as to be unable to move the tendon/ligament. If you just grab the bones as hard as you can and twist, the technique will not work.

C) Apply pressure with the sides of your thumb and fingers not the finger tips

D) Twist your hand so as to cause the tendon/ligament to roll and thus stretch.

Rule #3: Stretch receptors are stimulated by fast movements, dramatically more than by slow movements. Therefore, do not grab the wrist so hard that you cannot easily (and thus quickly) roll the ligaments. Also, you must keep twisting. Pure tension, in itself, does not cause significant pain. Only a change in tension causes the desired pain withdrawal reflex we talked about several chapters back.

NOTE: The radial nerve also runs through this area. You can trap the radial nerve at the same time as you trap the tendon by using the inside aspect of your thumb, as it wraps around the same area and twisting.

NOTE 2: Twisting both tendon/ ligament and nerve at the same time will cause a dramatic increase in pain.

You can roll any tendons /ligament you can reach, but, by our previous discussion, the only practical locations are those locations close enough to insertion points and bony prominences so as to stimulate stretch receptors and produce pain. There are numerous points in the body where the above rules apply. I will list some of the more useful points. Some possible points I may not mention. The fact is, however, once you understand the principles involved here, you can figure out your own points.

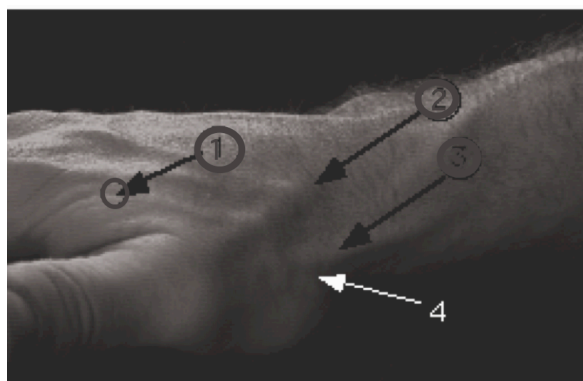
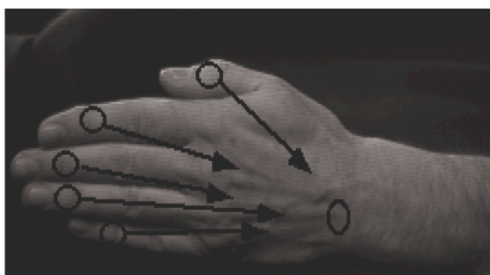
These are some of the more prominent locations you can attack:

HAND

LOCATION: Each finger is a separate unit. Force the distal phalanges of any finger backwards towards the dorsal center of the wrist with a twisting motion. See the arrows on the picture to the right. This means that to attack the small finger in standard anatomical position (our standard reference position) you would force the small finger distal phalanx dorsally and laterally with a fast twisting motion. To attack the index finger you would move distal phalanges dorsally and medially with a fast twisting motion.

LOCATION: The wrist as an entire unit. Best attacked with a twisting motion which forces it posteriorly and medially (from standard anatomical position or exactly the opposite directions if the palm is directed posteriorly to begin with).

LOCATION: There are four tendons that are located just distal to the bony distal ends of the forearm which can be attacked. These are located distally to the ligaments described in our first example. The areas in gray show the lateral pair of tendons. The medial pair are directly opposite these two tendons.



FOREARM

LOCATION: The tendons located approximately 1/2 inch proximal to the distal condyles (the ends of the bones) of the forearm. These have been described previously (in the first example of the chapter) .



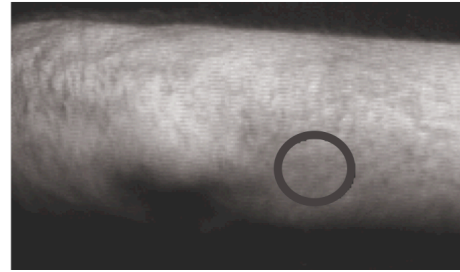
LOCATION: Approximately 1/2 inch distal to the proximal ends of the radius and ulna. The black circle in the picture to the right. You can roll either the medial or lateral tendons.

ARM

LOCATION: Approximately 1/2 inch proximal to the distal end of the humerus. Located in the mid lateral and medial planes. Most effective if pulled distally into the epicondyles as you perform the rolling motion. The lateral tendon is shown in the stripped white area in the picture above right.

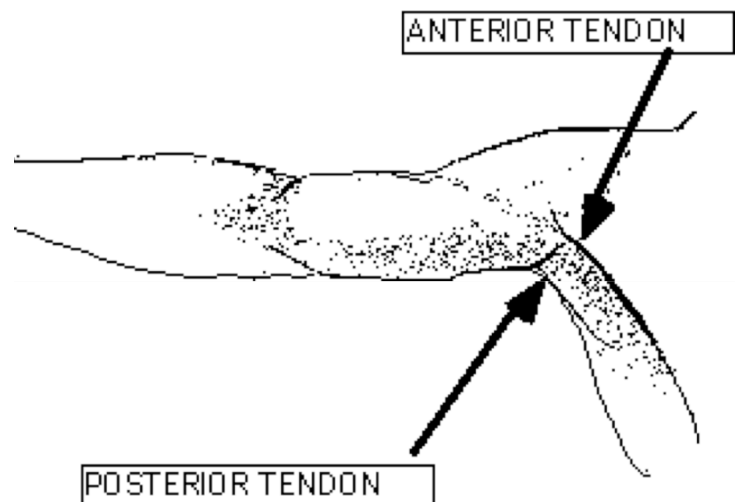
LOCATION : Approximately 1/2 inch proximal to the distal end of the humerus in the middle of the dorsal aspect is the tendon attaching the triceps muscle. This can be attacked with a rolling or

vibrating knuckle finger. Make the motions move perpendicular to the line of the tendon to be most effective.



SHOULDER

LOCATION: The anterior middle (both vertically and horizontally) of the shoulder contains a tendon which can be rolled producing moderate pain. This is a minor point as this tendon can be protected if your opponent can cause their pectoralis muscles to contract and protect this point.



NECK

LOCATION: The medial superior head of the clavicle is very tender because of the thin layer of muscles, which can be easily compressed and rolled.

