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Theory of Power

Reaction Force

This is what is felt when you are on a seesaw with someone. You are on the end that is up in the air and the other person is on the end that is on the ground.

When the other person gets off, your end falls to the ground and you hit hard.

This is what is known as *reaction force*. Another reaction force is your own. When you punch with the right fist and pull your left fist back to your hip, this adds force to your punch.

Concentration

By applying the impact onto the smallest target area, it will concentrate the force and therefore increase its effect. For example, the force of water coming out a water hose is greater if the opening is smaller than if it is larger. To how you the opposite of centering your power, if a man was walking on snow in snow shoes his weight is spread out and he hardly makes any prints in the snow. The blows in taekwondo are often centered onto the edge of the open palm or to the crook of the fingers.

Another type of concentration is in your mind, you need to think about your forms and all movements done in taekwondo. Putting both of these types of concentration together gives you the best power to defend yourself.

Equilibrium (Balance)

Balance is very important in any type of sport. In taekwondo it needs special consideration. By keeping your body balanced, a blow is more effective and deadly. However, if your stance is unbalanced someone can easily knock you down. Flexibility and knee spring are also important in maintaining balance for both a quick attack and instant recovery. One additional point, the heel of the rear foot, should never be off the ground at the point of impact. This is not only necessary for good balance but also to produce maximum power at the point of impact.



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Breath Control

Controlled breathing not only affects one's stamina but can also condition a body to receive a blow and increase the power of a blow directed against an opponent. With practiced breathing, if you stop exhaling at the critical moment that a blow is received against a pressure point on your body, this can prevent a loss of consciousness and reduce the pain. Whenever you are delivering a blow to anyone, remember to exhale. This will tighten your stomach muscles and help in throwing a powerful blow. If you inhale slowly before your next movement, this will help you get ready.

An important rule to remember: never inhale while delivering a block or blow against anyone. This will slow down your movement and you'll have less power. It is like blowing out a candle. You have more air to blow that candle out if you take a deep breath and blow.

You should also practice disguised breathing to hide any signs of being tired. An experienced fighter will always fight harder when he knows his opponent is tired.

Speed

Speed is the most essential factor of force. You can pass a flat hand through the flame of a candle and it will not go out. The candle however can be put out with a controlled punch or kick stopping within an inch of the flame due to the speed with which it's delivered.

Reaction force, breath control, looseness, relaxation of muscles and concentration cannot be ignored. However, these are the factors that contribute to speed and all these factors must be coordinated to attain maximum efficiency.

Mass

This is the weight of the body along with the speed that is present when you deliver a blow. The most body weight is applied when you twist at the hip. For example, if you are throwing a punch and twist at the waist into the punch, there is more power than if you just stand still and punch. If you are blocking a movement or throwing a blow you need to twist into it for the most power.