認識低血糖的原因及
症狀，都能幫助你在
病發前作好準備，並
病後發生時懂得如何
應付。

低血糖
如何應付血糖過低

血糖過低的一般事實
對糖尿病患者來說，血糖過低並非少見。最近估計，在
四十年的時期內，1型糖尿病患者平均產生大約2000至
4000次血糖過低發作。雖然血糖過低發生於接受胰島素
治療的患者中，它也可發生在接受口服低血糖藥SULFO-
NYLUREA (例如：glyburide, glipizide) 的病人中。

原因
產生血糖過低有不同的原因。最常見的原因：或許是餐
飲的時間延遲，或未食或所吃進的東西比平常少，或超
過正常運動量。低血糖可發生於特別緊張的運動當時或
長達36小時之後。

接受過多的胰島素或口服的血糖過低藥片，或者在接受
胰島素 (或口服藥) 與進食之間相距的時間太長，都會
導致血糖過低。最後，用酒精飲料也可以產生血糖過
低。尤其在「空肚子」的時候飲酒，更加如此。
覺得「怪怪」嗎?
這可能是你需要檢查你的血糖量的徵兆。

症狀
血糖過低的症狀多種多樣。對同一個病人而言，在過了不同的時間以後，症狀也可以不同。常見症狀包括：

- 顫抖
- 出汗
- 噁心
- 飢餓感
- 心跳加快

其它症狀常常（但非總是）在以後才發生的，包括：

- 視力模糊
- 糊塗
- 疲勞
- 焦慮

有些患者失去了辨識症狀的能力，稱為「血糖過低渾然不知」。我們知道，有些患者患糖尿病已十年以上，因為神經病理損害（神經纖維損害）的原因，卻不能辨識自己的血糖過低症狀。我們現在開始意識到患有糖尿病低渾然不知者比我們原來所認為的要多：尤其在試圖把血糖量保持在正常水平的患者中特別常見，何以會如此的原因並不清楚。所以，如果你和你的醫師決定要加強血糖水平的控制，每天測測血糖水平是非常重要的，它會減少你的低血糖發作。

如果你有不舒服感覺，或是覺得「怪怪」的，測查血糖水平是非常重要的，因為你的這種「怪怪」的感覺，可能是因為血糖水平下降所引起的。如果當時沒有測血糖計，最好的策略就是把你自己當成血糖過低來治療。
症狀（續上頁）

血糖過低的最好治療是吃進10至15克簡單的碳水化合物，例如兩、三顆葡萄糖片，六至十片LIFESAVER，或者大約六盎司水果汁。血糖過低的症狀通常在約十分鐘內得到改善。但是如果上述症狀十五分鐘之內不見改善，就要重複上述治療。

在上述急性治療之後，繼以吃進作用時間長的食物是非常重要的。如果血糖過低發生在下一餐飯之前一個小時，立即處理後繼續進食正常的餐飲已經足夠。但是，如果血糖過低發生在下一餐飯之前一個小時以上，或發生在夜間，應進吃一點蛋白質的食物，例如一杯牛奶或半個三明治。

血糖過低的治療過度，對糖尿並患者來說，是一個難題。患者常常期望在治療後馬上要覺得好些，但是如果吃富含脂肪的食物（冰淇淋、糖果、甜點等等）它們會延遲葡萄糖的吸收，減慢血糖回升的時間。富含脂肪的食物是容易吃得過多的。這些多餘的熱卡會使體重增加，它反過來對總的身體健康和血糖控制是不利的。

如果你經歷嚴重的血糖過低，你將需要另外一個人協助，例如妻子（或丈夫），父母親或同事幫助你治療你的血糖過低。這種嚴重的血糖過低可能會導致極度體力和精神的遲鈍、糊塗，甚至發生痙攣。這種情況最好以注射藥物GLUCAGON治療，它很快地提升你的血糖水平。你周圍的人需要學會怎樣作這種簡單的注射。
作好萬一的準備

所有以藥物治療來降低血糖水平的患者，都應當隨身準備好能迅速提供葡萄糖的食物，以備不時之需。葡萄糖或LIFE SAVER容易裝在口袋或皮包內。我們建議我們所有的患者掛一個醫療警告圈，說明你有糖尿病。我們也會為你準備一個卡片，放在口袋或皮包內，在你萬一發生緊急情況時，它可以使人知道你的醫生是誰。

我的低血糖徵兆／症狀是：

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

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______________________________________________________________________

開車

血糖過低如果發生在開車時，可能產生極為危險的後果。在開車之前，應當測量血糖水平。如果血糖低，就不應當開車。在車中貯物箱內存放和/或口袋、皮包內隨時放置備用的葡萄糖，在出現血糖過低早期徵兆時即可服用。
如果你有「血糖過低渾然不知」的情況，就要更加小心。在開車之前一定要量血糖水平，一定要準備好隨時可用的能快速產生葡萄糖的食物。血糖水平低時不要開車。

很難對所謂「低」給予一個明確的數值，它因人而異，也因測量血糖的方法和儀表不同而不同。

**個人的血糖水平：**

怎樣的血糖水平對我而言屬過低？

值得一問的問題是，「我的血糖水平是在上升還是在下降？」在午餐後一個小時測得的血糖水平如果是低的，它可能會回升。在午餐後幾個小時測得的血糖水平如果同樣的低，它可能還會繼續下降。如果你的血糖水平有任何問題並對開車的安全有顧慮，最好小心一些。

如果你參加具有潛在危險性的活躍，例如戴水肺潛水，跳降落傘，或攀山等等，要先向你的醫生請教。
有疑問嗎？

請致電 206-598-4882

你的問題對我們是重要的。如果你有任何疑問或顧慮，請打電話給你的醫生或健康照顧提供者。UWMC 的診所職員在任何時候也可為你提供協助。

筆記：
Recognizing the causes and symptoms of hypoglycemia can help you prepare for and respond to this condition when it arises.