LOCATION: Just dorsal to the distal end of the sternocleidomastoid muscle. Strike with a single finger in a medial direction angled 45° posteriorly.

LOCATION: The dorsal neck has numerous tendons and ligaments to attack. Some of the more effective tendons to attack are the major tendons located in the posterior lateral aspect of the neck. The correct angle of attack is so that you strike your target at an angle of 90° to the belly of the muscle. The force of strikes in this area are conducted to the brain, thus they have the ability to produce unconsciousness or death.

LOCATION: The midline superior neck just under the skull.

Note: This area will definitely conduct the force of the blow to the brain. *****WARNING *****
DO NOT PRACTICE THIS*****

Too hard of a strike to this area will cause dislocation of the first and/or second cervical vertebrae causing total paralysis and death. This is a killing blow!

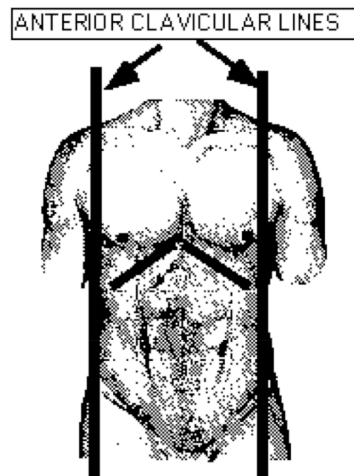
CHEST

Most people are under the impression that there are no real ligaments or tendons that can be attacked in the chest area. This is completely untrue. Besides the numerous nerves to attack in this region, there are also numerous areas of exposed tendons and muscles, which make excellent targets if you

wish to produce moderate pain.

LOCATION: The entire sternum is vulnerable to strikes, best done with a knuckle fist. For even better pain production, use a knuckle fist rub by making small circular rubbing motions. The nice aspect of this area is that no matter how large the chest muscles of the ape attacking you, they have no muscle covering the sternum. My favorite technique when I target this area is to strike with a knuckle fist in the upper third of the sternum and then drag my knuckle downward, forcefully, along the sternum. For some reason I never seem to be able to get to the inferior aspect of the sternum before Mr. Muscles decides to leave the area. (QUICKLY!)

LOCATION: The inferior ribs just anterior to the auxiliary line have a relatively small layer of muscles. Thus they can be struck with a knuckle fist, as described above. This time, however, drag your knuckle upwards.



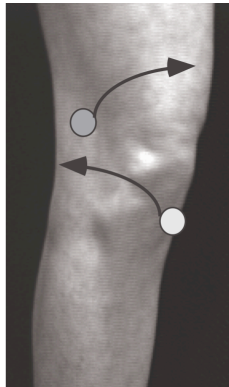
THIGH

LOCATION: The distal lateral thigh, just proximal to the knee joint. (Gray circle and arrow). These can be rolled easily with the knife edge kick. Your opponent's leg should be extended with the knee straight, otherwise the muscles form a protective barrier over the ligament. You can also sometimes trap the muscles just proximal to the epicondyles of the femur causing significant pain.

LEG

LOCATION: Just distal to the head of the tibia and the head of the fibula, you can trap and roll the ligaments causing significant pain. (White stripped circle and arrow on picture to right). Trap opposing sides like you did for the wrist. The rule of opposites also applies here.

LOCATION: The ankles can be stimulated just proximal to the medial and lateral malleolus, exactly like the wrists.

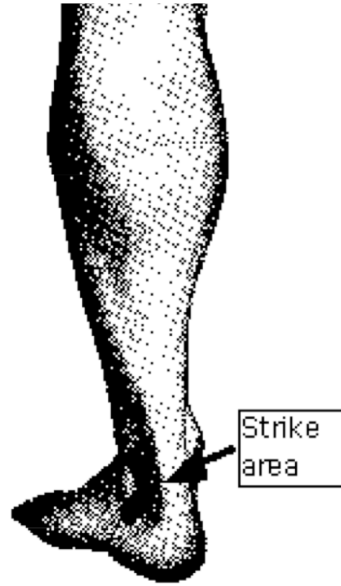


FOOT

LOCATION: The ankles can be stimulated just distally to the medial and lateral malleolus, exactly like the wrists. Again, you will be trapping opposite pairs of ligaments & tendons and twisting.

LOCATION: The distal midline of the foot is not a very useful location because of the fact that on the street everyone wears shoes, but the location is there and does respond well to knuckle punches. In

fact, a properly timed strike to this area, done as your opponent is throwing a kick at you will cause them to retract that kick so fast they will most likely wind up on their butt on the ground.



Truth: The view point of whom ever is in power at the present

CIRCLE TECHNIQUES

This chapter is actually a continuation of the last chapter on pain withdrawal reflex. The reason why I broke it into a separate section is because we are going to discuss a particular usage for the pain withdrawal reflex called, obviously, Circle Techniques.

Many styles use circular techniques. Many more use them in a limited way without even realizing what they do. Most of the latter will, of course, deny it. They have their own names for what they do and are not about to admit that they same techniques may have been developed by other styles. The purpose of circular techniques is to generate leverage, and thus pain, regardless whether a large circle or a small circle technique is used.

Here's the scenario. Your opponent's fist comes smashing towards you, and you block it with a forearm or straight-arm block. You know well that unless you subdue your attacker immediately, you will have another strike coming towards you in short order. Obviously, there are many, many techniques you can use.

The choice you must face at this point in time is how to control your attacker and how much energy are you willing to expend doing it. If you are only facing one person you have the luxury of expending a lot of energy. If there is more than one attacker or the person trying to re-arrange your face is bigger than you, you had better think about conserving your energy. - Especially if they are bigger and/or stronger than you. Since it is rare for small people to attack big people, this could well be a BIG problem. You could try to force control by a technique, which matches your strength against theirs, but as you should understand by now, there is definitely a better way. Or I wouldn't be wasting my time writing this chapter.

The answer is a circle technique.

Before we go any further I must make it clear that there are two distinctly different types of circle techniques: large circle and small circle.

