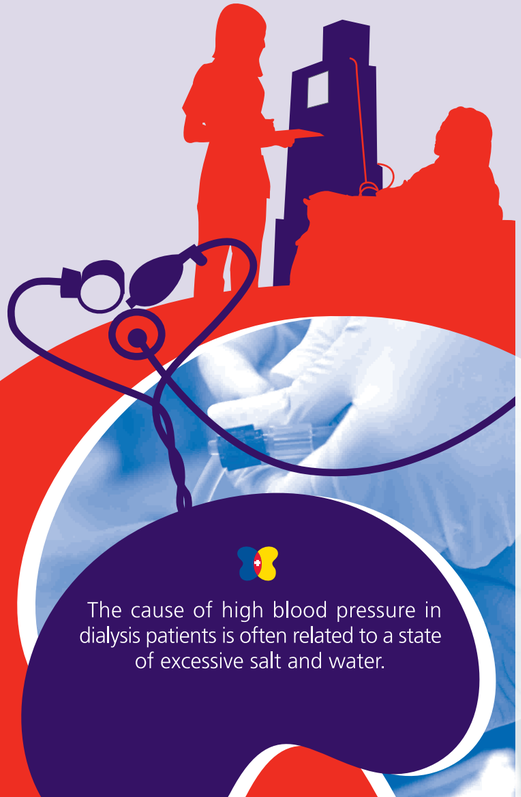
KDF
KIDNEY DIALYSIS FOUNDATION

BLOOD PRESSURE AND DIALYSIS



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Blood Pressure and Dialysis

What is blood pressure?

Blood pressure is the force of blood pushing against the walls of the arteries. The blood pressure reading consists of two numbers. The top number is called the systolic pressure. It measures the maximum pressure of the blood when the heart is pumping. The lower number is the diastolic pressure. It measures the pressure when the heart is at rest in between beats, filling up before pumping again. Blood pressures in dialysis patients may be alternately high or low depending on the situation in which blood pressure is measured.

Why is my blood pressure high?

The cause of high blood pressure in dialysis patients is often related to a state of excessive salt and water. Excess water in the body increases the amount of fluid in the blood vessels and increases the blood pressure. Narrowed or clogged blood vessels can also raise blood pressure. Consumption of food containing large quantities of salt makes one thirsty leading to a higher intake of water. It is common to see blood pressure normalize after a dialysis session when fluid has been dialysed out of the blood space only to go back to high levels after several hours when the blood space is refilled with fluid from other body compartments.

Can high blood pressure harm dialysis patients?

Yes! High blood pressure stresses the heart as the heart needs to work harder to pump against a higher pressure. High pressures in the blood vessels also damages the blood vessel walls. Thus, it is very important that blood pressure is well controlled as high blood pressure can cause heart attack, stroke and even death.

What can I do to control my blood pressure?

If the cause of your high blood pressure is related to consumption of salt and water, then you must control your intake of salt and water.

If you already have high blood pressure, you must take your medicines regularly as prescribed by your doctor. The medicines will control the blood pressure.

However, more often than not, you will need to combine both fluid, salt restriction and medicines in order to have a better control of your blood pressure. A trial of reducing post dialysis body weight concomitant with reduced salt and fluid intake while keeping the ultrafiltration (fluid removal) rate constant is worth a try to normalize blood pressure.

Why is my blood pressure low during dialysis?

There are several reasons why you experience low blood pressure or hypotension during dialysis:

- Too high a fluid removal rate during dialysis has been set. The body is unable to tolerate too rapid a fluid removal rate as the blood compartment cannot refill in time causing the blood pressure to fall. It is therefore important that you keep check of your fluid intake and monitor your weight gain in between dialysis. Higher weight gain between dialysis sessions means more has to be removed during a single session.

- The prescribed dry weight may be too low. If you have gained body weight with higher muscle or fat content, the proportion of fluid would be been reduced if the prescribed dry weight was not increased to keep up with this increase in body weight.

- Elderly and diabetic patients often have reduced response to fluid reduction in the blood space. A normal response with fluid removal is to increase the pump (heart) rate and the force of pumping thereby maintaining the blood pressure. Blood vessels also narrow temporarily to keep the blood pressure up. This is achieved through messages received by receptors which are passed to the heart and blood vessels by nerves. A nervous system that responds poorly will not be able to pass these messages appropriately and blood pressure can fall easily once fluid removal starts.

- Taking anti-hypertensive medications before dialysis. Many blood pressure medications interfere with the response mechanism as detailed earlier.

- In some instances, eating during dialysis may also cause a drop in blood pressure. This is because blood supply in the body is diverted to the stomach to digest food.

How can I prevent hypotension during dialysis?

- You can prevent hypotensive episodes by limiting your water intake. The doctor will instruct you the amount of fluid you can have daily.

- If you have accumulated fluid over a long time, do not be overzealous in bringing it down to achieve the dry weight. For each person, there is a limit on how much can be withdrawn during each 4 hour session. In general, one should not put on more than 5% of your body weight between dialysis. Depending on each individual, it sometimes takes 4 – 8 weeks to achieve the correct dry weight.

- Adjust the timing of taking anti-hypertensive medication. Check and monitor blood pressure regularly. If you persistently experience low blood pressure, inform your doctor. Your may need adjustment to your medicines.