Hypoglycemia
How to cope with low blood sugar

General Facts on Low Blood Sugar

Hypoglycemia (low blood sugar) is not uncommon for people with diabetes. It is estimated that over a 40-year period the average patient with Type 1 (insulin-dependent) diabetes will have about 2,000 to 4,000 hypoglycemia episodes. Although hypoglycemia usually occurs in patients who use insulin, it can also occur in patients who take one of the oral hypoglycemic medicines (e.g. glyburide, glipizide).

Causes

There are several different causes of hypoglycemia: missing a meal, eating a meal that is smaller than usual, or doing heavier than normal exercise. Hypoglycemia can occur during or up to 36 hours after an unusually strenuous period of exercise.

Taking too much insulin or oral hypoglycemic agent or waiting an unusually long time between taking the insulin or the oral agent and eating may also cause hypoglycemia. Finally, drinking alcoholic beverages may also result in hypoglycemia. This is especially true if you drink on an "empty stomach."
Feeling funny?
It could be a sign you need to check your blood glucose level.

Symptoms
The symptoms of hypoglycemia vary, and may even vary for the same person over time. Common symptoms include:

- Shaking
- Sweating
- Nausea
- Hunger
- Heart pounding

Other symptoms which usually (but not always) occur later include:

- Blurred vision
- Confusion
- Tiredness
- Anxiety

Some patients lose the ability to recognize the symptoms and this is called "hypoglycemia unawareness." We know that some patients who have had diabetes for more than 10 years do not recognize their hypoglycemia due to neuropathy (damage to the nerve fibers). We are now beginning to appreciate that hypoglycemia unawareness is common in many more individuals than previously thought. It is especially common in individuals who try to keep their blood glucose levels in near normal ranges. The reason for this is not yet entirely clear. Therefore, should you and your doctor decide you want to achieve "tight" blood glucose control, it will be important for you to measure your blood glucose levels frequently each day. This will minimize your risk for hypoglycemia.

If you do not feel right, if you are just "feeling funny," it is important to measure your blood sugar. Your "funny feeling" might be caused by a dropping blood glucose level. If a blood glucose meter is not available, the best strategy is to treat yourself as if you were having a hypoglycemia episode.
Symptoms, continued

Hypoglycemia is best treated by taking 10 to 15 grams of simple carbohydrate, such as two to three glucose tablets, six to ten Life Savers, or about six ounces of fruit juice. Usually, the symptoms of hypoglycemia will improve in about 10 minutes. However, if symptoms have not been resolved in 15 minutes, the above treatment should be repeated.

It is also important to provide longer-acting foods after the acute treatment just described. If the hypoglycemia occurs within an hour before your next meal, simply treat the hypoglycemia right away and eat your meal at your regular time. However, if your hypoglycemia occurs more than one hour before your next meal or if it occurs during the night, you should also eat food with protein, such as a glass of milk or half a sandwich.

Overtreating hypoglycemia can also be a difficult problem for people with diabetes. Often a patient will expect to feel better immediately after treatment. However, if high fat foods (ice cream, candy, sweet desserts) are eaten, they can actually slow the absorption of glucose and slow the rise in blood sugar. High fat foods are easily eaten in excess and these extra calories can cause an increase in weight, which, in turn, can have an adverse effect on overall health and blood glucose control.

If you experience severe hypoglycemia, you will need the assistance of someone else, usually a spouse, parent, or co-worker. Severe hypoglycemia can cause an extreme lack of physical and mental alertness, confusion, or even a seizure. This situation is best treated with glucagon, an injectable medication that raises your blood sugar. People around you will need to learn how to give this simple injection.
Be Prepared

All patients taking medication to lower their blood glucose levels should have some quick-acting glucose source available at all times. Glucose tablets or Life Savers can be easily carried in a pocket or purse. We suggest that all our patients wear a medic-alert bracelet stating that they have diabetes. We will also provide you with a card for your wallet or purse that will identify your doctor in case of an emergency.

My Signs/Symptoms of Hypoglycemia Are:

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Driving

Hypoglycemia can have devastating consequences if it occurs while you are driving. You should measure your blood glucose level prior to driving, not drive if glucose is low and have glucose tablets immediately available in your car's glove compartment, your pocket or purse in case early signs of hypoglycemia occur.
Driving, continued

Special precautions must be taken if you have "hypoglycemic unawareness." Always measure your glucose level before driving and always have a quick source of glucose available to you at all times. Never drive when your glucose level is low.

It is difficult to give a precise value for "low." Both individuals and blood glucose meters can vary.

**Personal blood glucose level:**

_________________________________

**What level is too low for me?**

_________________________________

One good question to ask is, "Is my blood sugar going up or down?" A low blood glucose reading one hour after lunch will probably go higher while a similar low reading late in the afternoon several hours after lunch will probably go still lower. If there is any question about your blood sugar levels and the safety of driving, it is always better to be cautious.

If you participate in potentially hazardous activities, such as scuba diving, parachute jumping, or mountain climbing, ask your health care provider for further guidance.
Questions?

Call 206-598-4882

Your questions are important. Call your doctor or health care provider if you have questions or concerns. The UWMC Clinic staff is also available to help at any time.

Notes: