



## The Relation Smoking, Breathing, Glycemia and the Rate of the Metabolism that Reveals the Effective Way of Controlling Body Weight and Glycemia

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### Abstract

Smokers inhale nicotine and many other chemicals in the cigarettes which increase the metabolism in the body because of smoking speeds up the metabolism, so the body burns calories at a faster rate. When people stop smoking, they actually need fewer calories so they will put on weight when they quit. But why smoker does not have the feeling of hunger as when they quit smoking. When they smoke, they consume a lot of energy and do not have the feeling of hunger; the paradox is then they quit smoking, their body consumes less energy but they do have more the feeling of hunger than when they smoke. People suggest smoking can suppress the appetite to answer this paradox is wrong because many smokers still have a good appetite. Teachings the breathing in Qi Gong, I find that it is in the mechanism of deep breathing via the mouth can increase the mobilizing glucose from the body into the bloodstream. We do know that the level of glucose in the body has a relation to the feeling of hunger. This review will give you a deeper view of this relation.

**Keywords:** Smoking; Quit Smoking; The Rate of Metabolism; Appetite; The Feeling of Hunger; Glycemia; Body Weight; Smoker; Weight Control; Qi Gong; Hypoglycemia; Breathing

### Bodyweight, smoking, feeling of hunger and glycemia

On average, people gain 5kg in the year after they stop smoking. (Heavy Smokers More Likely to Gain Weight When They Quit - Written by Brian Krans on August 21, 2013) [8,21].

Weight gain is a common concern for people who are thinking about quitting smoking, even smoking consumer more energy of the body, but the people who smoke do not have much feeling of hunger compared to when they quitting smoke. People quit smoking consume less energy but they have more feeling of hunger and start to gain weight even they are on the same diet [3,10,20,27,31,35,43].

We do know that the feeling of hunger depends on the level of glucose in the bloodstream. When people have a high level of glu-

cose in the body, they do not have a feeling of hunger or tired. But when they have a low level of glucose in the body, they start to feel hungry and tired. Before meals, if we let kids eat candy instead of vegetables, the kids will eat less because of the feeling of hunger reduced.

People with diabetes will have the feeling of hunger, tired or even cold sweating when it is late for the meal. This feeling is the feeling of hypoglycemia, it makes the feeling hunger and wants to eat food immediately. If the meals are not ready, they can eat some candy to reduce these feelings substantially. Cold sweating, trembling, tired and feeling of hunger are the indicators that the level of glucose in the body reduced below the normal level [3,10,20,27].

All metabolize of the body need energy from glucose, so the cells and organs of the body start to work poorly when the level of glucose in the bloodstream is below to the normal level.

Blood pressure (BP) is the pressure of circulating blood on the walls of blood vessels. Most of this pressure is due to work is done by the heart by pumping blood through the circulatory system. Used without further specification, "blood pressure" usually refers to the pressure in large arteries of the systemic circulation. Blood pressure is usually expressed in terms of the systolic pressure (maximum during one heartbeat) over diastolic pressure (minimum in between two heartbeats) and is measured in millimeters of mercury (mmHg), above the surrounding atmospheric pressure. Reading the diastolic pressure can let us know the level of glucose,

triglycerides, and cholesterol in the body. To some extent, the changing of diastolic pressure of a person around the average number of that person has a direct relation to the changing of glucose in the body [5,42,50].

**Most of the symptoms have the relation to the hypoglycemia**

Hypoglycemic symptoms can be divided into those produced by the counterregulatory hormones (epinephrine/adrenaline and glucagon) triggered by the falling glucose, and the neuroglycopenic effects produced by reduced brain sugar. For a long time, we only afraid of hyperglycemia and forget that hypoglycemia may be much more dangerous than hyperglycemia. The diabetic patients usually have the feeling of hypoglycemia when they are late for meals [1,24].