- If the cause of your low blood pressure is eating during dialysis, than you may want to consider eating less during dialysis.

- If you are unwell, have diarrhoea or vomiting, inform the nurse as she will plan the dialysis treatment to avoid discomfort.

- Inform the nurse or doctor if you have gained flesh weight or have lost weight. The nurse or doctor will adjust your dry weight accordingly.

What are the signs of low blood pressure?

During dialysis, should you experience one or more of these symptoms, you must inform the nurse.

- Feeling faint
- Sweatiness
- Nausea
- Vomiting
- Shortness of breath
- Stomach or leg cramps

Do not suffer in silence! Severe low blood pressure is very dangerous. You can risk losing your fistula or graft function because of severe hypotension.

Remember!

The first step towards good dialysis treatment is to have a well-control blood pressure. This will help avoid any discomfort during your dialysis treatment.

You may visit these websites for more information:

http://www.kdf.org.sg/health.aspx
http://www.davita.com
http://www.uptodate.com/patients/index.html

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血压与透析

透析病人有高血压通常是因为体内含有太多的盐分与水分。

血压与透析

什么是血压？

血压是血液流向血管壁所施压的力量。血压指数含有两个数字。较高的数字是心脏收缩的血压，测量心脏运作时产生的血液最高压力。另一数字是心脏舒张的血压，测量心跳之间所产生的压力。透析病人的血压在不同情况下可以偏高或偏低。

为什么我的血压偏高？

透析病人有高血压通常是因为体内含有太多的盐分与水分。体内多余的水分会增加血管里的液体，导致血压升高。狭窄或堵塞的血管也会使血压升高。食用高盐分的食物会使人口渴而喝下更多的水。在透析后，病人的血压一般上会在正常的水平。这是因为透析过程将血液里的液体除去，只有在几个小时后才由身体其它部位的液体重新填满。

高血压会不会对病人有害？

会！高血压给心脏带来很大负担，因为心脏需要更用力地跳动来应付高压力。同时，血管里的高压力也会损害血管壁。因此，控制血压并让血压正常是很重要的。高血压可以导致心脏病、中风甚至死亡。

我如何控制我的血压？

如果您的高血压是因为食用了太多的水分与盐分，您就必须控制您的饮食。

如果您已患有高血压，您就必须按照医生的指示定时吃药。药物会控制您的血压。

但是，一般上您都必须以控制饮食和服用药物来更好地控制血压。您可以试用在维持所抽取液体量不变的情况下，减低吸收液体与盐分以减低透析后体重的方法。这有可能会控制您的血压。

为什么我的血压在洗肾时会偏低？

洗肾使血压偏低的几种原因：

- 从身体里所抽取的液体量太高。身体无法忍耐液体的迅速抽取，在短时间内无法填补所抽取的液体而使血压偏低。因此，在每次洗肾疗程之间，您必须注意您的体重增加。体重增加越高，就意味着需要抽取的液体越多。
- 医生所规定的无液体体重可能太低。如果您是因为身体里的脂肪或肌肉增加而使体重增加，规定的无液体体重如果没有随着增加就会减低身体里的液体成分比例。
- 老年人与糖尿病患者对于血液里的液体减少常有较为缓慢的反应。当液体被抽取，正常的反应是增加心跳速度与力度来维持血压。血管也会暂时变窄来使血压升高。这是通过神经接收器在液体抽取时所传达给血管与心脏的信息。反应性差的神经系统就无法有效地传达这些信息，而导致血压在液体抽取时开始降低。
- 在透析前服用抗高血压的药物。很多抗高血压药物会扰乱神经系统的反应，导致血压偏低。
- 在一些情况下，在透析时吃东西可能导致血压降低。原因是，身体里的血液导向胃部以帮助消化食物。

如何在透析时预防低血压？

- 您可以限制您所喝的水量来减低血压偏低的可能性。医生会给您指示，让您知道每天可以摄取多少水分。
- 如果您长时间累积了液体，不要过度热忱地希望把液体消除以达到达到无液体时的重量。每一个人在每次四个小时的疗程里所能抽取的液体量是有限制的。大致上，一个人不应该在每次透析疗程之间增加超过身体重量5%的体重。根据个人情况，达到正确的无液体重量需要4至8周的时间。
- 调整服用抗高血压药物的时间。定时检测您的血压。如果您经常有血压低的情况，通知您的医生。您可能需要调整您的药物。
- 如果您是因为在透析时吃东西而出现血压低的情况，那您可考虑在透析时少吃东西。
- 如果您感觉不舒服，有腹泻或呕吐的情况，通知您的护士。她会另外安排您的透析治疗以避免您的不适。
- 如果您增加或减少了您的非液体体重，通知您的护士或医生。他们会根据情况调整您的无液体体重。

低血压的症状是什么？

如果您在透析时出现以下症状，请通知护士：

- 头晕
- 流汗
- 恶心
- 呕吐
- 呼吸短促
- 胃部或腿部抽筋

不要默默受苦！严重低血压是很危险的。您可能因为低血压而失去您动静脉瘘管或再植瘘管的功能。

记住！

有效透析疗程的第一步，是控制好您的血压。这将让您避免在透析疗程时感觉任何不适。

欲知详情，可参阅以下的网址：

http://www.kdf.org.sg/health.aspx
http://www.davita.com
http://www.uptodate.com/patients/index.html

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