Large Circle techniques are when you execute or move your hand forearm and arm through a large circle. It doesn't really matter in the long run if the circle is done clockwise or counter clockwise, but if I have a choice I always try to move counter clockwise as you have to move the extremity a shorter distance before producing pain. Your primary joint of rotation is your shoulder joint which is the best one of the upper extremity to generate a circular movement with any degree of strength. The purpose of the circular movement is to overpower your opponent through use of a long lever arm which applies pressure placed upon multiple joints in an extremity. The end product will be to cause your opponent to move their entire body, quickly and painfully, a significant distance away from you.

Small circle techniques, in contrast, use only your hand and wrist motion to generate a small circular motion against a single joint, producing significant pain and thus capturing your opponent. The purpose in both types of circle techniques is to use the leverage created by moving in a circular motion to overcome your opponent strength.

In the last chapter we talked about how the stretch receptors surrounding a joint or located around ligaments and tendons could be stimulated. Well, in short circle techniques do exactly that.

Let me explain. The human body is comprised of muscles, tendons and ligaments which cause the joints of the body to move in straight lines. For some specialized joints (like the thumbs, shoulders and the hip joints there is an over lapping of the areas where each muscle controls the joint so that circular motions can be produced. Essentially though, even in these joints each muscle by itself only moves in a straight line. Thus even for these specialized joints, the circle movement produced is one that is comprised of a series of straight lines.

That is how the body is designed and any deviation from the correct limits of motion for which the muscle was designed, causes pain.

NOTE: Like with any other pain situation the rules we established in the chapter on pain withdrawal reflex apply here.

LARGE CIRCLE TECHNIQUES

As we have already said, with large circle techniques you effectively move your opponent's hand, forearm and arm (or foot, leg and thigh) through a large circle. Archimedes stated that with a long enough lever he could move the world. So it is with large circle techniques. Because you are causing both your arm and your opponent's extremity to move through a large circular area, it is exactly like making your extremity into a lever and their muscles, ligaments and tendons the focus of the force that lever. Because of this lever action you can overcome the strength of a person who is much larger than you.

What you have to remember is that the larger of a circle you move their hand through (after you capture it, of course) then the less muscle energy you have to expend.

The real nice thing about circle techniques is that since you are the one who is doing the twisting, you will automatically adjust your own muscles to stay in the straight lines (despite moving your arm in a circle) they were intended to move in. Your opponent however, will be pushed into circular twisting motion which their muscles were never intended to work in and thus will not be able to generate any significant power only pain.

An example of the large circle technique is to block a punch, then capture the attacker. Next, push your opponent's arm outward - usually continuing the block, which, if you are planning on using circle technique, is best done by pushing up- and out-ward at about a 45 degree angle. Grab the arm and push along this 45 degree path as far as it will go, keeping both your own and your opponent's arms extended, then move the arm swiftly downward, then make a swing towards you, then back up. If done quickly, you will find that your opponent's body has also swung with the arm - and is presently in very precarious control of their balance.

On to the coup de grace. Simply continue to move the arm in a large circle without letting go. Complete another circle if you can, however, usually you will find that when done correctly, you will not have been able to complete the second circle as you opponent has usually crumpled on the ground or gone off flying into a nearby object (wall, door, furniture, floor).

The two secrets of this technique are:

- 1) Use a large circle. The larger, the better, because the larger the circle, the less force you have to use.

2) DO NOT let go with your hand. If you do the technique slowly, it will seem as if your hand has trouble twisting to keep up with your opponent's arm. It does have trouble twisting. But, when done fast, your opponent's arm will bend to stay with your hand and not vice versa. In this way, your opponent will try to bend themselves into very weird and unnatural angles to lessen the pressure on their arm. As they will not be able to keep up to the quickly changing positions, they will launch themselves (willingly, it will seem) into nearby space or objects, depending what is readily nearby. (Rather nice of them to self-destruct, isn't it?)

Small circle techniques are done in a similar way. First you must capture your opponent's extremity. Then, instead of grabbing the entire hand or foot, grab hold of a single finger (or toe if it is available). Next twist the digit in a circular motion either pulling it toward you or pushing it away from you. Personally, I prefer to pull the person towards me. This is a control technique after all. It also helps if you either push downward on the extremity or lift upward evoking all aspects of the pain withdrawal reflex. Once you have forced the person into a position where they can no longer freely move, like on the ground bent over backwards or some other unnatural position, moved the joint to the limits that the joint was designed to go and placed enough tension on the ligaments and tendons around the joint, you have captured the person.

Please note that this is not a violation of the principles stated in ligaments and tendons chapter or in pain withdrawal reflex chapter because the pain you are producing in the joint by pure tension will in fact drop off rapidly. However, any movement on the part of the person will cause that sudden change in pressure in their captured joint and produce significant pain that will stop them from moving any farther.

Note: It is possible for a person who understands the principles here to attempt to move slowly and not produce pain they can't override but what are you planning to be doing when they are doing this slow movement? Ordering a pizza?

Ignorance may be cured with hard work.
Only death cures stupidity!

NERVE STRIKES

*******WARNING*******

**REPEATED STRIKING OF NERVE POINTS OR
EXCESSIVE FORCE TO A NERVE POINT MAY
CAUSE PERMANENT DAMAGE.
IT IS RECOMMENDED YOU HAVE ADEQUATELY
TRAINED SUPERVISION BEFORE ATTEMPTING
THESE TECHNIQUES YOURSELF.**

Literally if you don't want to paralyze someone
Then don't screw around with this –
you need to know This for the street –
But don't hurt your training partners

In this section we are going to describe some of the major (and a few minor) nerve points. Because of the close proximity of appropriate locations suitable for trapping and stretching ligaments many of these points will place pressure on both ligaments and nerves.

Theory : Actually, nerve point use can be described very simply, but like most things, the words are deceptively simple. The rules of nerve points are simply:

- 1) Any point where a nerve can be compressed against a firm surface is a valid strike point. Since the body tries to protect its nerves, nerves are located so as to be resistive of attack in most locations of the body. You must find locations where nerves are not running under significant muscles and yet running over firm surfaces to attack. If you have protective covering over the nerve and there is no firm surface under the nerve, you will produce little or no pain when you strike the area.
- 2) A rolling or vibrating action as you apply pressure to a point will dramatically increase the effectiveness of the force you apply.
- 3) The larger the nerve (and obviously the less the protection), the more pain it causes when you compress a nerve. Since larger body parts have larger nerves passing through them, it is more effective to try to produce significant nerve pain by attacking larger structures. Thus, you can produce more nerve pain in your opponent by attacking his arm, for example, than his fingers, assuming either location has the same amount of muscle protection. Please note this is exactly opposite of the rules for muscle and tendons.