Produced by the counterregulatory hormones	Central nervous system	
Shakiness, anxiety, nervousness	Abnormal thinking, impaired judgment	Difficulty speaking, slurred speech
Palpitations, tachycardia	Nonspecific dysphoria, moodiness, depression, crying, exaggerated concerns	Ataxia, incoordination, sometimes mistaken for drunkenness
Sweating	Feeling of numbness, pins and needles (paresthesia)	Focal or general motor deficit, paralysis, hemiparesis
Pallor, coldness, clamminess	Negativism, irritability, belligerence, combativeness, rage	Headache
Dilated pupils (mydriasis)	Personality change, emotional lability	Stupor, coma, abnormal breathing
Hunger, borborygmus	Fatigue, weakness, apathy, lethargy, day-dreaming, sleep	Generalized or focal seizures
Nausea, vomiting, abdominal discomfort	Confusion, memory loss, lightheadedness or dizziness, delirium	Abnormal thinking, impaired judgment
Headache	Staring, glassy look, blurred vision, double vision	Nonspecific dysphoria, moodiness, depression, crying, exaggerated concerns
	Flashes of light in the field of vision	Feeling of numbness, pins and needles (paresthesia)
	Automatic behavior, also known as automatism	Negativism, irritability, belligerence, combativeness, rage

**Table 1:** The signs and the effects of hypoglycemia [1,2,4,7,16].

Hypoglycemia is also found in many people with hypothermia, as hypothermia, may be a result of hypoglycemia. The distribution of temperature in the body will lead us to know where the cells may suffer hypoglycemia and low temperature. The level of sugar in the blood is like the level of supplying energy for the billions of cells and organs function normally. Body temperature is also main-

tained by the function of the body cells. The whole body is a big biologic machine that all of the activities of the cells in the body are belong to the energy supplied by the reaction that control by enzymes and these enzymes are very sensitive to the changing of the temperature [12].

Mild	Moderate	Severe
With sympathetic nervous system excitation.	Mental status changes such as amnesia.	As the temperature decreases, further physiological systems falter and heart rate, respiratory rate, and blood pressure all decrease.
Shivering,	Confusion,	No shivering,
High blood pressure,	Slurred speech,	Cold,
Fast heart rate,	Decreased reflexes,	Inflamed skin,
Fast respiratory rate,	Loss of fine motor skills.	Hallucinations,
Contraction of blood vessels	Mental status changes such as amnesia,	Lack of reflexes,
Increased urine production due to cold,		Fixed dilated pupils,
Mental confusion,		Low blood pressure,
Liver dysfunction may also be present.		Pulmonary edema.
		Pulse and respiration rates decrease significantly,
		Fast heart rates (ventricular tachycardia, atrial fibrillation) can also occur.

**Table 2:** The signs and the effects of hypothermia [1,9,12,16-18,23,24,26,28,29,34,3649].

**The facts of hypotension**

We do know that Blood pressure is the vital signs, but for a long time we only afraid of hypertension, we skip the dangerous of hypotension. By observing, the healthy people only have the feeling of dizziness or vertigo when they have hypotension or hypoglycemia.

Signs, symptoms and associated with certain symptoms.

The signs and the effects of hypotension
· Lightheadedness or dizziness.
· If the blood pressure is sufficiently low, fainting may occur.
· Chest pain
· Shortness of breath
· Irregular heartbeat
· Fever higher than 38.3 °C (101 °F)
· Headache
· Stiff neck
· Severe upper back pain
· Cough with sputum
· Prolonged diarrhea or vomiting
· Dyspepsia (indigestion)
· Dysuria (painful urination)
· Acute, life-threatening allergic reaction
· Seizures
· Loss of consciousness
· Profound fatigue
· Temporary blurring or loss of vision
· Black tarry stools

**Table 3:** The signs and the effects of hypotension [16-18,29,32,33,36].

**Effect of breathings on the glycemia in Khi Cong Y Dao Vietnam**

Respiration therapy in Khi Cong Y Dao Vietnam, an alternative form of health exercise founded by Master Do Duc Ngoc in 1980, Master Do is widely respected by many people for his expert knowledge of the ancient Eastern concept “Qi” or “Chi” energy. At its core, Khi Cong Y Dao Vietnam combines the idea of Chi energy with simple, specific physical exercises, which is able to stimulate the body to repair damage and regenerate itself.

Before the test, we check the blood pressure: systolic pressure/diastolic pressure. Then during the breathing, we check the blood pressure regularly and when the participants said they have some strange feeling that they do not have before taking the breathing test. You can do for yourself to compare the signs of the table below. Note that you should have a glass of sugar juice next to you to drink when you have strange signs because it is the signs caused by hypoglycemia when you blow out:

- Blow out quickly, strongly and deeply by mouth
- Blow out slowly, gently and deeply by mouth

By practicing and recording the signs, I see that blowing out will reduce the glycemia. If we blow out quickly and strongly, we will reduce the level of glucose in the bloodstream quickly and we will soon have the signs of hypoglycemia after 5 minutes of practicing. Our participants who had high blood pressure just blowing out strongly by mouth in five minutes had systolic pressure reduced 10 mmHg.

Breathings by mouth	Changes inside the body	Glycemia during the breathing	Blood pressure during breathing	Hypoglycemia
Group one: blow out quickly, strongly and deeply by mouth	Burn out glucose quickly so that people started to yawn and the feeling of vertigo, dizziness, and the pain, stiffness, and numbness, in the face and body's parts after five or ten minutes of practicing.  If they have back pain and neck pain before, their pain will become severer when taking deep and fast breathing in and out	Glucose in the blood reduce quickly	Systolic pressure reduced substantially and diastolic pressure reduced substantially.	Most of the signs in the body were be clear by a glass of sugar juice.  The more severe of the symptoms, the more sugar juice they need to take to clear it out

**Table 4:** Experiments of quick, strong and deep breathing in respiration therapy [39,40].

Breathings by mouth	Changes inside the body	Glycemia during the breathing	Blood pressure during breathing	Hypoglycemia
Group two: blow out slowly, gently and deeply by mouth	Burn out glucose slowly so that after five or ten minutes, they do not have as many signs as group one. These people only started to yawn and the feeling of vertigo, dizziness, and the pain, stiffness, and numbness, in the face and body's parts after ten or twenty minutes of practicing.	Glucose in the blood reduce slowly, and it was reduced substantially when participants start to have a strange feeling	Systolic pressure and diastolic pressure reduce slowly, and it was reduced substantially when participants start to have the strange feeling	Only some participants need to take sugar juice to clear out the strange signs.

**Table 5:** Experiments of slow, gentle and deep breathing in respiration therapy [37-40].

If we blow out slowly and deeply, we will not have signs of hypoglycemia after 5 minutes of practicing. This kind of breathing is similar to breathing in smoking. During smoking time: people start to breathe in deeply and slowly by mouth. Breath The participants taking a breath by mouth slowly and deeply for 20 minutes can reduce both systolic pressure and diastolic pressure substantially, and their glycemia also reduced. Some participants had a feeling of reducing glucose level in the blood like yawning and the feeling of vertigo, dizziness, and the pain, stiffness, and numbness, in the face and body's parts. I confirm these feelings appeared caused by reducing glucose level in the bloodstream because all of these feelings had been cleared out immediately just by taking a glass of sugar juice. These are the simple experiments that you can do by yourself [39,40].

The differences in the experiment of breathing out slowly and breathing quickly make me think that breathing slowly and deeply by mouth can help to mobilize the glycogen and lipids in the sto-

mach and liver into the bloodstream so that the participants did not have the feeling of hunger, did not reduce glucose in the blood and did not have to reduce blood pressure compared to the group taking breathing deeply and quickly. Smoking is also a proof for this kind of breath by mouth. Because smoking increases metabolism so that the smokers do not gain bodyweight, but the smokers do not have the feeling of hunger because each deep breathtaking in by mouth, help to mobilize the glycogen and lipids in the organs in the stomach and the liver into the bloodstream. The glucose mobilized by the deep breathing is more than the glucose consumed by nicotine in the cigarette so that they do not feel hunger. On the other hand, people who quit smoking will quit the habit of breathing deeply and slowly by mouth which makes them do not create chances to mobilize the glycogen and lipids in the organs in the stomach and the liver into the bloodstream so that the glucose in the bloodstream is low enough to create the feeling of hunger even they consume less energy than before. Just by taking a deep and slow breath by mouth several times a day can not only make the people quit smoking do

not have the feeling of hunger but also increase the metabolism of the body so that they do not gain weight after quit smoking.

These kinds of breathing can be done by you and all other participants so that you can self prove the signs, symptoms, and applications? As a pharmacist and a trainer of respiration therapy in Qi Cong Y Dao Viet Nam, I see the immense application of the breathing in controlling glucose level and many metabolic diseases that we are facing [36-40].

### Conclusion

By joining hand together, we can connect modern medicine and traditional therapy, alternative therapy to help millions of people to have better health effectively, naturally and cheaply. The indicators that can be tested by machines like blood pressure and glycemia are the firsts bridge to connect modern therapy and traditional therapy. Blood pressure and glucose in the blood are also the indicators that apply cheaply test whether or not any therapy using is suitable.

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