# How insulin works

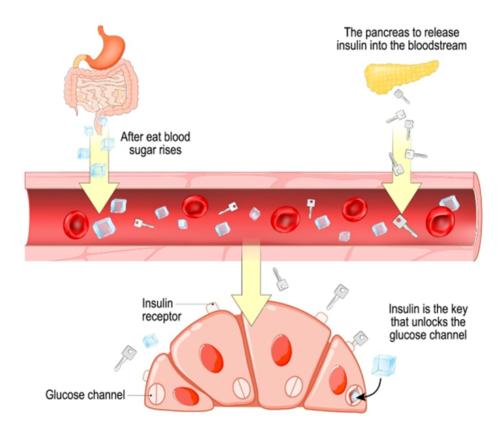


Figure 1.2 How insulin works

#### ■ 1.3 How insulin works

It is necessary to consider diabetes countermeasures, which have relied solely on insulin, from a new perspective in light of the drastically changing lifestyle characteristics of modern people. We have entered an era in which we are considering the improvement of hyperglycemia from various aspects, including the insulin efficacy on glucagon's activity. From the history of human metabolism, this hormone function is prone to hyperglycemia. It is not your fault, but inevitably it works on the high glycemic side rather than the hypoglycemic side. And the danger is not diabetes itself, but persistence of

cells resist the absorption of blood sugar. There are cases where blood sugar does not decrease from the blood due to insulin resistance. Such symptoms are called type II diabetes. Type I and type II can be said to be completely different types of diabetes even if they are the same.

This book mainly deals with type II diabetes. At first it should not have been diabetes. It refers to a person who develops type II diabetes due to lifestyle. Type II diabetes tends to increase year by year, especially in developed countries. It is said that there are a huge number of patients including the preliminary group. Why can't people with type II diabetes be treated and reduced? In modern society, the fact that the number of diabetic patients does not decrease while medical science has developed so much and there are many clinics and hospitals has become a major social problem. Why is the number of people with diabetes not decreasing? Is there a more effective way? In this book, we aim to be of some help to many people with diabetes. I hope that potential reservists, as well, will work positively on this book.



Now, let's talk about the changes in diabetes efforts that we talked about in the previous chapter in the next chapter. Briefly describe the process of work of autophagy. See Figure 5.1.

- 1, Autophagy begins to form a double curtain around the mitochondria.
- 2, This bag is called an autophagosome, and it is completed within a few minutes to 10 minutes.
- 3, Lysosomes are fused with degrading enzymes and autophagosomes.
- 4, These are called autolysosomes and perform the degradation and recycling of cellular components.

# **AUTOPHAGY**

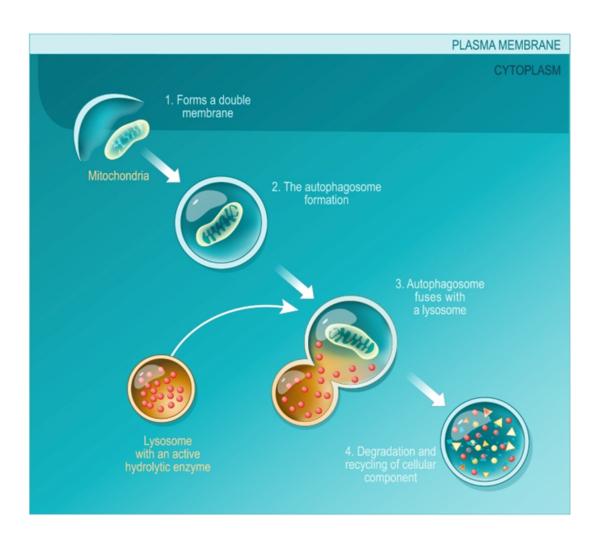


Figure 5.1 How autophagy works

### ■ 10.3 Hand massage

#### 1. What is a reflection zone?

There is a way to improve blood sugar levels by pressing the pressure points in the palm of your hand several times a day. If you look at the figure below, the reflex zones of the six organs related to diabetes are clearly stated. The reflex zone means that the position of the internal organs is reflected in the palm of the hand. There are also reflex zones on the soles of the feet, but there is a slight difference between the left and right hands. The liver, for example, is in the right hand and not in the left. The spleen is located in the left hand, and not in the right. The pancreas, kidneys, adrenal glands and thyroid gland are located in both hands. For the roles of each institution, please refer to item 4.

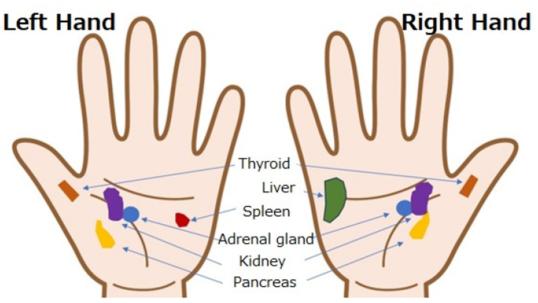


Figure 10.2 Palm reflex zone

and your lower belly is dented, hold your breath for 3 to 4 seconds. And again, breathe in through the nose.

#### 5, Repetition of abdominal breathing

Repeat abdominal breathing for about 2 minutes in the above procedure. Repeat slowly.



Figure 12.2 Repetition of abdominal breathing

#### 1-2. Tanden Method

Kneading the Tanden (there is a place called the Tanden under the navel of the belly)

In order to train your Tanden, place your hands on it. The place is about 5 cm (3 fingers) below the navel. There is no place called Tanden in the body part. But focus on this place, 5 cm below the navel. Specifically, when you breathe in through your nose, make sure with your hands that your stomach swells around your Tanden.

As you exhale, your diaphragm lifts your lungs and your stomach becomes dented. However, this Tanden part is shaped so that it is pushed by abdominal pressure without making a complete dent. Be aware that there is such a part. When you exhale, your diaphragm goes up. However, be aware of the contradictory movement of pressing the Tanden part with



Figure 12.5 Stretch to raise your arms from the front

Do this for 4 sets for about  $2\sim3$  minutes.

#### 1 – 5. Banzai stretch from the side

- ① 1, Slowly raise your hands from the side from the bottom to the top.

  At that time, inhale heavily through your nose.
- ② When you have finished inhaling, stand still for 10 seconds.
- ③ Slowly lower your hands to the side while exhaling through your mouth.
- 4 Hold your hands down for about 15 seconds while you exhale sufficiently.
- ⑤ Then, as you breathe in through your nose, slowly raise your hands to the sides and hurry up.

Do this for 4 sets for about  $2\sim3$  minutes.



Figure 12.6 Stretch to raise your arms from the sides

is very important. If you go to bed immediately after eating dinner, fat will easily stick to your body.

•2-1 Autophagy without dinner

•2-2 Autophagy without breakfast

•2-1 Autophagy without dinner						●2-2 Autophagy without breakfast						
Standar d time	Summer time	Sun	Circadian Rhythm	Program	Autophagy		Standar d time	Summe r time	Sun	Circadian Rhythm	Program	Autophagy
5:00	6:00	Sunrise	Wake up	Hydration Sungassing 15	17.5	П	5:00	6:00	Sunrise	Wake up	Hydration Sungassing 15	
5:30	6:30		breakfast 30			$  \  $	5:30	6:30			Abdominal breathing 5	12
6:00	7:00			Healthy walking 15		$  \  $	6:00	7:00		Snacks	Salad and oil	13
7:00	8:00			hydration		Ш	7:00	8:00			Hydration	14
8:00	9:00					П	8:00	9:00				15
9:00	10:00			abdominal breathing 5		Ш	9:00	10:00			Abdominal breathing 5	16
10:00	11:00			hydration		Ш	10:00	11:00			Hydration	17
11:00	12:00		Lunch 30			$  \  $	11:00	12:00		Lunch 30		
11:30	12:30			Healthy walking 20		Ш	11:30	12:30			Healthy walking 20	
12:00	13:00		Autophagy	hydration	1	П	12:00	13:00			Hydration	
13:00	14:00				2	Ш	13:00	14:00				
14:00	15:00			Abdominal breathing 5	3	Ш	14:00	15:00			Abdominal breathing 5	
15:00	16:00				4	Ш	15:00	16:00				
16:00	17:00			hydration	5	Ш	16:00	17:00			Hydration	
17:00	18:00		Snacks	Salad and oil	6	Ш	17:00	18:00		Dinner		
17:30	18:30			Abdominal breathing 5		Ш	17:30	18:30			Healthy walking 20	
18:00	19:00			(Nonkafein)	7	Ш	18:00	19:00		Autophagy	(Nonkafein)	1
19:00	20:00				8	Ш	19:00	20:00				2
20:00	21:00	Sunset			9	П	20:00	21:00	Sunset			3
21:00	22:00		Going to bed		10	Ш	21:00	22:00		Going to bed		4
22:00	23:00				11	П	22:00	23:00				5
23:00	0:00				12		23:00	0:00				6
0:00	1:00				13		0:00	1:00				7
1:00	2:00				14		1:00	2:00				8
2:00	3:00				15		2:00	3:00				9
3:00	4:00				16		3:00	4:00				10
4:00	5:00				17		4:00	5:00				11
5:00	6:00	Sunrise	Wake up	Hydration Sungassing 15	17.5		5:00	6:00	Sunrise	Wake up	Hydration Sungassing 15	12