Please note that some points identified in this chapter are done for completeness even though they are not major strike points. Also note that I haven't even come close to naming all the possible nerve pressure areas. This book isn't long enough for that. I have shown enough for you to more than adequately understand the principles. The other locations will be easy to find if you obtain the reference books I recommended earlier.

HAND (including fingers)

LOCATION: In standard anatomical position, press on the inferior lateral aspect of each finger to compress the nerve for each finger. The lateral aspect of the proximal phalanx is the most tender but overall even these locations are considered (very) minor nerve pain points. Still their additive effect to other nerve points can be useful.

LOCATION: In standard anatomical position, find the middle of the index finger metacarpal. Then press 90° medially and 45° dorsally at the middle of the index finger metacarpal. Because of muscle formation, this location can even be triggered when your opponents hand is in a fist. To make the pain effect more pronounced, roll the tip of your thumb in a small circle as you apply pressure. Arrow #1 on picture top of next page.

LOCATION : In standard anatomical position, find the middle of the small finger metacarpal. Then press 90° laterally and 45° dorsally at the middle of the small finger metacarpal. This location is a minor pain location because of the protective muscles along the small finger metacarpal but when combined with the point named on the last page can be very effective.

LOCATION : In the anatomical snuff box on the dorsal aspect of the wrist. (This is the area just proximal to the thumb between the two ligaments which extend the thumb and distal to the head of the radius. You can see these two ligaments by extending your thumb dorsally.) Apply pressure (best with your thumb) angled towards the ring - long finger web space and pull distally. This is the area between arrow #2 and arrow #3.

LOCATION : Superior to the anatomical snuff box on the dorsal aspect of the wrist. (This is the area just distal to the thumb and distal to the head of the radius. designated by arrow #4.) Apply pressure (best with your thumb) angled towards the ring - long finger web space and pull distally.

FOREARM

LOCATION: Medial to the palmar side, radial aspect tendons approximately 1/2" proximal to the distal head of the radius. You will be compressing the radial nerve. This the area just medial to the tendons identified in the previous chapter.

LOCATION: Medial to the palmar side radial aspect tendons approximately 1/2" proximal to the distal head of the ulna bone. You will be compressing the Ulnar nerve. as above this the area just medial to the tendons identified in the previous chapter.

NOTE: Obviously you can not effectively compress both the Ulnar and the Radial nerves together at

the distal forearm, therefore it is my recommendation that you attempt to roll the dorsal Ulnar side tendons and the radial nerve (tendon described in the last chapter) because... it hurts more!

LOCATION: The distal half of the brachioradialis muscle. Because of the way that the brachioradialis is angled across the top of other muscles it is particularly vulnerable to attack. It is innervated with several branches of the radial nerve in it's distal half, making the muscle tender when struck. (especially repeatedly!) The best strike is angled 45° back towards you. The effect is dramatically more pronounced when there is tension on this muscle. Therefore if you are applying tension (in a distal direction) to distal pressure points and then strike the brachioradialis muscle you will get maximum effect.

ARM

LOCATION: Just proximal to the head of the distal humerus. Located on the anterior-medial aspect of the arm at 45° off (dorsally) the midline plane. This point has many small muscles and a nerve which can be rolled or struck by compression into the medial epicondyle of the arm. Strike must be at 45° downward into arm and back towards you.

LOCATION: The entire proximal medial line (of the proximal 1/2 of the arm) between the biceps and the triceps muscles of the arm contains the auxiliary nerve. Pressure or strikes are best done 90° perpendicular to the bone at this location.

NOTE: Strikes to the Auxiliary nerve or plexus may cause permanent paralysis!!! Some people will not feel the pain until the damage has been done! DO NOT PLAY AROUND!

LOCATION: The next point is called the auxiliary plexus. Located on the medial aspect of the proximal humerus approximately 1 inch distal to the muscles of the inferior Axilla. Best-struck or compressed with force angled 45° outward through the head of the humerus.

This nerve point is extremely vulnerable and could result in temporary or permanent paralysis of the arm, forearm and or hand. Use Caution! (Read that do not hit unless you like lawyers!)

LOCATION: In the posterior aspect of muscle surrounding the shoulder, there is a muscle called the Teres major. Just dorsal to arrow #2. This is the muscle, which forms the anterior edge of the posterior group of muscles which are projected forward when the arm extends. A combination of small local nerves and the edges of several muscles make this area VERY sensitive when struck properly. The correct strike is with a single finger pointed parallel to the humerus (but obviously moving in the opposite direction).

Some of the higher forms in styles, which concern themselves with pressure points, use a move, which strikes both the auxiliary nerve and this sensitive region simultaneously. This is done by holding your hand so that the thumb strikes the auxiliary nerve at the same time as the index finger strikes the nerve point above.

Obviously this is a very deadly move that has great potential for inflicting both pain and severe damage to an opponent.

LOCATION: Just opposite to the Axillary nerves. Located in the medial aspect of the axilla just anterior to the midline but behind the fold of muscle produced by the pectoralis muscle. The best angle to strike this region is from the posterior, angled upwards anteriorly towards the centerline.

LOCATION: There is also the corresponding compression of the opposite area from above, located in the deep central axilla just anterior to the fold of muscle produced by the latissimus dorsi and Teres muscles. Arrow #3 on picture. The best angle to strike this region is upwards from the anterior, angled posterior towards the spine. This strike is as effective as its opposite anterior strike and can be very painful if enough force is applied with a single finger. Multiple finger strikes quickly increase surface area there by compressing protective muscle around the sensitive nerve making the strike less effective.

NECK

LOCATION: The centerline of the spine at the junction of the first and second cervical vertebrae.

Blow is angled anteriorly and upward at 45°. **DO NOT PRACTICE THIS! This is a killing blow! ONLY!** It has no other function except causing death by cutting the spinal cord through dislocation at the strike point. The margin between unconsciousness and death at this location is too small to matter. I will testify AGAINST you if you do this and your life was not in danger!

LOCATION: Under the posterior jaw just anterior to the sternocleidomastoid angled at 30° medially and 30° either superiorly or inferiorly. Both angles work, but the blow angled inferiorly is the most effective.

CHEST

Moving into the rib area, all EXPOSED ribs are candidates to be attacked. Meaning that you cannot attack the nerves, protected by each rib, if there is too heavy of a muscle layer covering the rib.

Therefore, the pectoralis muscles protect the underlying nerves of the upper ribs, especially in front. However you can attack these muscles at their weak points. (See the chapter on tendons, ligaments and muscles.)

Attacking the nerves under the ribs will produce sharp, moderately severe pain. This pain is, however, usually not severe enough to drop your opponent or to cripple them. Therefore, these points make very good points for persuasion when you wish to impress a point without actually harming someone seriously. Because of the pain withdrawal reflex, these points also work well for setting a person up for a really good strike.

The correct method of attack is to deliver a blow upwards at about 30° from horizontal because the nerve is located on the lower posterior aspect of each rib.

The best location to attack each rib is in the anterior Clavicular line because there is the least amount of muscle protecting the rib at this point.

ABDOMEN & PELVIS

NOTE: Nerve strikes to plexuses (groupings of nerves) cause their effect without necessarily being interpreted as pain. When struck these plexuses cause just as great an effect as if the person was feeling pain, sometimes even more!

LOCATION: The solar plexus. Direct the blows posteriorly and DOWNWARD at a 45° to stimulate the gastric nerve plexus.

LOCATION: The area in the mid lower abdomen just below where the standard belt knot rests. Again, direct the blows posteriorly and DOWNWARD at a 45° to stimulate the pelvic nerve plexus.

LOCATION: The top of the pelvic crest. Strike the blows downward and towards the centerline at 45° into the medial top of the iliac crest. The solid black circles the arrows are pointing to.

THIGH

LOCATION: The femoral nerve is prime for attack in the medial aspect of the proximal thigh. Located just distal to the groin, the femoral nerve is poorly protected in the proximal 1/4 of the medial thigh. The angle to strike is from medial to lateral angled through the thigh at 45°

LOCATION: The medial-mid aspect of the distal thigh just proximal to the epicondyle. The object here is to drive the cutaneous nerve into the epicondyle.

LEG

LOCATION: The medial posterior aspect of the proximal leg approximately 1/2 inch distally to the medial condyle. Pressure best applied in a counter clockwise rolling motion and directed upward and laterally at 45° angled through the leg. The object is to trap the internal saphenous nerve against the medial aspect of the tibia

LOCATION: The medial-posterior aspect of the distal leg just proximal to the epicondyle. Pressure best applied in a counter-clockwise rolling motion and directed laterally at a 45° angle through the leg. This point is very similar to the point on the wrist (distal lateral aspect of radius).

FOOT

LOCATION: The medial-posterior aspect of the ankle just posterior and inferior to the epicondyle contains the plantar nerve which can be rolled laterally at a 45° angle through the leg

LOCATION: The interspaces between the 4th and 5th metatarsals just distally to the proximal metatarsal heads. This is a strike area, which is best attacked with a stomp by your heel and then twist laterally (with your toes as you leave the heel in place).

When two tigers fight one is maimed the other killed

MUSCLE ATTACKS

There are many different systems or styles that have at least some techniques which concentrate on muscle attacks. In fact, as I earlier stated, three of the 5 stages of the 'Poison Hands' system I learned were discussed in the last chapter dealt with a particular variety of muscle attacks.

Unlike simpler systems or even for poison hands systems in general, muscle attack systems take a lot of hard work and a long time to learn. Most younger martial arts practitioners simply are not willing to do the amount of work to learning sufficient anatomy and therefore are unable to produce reliable results from muscle attack techniques.

It was due to this fact, that many muscle attack systems developed a bad or at least a mystical reputation. Certain masters had spent the time and work to learn the complete systems and could make the strikes look as simple as they were effective. When their students tried to use what they thought were the same techniques, however, the results were not the same. The reason being that very small differences in strike locations, while not noticeable to onlookers will make dramatic differences in results. Thus much confusion and mysticism about powers of individuals was generated.

Despite the general mystique about muscle attack systems, they are in fact no more complicated to understand than either nerve or tendon-ligament attack techniques. Muscle attacks can produce considerable pain and, if done correctly, can be just as disabling as any other advance attack system.

The beauty of muscle attacks is that it is a system which, if done correctly, gives you a wide variety of attack points which you can use without the fear of permanently disabling to your opponent. The down side is that you must take the time to learn the principles involved and to learn sufficient anatomy so that you can use those principles.

As usual, the general principles involved are fairly easy to relate in a few sentences. The actual implementation takes a lot more explaining and examples. I will give you some of both.

However, because of the tremendous number of different possible muscle attacks. I will only name some of the more prevalent ones and some of each major type so you will be able to see how the rules apply. Then you must find and apply the principles in this chapter to other points if you wish to master these attacks. (This chapter itself would be a whole book in length before I could name all the possible points)

Concept :

- 1) Compressing any muscle edge against a hard or semi hard surface will produce significant pain.
- 2) Stretch receptors will be stimulated if you can stretch a muscle far enough in a direction it is not designed to go.
- 3) The more times you strike, vibrate or roll a particular muscle point, the more tender it will become.

FOREARM

LOCATION: The muscle ligament junction of the Supinator longus on the lateral aspect of the forearm and the flexor carpi ulnaris on the medial aspect of the forearm. Both locations are best struck with a knife hand angled 45° back towards the hand.

LOCATION: The distal half of the brachioradialis muscle. Because of the way that the brachioradialis is angled across the top of other muscles it is particularly vulnerable to attack. The entire distal half of the muscle is supported by the radius so it can be struck any where in this region. As discussed in

the chapter on nerves, the brachioradialis is also innervated with several branches of the radial nerve in it's distal half making the muscle even more tender when struck. The best strike is with a knife hand angled 45° back towards you. The effect is much more pronounced when there is tension of this muscle. Therefore, if you are applying tension in a distal direction to distal nerve points and then strike the brachioradialis muscle, you will get maximum effect.