Figure 13.3 Schedule 2-1&2-2 Summer in the Southern and Northern Hemispheres

Ms. Betty is in the second ketogenic phase, with 50g of carbohydrates in the morning and 30g in the afternoon. Proteins account for 20% of the total, and lipids account for 30%. MCT oil is 8g in the morning and 28g in the afternoon. You need to get a lot of fiber, so supplement it with MCT oil and salad instead of dinner. MCT oil should be 8 g in the morning, 12 g in the afternoon, and 16 g at night, for a total of 36 g. Dietary fiber (salad) can be divided into 10 g in the morning, 18 g in the afternoon and 18 g at night. The daily calorie consumption is 1918 kcal compared to 2180 kcal. BMC is 1646kcl, so there is still a lot of room to spare. The difference in carbohydrate restriction makes it a diet of 262 kcal. Take a dinner replenishment of MCT oil and salad to replenish calories. As the weight

Table 2 Ms. Betty: (BMC) : 1646kcal, (CI) : 2255kcal→2180kcal

Nutrient intake ratio in total	Nutrient Name	Nutrient intake ratio at Breakfast	Nutrient intake at Breakfast	Nutrient intake ratio at Lunch	Nutrient intake at Lunch	Unit	Total
20.0%	Proteins	45% 9.0%		55%	11.0%	%	20.0%
14.7%	Carbohydrate	63% 9.2%		38%	5.5%	%	14.7%
8.3%	Dietary fiber	50% 4.2%		50%	4.2%	%	8.3%
30.0%	Fats	40%	12.0%	60%	18.0%	%	30.0%
15.0%	MCT Oil	22%	3.3%	78%	11.7%	%	15.0%
Total	Balance	Breakfast	37.6%	Lunch	50.4%	0.4% %	
Name		Ms. Betty		Daily calo	2,180		
No.	Nutrient Name	Breakfast g Breakfast kcal		Lunch g	Lunch keal	Total g	Total kcal
1	Proteins	49	196	60	240	109	436
2	Carbohydrate	50	200	30	120	80	320
2	Dietary fiber	23	90	23	90	45	181
3	Fats	29	262	44	392	73	654
	MCT Oil	8	72	28	255	36	327
Tota	al keal	159	820	185	1,098	343	1,918

gradually decreases, the BMC and CI values also decrease, so the kcal of nutritional intake also changes and decreases.



# 15. Appendix - 01

## ■15.1 Introduction to Healthy Tea

1, Mulberry leaf tea <a href="https://welovekitty.net">https://welovekitty.net</a>

Mulberry leaf tea is expected to prevent and improve diabetes and have a dieting effect. The DNJ (deoxy nojirimycin) component contained in mulberry leaves is said to be effective in preventing diabetes by suppressing sugar absorption. There is no caffeine in it.

2, Guava tea <a href="https://welovekitty.net">https://welovekitty.net</a>

Herbal tea made from guava leaves. It is rich in creatinine tannins, which in addition to suppressing inflammation such as allergic dermatitis and hay fever, it is said to control blood sugar levels and have a dieting effect. There is no caffeine in it.



●Mulberry Tea



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