LOCATION : Approximately 1/2" distal to the proximal head of the radius. located on the lateral aspect of the arm. This point has many small muscles that can rolled or struck, including the brachioradialis muscle.

LOCATION : Approximately 1/2" distal to the proximal head of the ulna. Located on the medial aspect of the arm. This point has many small muscles that can rolled. Makes an excellent combination with the above location to trap the distal forearm.

ARM

LOCATION : Approximately 1/2" proximal to the head of the distal humerus. Located on the anterolateral aspect of the arm. (at 45° off the midline) This point has many small muscles that can rolled or struck by compression into the lateral epicondyle of the arm. The white circle with the black dots in the picture below. Strike must be at 45° downward into arm and 45° back towards you.

LOCATION : Approximately 1/2" proximal to the head of the distal ulna. Located on the posterolateral aspect of the arm. This point has many small muscles that can rolled or struck by compression into the medial epicondyle of the arm. It also contains nerves that can be stimulated if you apply enough pressure. Pressure should be angled medially and distally 45° into the medial epicondyle.

LOCATION: Both sides (medial and lateral aspects) of the proximal biceps. Especially effective if you pinch both these locations, towards each other. See the hollow black circle in the picture above right. This also works for the proximal triceps muscle (if you can capture it...very hard to do!).

NECK

LOCATION: The lateral aspect of both sides of the neck. Striking the Sternocleidomastoid Best done with a knife hand angled at 45° downward through the neck.

LOCATION : The superior aspect of the groove between the sternocleidomastoid and the trapezius, located on both anterolateral aspects of the neck. Best done with a knuckle fist of a spear hand and 45° medially through the neck. Keep angle of blow parallel to the ground. See the picture on the top of the next page.

CHEST

LOCATION: The edges of the pectoralis major muscles. Best struck and or rolled with a knuckle fist. The pectoralis minor muscles are also sensitive but generally harder to compress effectively (especially when contracted).

THIGH

LOCATION : The Sartorius muscle is moderately sensitive to being struck, especially in the proximal 1/4 of its length, (the anterolateral aspect of the muscle).

LOCATION : The lateral-anterior aspect of the distal thigh just proximal to the epicondyle contains sensitive muscle edges which can be rolled.

LOCATION : The lateral-posterior aspect of the distal thigh just proximal to the epicondyle contains sensitive muscles edges which can be rolled.

LEG

LOCATION : The posterior superior lateral edge of the Soleus muscle as it protrudes from under the Gastrocnemius muscle, along the tibial border, is very sensitive to being struck with a knife hand angled 45° back at you.

Note: This is an extremely good target to strike to deflect a kick. Not only will you divert the kick but when they try to step back down on their leg you will get a moment where they have to fight the pain withdrawal reflex before they can use their leg. IF you are even moderately good it will be all the time you need.....

As I said earlier these are not even close to all the muscle areas you can attack but I have given you examples of almost all the different types of muscle attacks. Now that you understand the principles, I suggest you sit down with a good anatomy book and go to work. The effort will be worth while!

Never let your schooling interfere with your education.

More Neat Stuff?

In the earlier chapters, I identified the area of the solar plexus as a target area. I stated you should strike downward, too. Some of the feedback I received from Edition 1 indicated people felt I was indicating that a downward strike is the only viable direction for stimulation of nerve points. That is definitely not true! Anyone who has been struck in the solar plexus and has had trouble breathing and then seen what a downward strike will do will realize there are two separate and completely different effects which can be caused.

This is because there are two separate nerve plexae, which you can stimulate. The downward strike stimulates the deeper gastric plexus, while an upward strike stimulates the epigastric plexus. Stimulation of the epigastric plexus will temporarily paralyze the diaphragm, making breathing extremely difficult. Seldom, however, will they wind up on the ground (at least from that strike), however, with the downward strike your opponent frequently ends up on the ground with a deeper, less painful, but more confusing feeling in their abdomen. Which strike is best? It depends on what effect you want to cause.

For those interested, here are the angles and direction to produce the above mentioned strike plus a chest plexus area, which you can strike and produce reflex actions.

- 1) As above, strike the solar plexus, but this time, strike upward at a 45 degree angle. This is the same point many people know to strike, but here is a way to dramatically increase the effect: start the strike just to your opponent's left side of the solar plexus and angle the blow towards their right shoulder. The two angles will maximize the effect by causing the cardiac sphincter plexus of the stomach and the esophageal nerve plexus to be stimulated. The effect will be causing your opponent to have a great deal of difficulty in breathing for a period of time. This strike is best done with a knuckle fist.

2) Another “interesting” area to strike/stimulate is a bronchial plexus located in the upper right quadrant of the chest. The chest area just to your opponent’s right of the center line, one fist distance above the nipple line. Angle the blow towards your opponent’s right shoulder blade. This angle will stimulate some of the lung plexus and cause minor difficulty breathing plus a heavy uncomfortable feeling in the chest. It will also frequently send a smoker into a coughing fit. This plexus is located deep and is best stimulated with a hammer fist strike or Ji strike.

More On the Subject of the Knee and Kicking

For some reason, some of the people who read the section on knee strikes in the first edition, seemed to imply that I had listed all the major strikes to the knee. Of course not. In fact, I left out one very effective strike to the knee assuming that it was too obvious. From the feedback I have received, the only thing obvious was that my assumption was wrong. So here goes.

The knee can be attacked by fast snap kicks and push kicks to the front of the knee. The target is either the kneecap itself or the tendon located just below the patella. The patella is extremely painful when struck. It is also easy to break the patella, so be very careful. You can cause permanent damage! The other area just below the patella is the patellar tendon. Striking this area causes the tendon to be trapped against the front part of the tibia called the tibial plateau. This area is less likely to cause permanent damage, but will still cause significant pain. This does not by any means imply that such blows are risk free.

For those of you not familiar with the Chinese front kick, also called a push kick by some people, it is a kick done by striking with the heel instead of the toes. In order to do this kick, you have to raise your knee, retract your toes, and then strike forward with your heel. Do not try to keep your opposite knee locked as this will only make it harder to perform the kick. Instead, bend your opposite knee slightly as you kick forward. This will improve your balance and increase the amount

of power you can generate. For those not familiar with this type of kick, it may seem clumsy at first, but I can assure you that because it involves more of the major leg muscles, it is a dramatically more powerful kick than the front snap kick which relies on speed and momentum to cause it's effects. The push kick is very effective against the knee targets identified above and will not only cause the desired amount of pain, but will also deposit your opponent on the ground - immediately.

Another neat place

Talking about leg area, there is another location, which can be targeted on the lateral aspect of the leg, approximately three inches below the middle of the knee. This is the point where the soleus muscle (located just below and lateral to the gastrocnemius muscle) becomes prominent. Those familiar with poison points will recognize this place. This spot is special, however, for unlike most poison points, the muscle here is also trapped against bone, specifically the tibia. Therefore, when this point is struck, you will get an instantaneous pressure point effect, like any muscle edge struck correctly, plus the added later effect of a poison point. You should note that because of the configuration of muscles here, you can, not only attack the soleus muscle, but also attack the Tibialis Anticus muscle. This means, you can attack this point from the front, side, or the back. Attack this point at a 45 degree angle, driving the force downward through the tibia.

Protecting your face rule

One of the more damaging concepts which was attempted to be drilled into me when I was taking Tae Kwon Do had to do with keeping my back straight up (i.e. vertical to the floor), when I did my kicks.

- 1) I can still hear my instructor telling me to watch my posture and stand up straight when I did my kicks. Then he would come over and help me stretch my leg upwards, while my back was feeling like a pretzel and my groin area feeling like it was being torn apart. Well,

I did learn the ability to do my kicks that way but I quit doing that the second I quit Tae Kwon Do. The reason is simple. Keeping your head up looks great for tournaments. (The word “tournament” is a swear word in my vocabulary.)

However,

- 2) I do not teach a sport! I teach martial arts; a street style that places a lot of value on staying alive on the street. The fact of the matter is when you keep your head up, all you are doing is making it easier for someone to target your head. When someone is punching or kicking at you, the best thing you can do is to move out of the way.
- 3) Back to the kicks. When you do a side or spin kick, there is a natural tendency to move your head and neck in the direction away from the force of your kick, to bend your head back and downwards. Many people have learned through hours of practice to overcome this tendency, but the gist of this section is that doing that only puts you in greater danger.
- 4) If you do your kicks so that you allow your head and neck to move in that natural direction, away from the force of your kick, you will find that you will, not only kick higher with less effort, but also your face will be at a farther distance from your opponent. This agrees with Miller’s First Rule: You aren’t going to last very long if your face takes a significant blow. In all cases, defense comes first.
- 5) One thing is important, though. The concept of keeping your back straight was correct. And is even more so when you allow yourself to bend away from the kick you are delivering. By keeping your back straight you will not only be able to deliver force from all of your body into the kick and the force you absorb will be divided the same way. This is the best of both worlds as your opponent will take the maximum damage, your response time will be faster because you will not have to fight natural urges, and you will be subjecting yourself to as little shock per area as you can.

The Cross Step

Here is something from the Chinese side of Quan Li K’an. Want to know why Chinese stylist are always doing those fancy steps where they place one foot directly in front of the other or with one foot crossed over the other? Obviously in this stance the practitioner is off balance. While it may look pretty (or goofy depending on your definition), I can assure you of it’s functionality. The purpose of the move is to teach the practitioner to cross over the center line and step on their opponent’s foot on the OPPOSITE side of theirs.

The reason for this is profound and you should test it the first chance you get. Stand facing your opponent and step forward to step on their foot. If you step on the foot directly opposite of yours, very little will happen, except possibly they resent getting their foot trounced. Now step on the foot which is across the center line from yours. (For example, step on your opponent's right foot with your right foot.) When you do this you will notice an increase in the distance they pull back, even to the point where they pull themselves off balance.

For the final coup de grace, the bent knee, which you always see from the Chinese practitioners, means that you should bend your knee and tap their knee or upper leg outwards, away from the center line. This action will cause the body to twist and the knee to buckle. Do the technique correctly and you will find that the majority of energy you spend will be in picking your opponent off the ground for that is surely where they will wind up in short order.

DOING IT RIGHT

(Sweeping the floor?)

A friend of mine, who also runs a martial art school but of a different style had a student who was interested in cross training. To make a long story short the student wound up in my school for an evening of training.

Right up front I have to say he wasn't bad, not bad at all, for the rank he had. Unfortunately, he had a habit of making what I at least consider a fatal flaw.

When we got around to sparring practice, I matched him up with a student of equal rank. The two students were evenly matched until the visiting student tried to do a sweep. Pretty as a picture, he reached out and swept the leg of the student I had matched him with. Instead of going down, however, my student, merely lifted his swept leg and proceeded to reverse round house kick him in the chest. Unconvinced of



what had happened, the visiting student twice more tried to do a sweep and wound up both times, on the receiving end of a kick for his efforts.

The next student he happened to spar with was my assistant instructor. When he again made the inevitable sweep attempt, she merely stepped inside the curve of his sweep, did a spin side kick and a back knuckle combination which luckily she had enough control to stop just before it took out his throat.

While the look of terror was fading from the visiting student's face, I called a halt to the sparring and pulled him aside to give him some pointers. The biggest mistake he was making was in the fact that during his sweeps he was sweeping only the front foot. The fact is that there are many different styles out there, which practice sweeps. If they are against a style, which places more than 35% of their weight of their front leg, the front leg sweeps will most likely cause their opponent to fall.

If however, you are against someone from a style which places less than 35% of their weight on the front leg, then you had better concentrate on sweeping the back leg lest you wind up in more trouble than you can imagine. Also, many styles train their practitioners to step into a sweep. This not only nullifies the sweep but places them in a position to attack the person attempting the sweep while they are still trying to recover from the sweep attempt.

Another fact that you might consider is that if you do attempt to sweep the back leg, then you must realize that it takes a lot more force to accomplish this than it takes to sweep the front leg. The reason for this is the amount of weight, and balance, which is placed on the back leg. The best points to strike when you are attempting a back leg sweep are at the dorsal distal leg, at the Achilles tendon and at the dorsal aspect of the medial knee.

One last point to consider: there are some styles, which have trained to work out of stances which are almost impossible to sweep. The reason these styles are so hard to sweep is not based on foot position or stance, but on distribution of the weight on the foot. Most people place the majority of their weight on ball or the heel their foot.

Spreading that weight out, evenly over the entire foot, increases the stability dramatically! And makes sweeping extremely difficult. The best way to sweep people trained like this is to cause them to move off their well-set balance; preferably by stimulating a pressure point.

God heals, and the doctor takes the fee.

Benjamin Franklin

NON-RESPONDERS

This section is about why nerve attacks do not always work the way articles and books say they should. There are a certain percentage of people on whom nerve point strikes do not work. No matter how hard you twist, bend or pound, 1 to 3 % of the general population will not feel any pain. There are also a slightly larger percentage (2 to 5 %) who will not feel the degree of pain the normal person feels. They may feel a small amount of pain or a tickle but they aren't going to be slowed down by normal strikes. The actual percentage of people who will not respond "correctly" to the correct strike technique is some where between 3 and 10 % of the population as a whole.

Now, just because nerve strikes do not work on these people does not mean that the theory is invalid. In fact, it is these people who lead credence to the fact that nerve pain can be explained because of known medical physiology. And, to the best of my knowledge, there is no explanation why some people do not respond in the Chi concept.

The following reasons are well-documented medical explanations why a person may not feel the normal amount of pain at a specific point.

- 1) There is a well known standard variation in nerve locations, density of stretch receptors, and pain thresholds which occur between people. In short, everybody is a little different in some way or the other. If that difference is in the way we feel pain or the sensitivity of stretch receptors, then that person is not going to feel the normal amount of pain because their nerves are not in exactly the place we expect them to be.
- 2) Some people have an increase in the amount of protective fat padding around their nerves. Normally, every person has some fat padding around the nerves of their body. This special fat is there to protect the nerve from trauma. If it is increased, it will do an even better job

of protection, and that person will feel even less pain than normal. However, by the time you apply enough pressure for these people to feel the pain, you are already compressing the nerve sufficiently to be causing significant damage.

Note: Older people tend to lose this natural protective fat padding with age. Therefore, they are more susceptible to damage. Also, the younger the person, the more likely they are to have a larger protective fat coating around their nerves. Diabetics tend to have an increased amount of fat padding around their nerves because of the nature of their disease.

3) There is a definite difference in pain threshold between people. Whether this is due to just mental condition, physical condition or both is a subject for debate. The fact that this difference exists is well established. Note that I do not mean the amount of pain a person can ignore, but the actual amount of pain, everything else being equal, that the person must feel before they even notice that they are in pain.

These are some of the main reasons why there is a difference in effectiveness in strike points between people. Please note that I am not saying that nerve attacks do not work. In the majority of cases they work great, but in some cases there are certain people who do not feel the pain.

These non-responding people are not off the hook, however. In fact, in a lot of ways they are in much more danger than the person who does feel pain. This is because the force of the blow or torque to the specific point will cause more damage to these non-responders than it will to the “normal” person. The reason for this is because they are not feeling pain. Normally when we experience pain we attempt to move our body in ways that decrease the pain. Obvious. What we are really doing, however, is moving our body in such a way that we are decreasing the damage to the affected area. When we feel pain at a joint because someone is torquing on it, we move our entire body as quickly as possible in the direction, which decreases that pressure, thus decreasing the damage. The same is true when we apply pressure to a nerve point. Again, the body moves to decrease the damage.

While it is true that these sudden reflex moves can occasionally get us into more trouble than they get us out of, biology has decided that, over-all; they help more than hurt, so we are stuck with them. When a person does not have these reflexes, however, they will not move their body in any direction to lessen the pressure on a point unless the force of the strike causes them to move. By that time it is too late and they have encountered the full brunt of the force and sustained the maximum damage.

Therefore, a word of warning. If you run into one of these people in your practice sessions, do not keep increasing the force of your strikes or continue to dig to find a point. If you feel certain that you are on the correct point but the person does not respond, it may be because of the above. Get your instructor to check out the circumstances. Do not just keep hitting or twisting on the person. You may cause permanent nerve damage, which may not show up until later!!

Neck

Neck Attacks

One point, which I need to clarify from Edition 1, is in the area of attacks to muscles and nerve points of the neck. Earlier (in this edition) I identified several points on the neck, which can be attacked. Some of the feedback I received showed that while people recognized these points were definitely there, they were not able to use these points for much more than causing their opponent to release a hold or move back a step or two. While these results are somewhat useful in and by themselves, the fact is that if that is all the results you get, you are missing the most useful aspect of neck attacks: control of your opponent's balance.

The fact is that the neck is the second most powerful part of the body to affect in terms of controlling balance. Only moving the head has more profound effects on a person balance.

So, if we are trying to use these points to affect our opponent's balance, how do we do that? The secret of using neck points to cause changes in balance is twofold:

- 1) Stimulate points on the opposite side of the centerline; and
- 2) Push or pull on those points towards the centerline. Please note that by stimulate here I do not mean you have to hit. In fact while I identified neck points which could be struck earlier in this book the fact is, simple pressure from a well placed finger tip can be more effective than a hit.

This means that if you are going to use your right hand to stimulate a muscle or nerve point, that point should be (for maximum effect) on your opponent's right side of the neck. If you practice this

technique, you will see that you have two methods to get to your opponent's right side - from the front or the back. While both work well if done correctly, I personally like stimulating the points by coming from behind as this technique causes increased effects. Therefore, I would wrap my attacking hand/forearm around the back of my opponent's neck and then attack those points.

The second point was to push or pull these points towards the centerline. This is a crucial point. The fact is, you can definitely affect your opponent's balance by pushing up or

down on these
matter is you usually
opponent's balance
can recover quickly.
take control of your
it should be your
more destructive
just trying to hurt
best way to
opponent's
their weight across t
movement a tendenc
attacking neck points from behind, and you will create a quick loss



points, but the truth of the
will not affect you
beyond the point where they
The goal of a neck attack is to
opponent's balance (at least
goal. There are by far
techniques if you are
your opponent). The
unsettle your
balance is to move
centerline. Add to that
them to turn backwards caused by