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Carpal Tunnel Syndrome

Carpal tunnel syndrome is a set of symptoms thought to be caused by squashing (compression) of the median nerve in the carpal tunnel.

Carpal tunnel syndrome is a collection of symptoms - with pain as the star performer - that result from squashing of the median nerve as it runs through the carpal tunnel.

What is it?

When asked where the carpal tunnel was, 9 out of 10 lorry drivers thought it ran from Rotherhithe to Limehouse. The 10th (a failed medical student) correctly identified it as the space between a group of eight small bones in the wrist joint, called carpal bones, and the ligament that covered them (the retinaculum). This is a busy tunnel. The tendons that attach the forearm muscles to the fingers and a main nerve in the hand (the median nerve) all run through it.

The median nerve supplies the sensation of feeling to the thumb, index and middle fingers, and half of the ring finger. Just to show off, it also makes the small muscles at the base of the thumb move.

Who gets carpal tunnel syndrome?

It's mainly women in their late 50s although in later life it stops being sexist and affects men and women in their late 70s equally.

It's more common in people who are obese and can be a family trait. It can also add to the delights of pregnancy.

What are the symptoms?

The first thing you may notice is pins and needles, often in the index and middle fingers. This is followed by pain and numbness. The skin of the affected fingers may become dry. If it gets really bad, your grip may become affected and you may notice wasting in the muscles at the base of your thumb.

Some people develop really bad symptoms but if you're lucky, you may get away with a milder form. It can affect one or both hands and may come and go to start with. You may find yourself watching a lot of late night telly, because the symptoms are often worse at night and may wake you up.

Symptoms can vary from person to person from mild to severe. One or both hands may be affected. Symptoms tend to come and go at first - often after you use the hand - and are typically worse at night. If it gets really bad, you may get symptoms all the time.

Read more about the symptoms of carpal tunnel syndrome.

What causes it?

Nobody knows for sure. One theory is that something happens to the tendons that run through the carpal tunnel, increasing the pressure in the tunnel. Pressure on the blood vessels supplying the median nerve affect the way it works and this causes the symptoms.

1 in 4 people have a close family member with it (mum, dad, brother or sister). It is, as they say, all in the genes.

You're also more likely to get it if your wrist joint is done in. Fractures and rheumatoid arthritis may lead to carpal tunnel syndrome.

Conditions that lead to your body (including your wrist) becoming water-logged can also cause it, such as pregnancy, obesity and an underactive thyroid gland. The condition can also be caused by a whole ragbag of unusual cysts and swellings arising from tendons or blood vessels.

Learn more about the causes of carpal tunnel syndrome.

Do I need any tests?

Often the symptoms are so typical that no tests are needed to confirm the diagnosis. However, these days you can't get far in a hospital without some techie wanting to try out his or her new toy. So, you may end up with an ultrasound or MRI scan. These can actually be quite useful in confirming the diagnosis and pinpointing areas that need treatment.

You may also be asked to have a nerve conduction test. This tests how long it takes for a slow speed electric impulse to go from one end of the median nerve to the other.

Find out more about the diagnosis of carpal tunnel syndrome.

What are the treatment options?

General measures

Don't overuse your wrist and do try to lose some weight if you're a bit chubby. Painkillers may help and you may also need treatment for any associated condition such as arthritis.

Not treating may be an option

Some people don't need treatment, especially if they're aged under 30 years.

A wrist splint

A removable wrist splint (brace) is often the first thing to try. Often, people find wearing the splint at night is enough.

A steroid injection

A shot of steroid in or near the carpal tunnel often does the trick, although in some people the symptoms came back after a year.

Surgery

If you have severe symptoms you will almost certainly need an operation. However, the experts haven't quite worked out if surgery or an injection is best for people with moderate symptoms. Until this research is completed, you might as well flip a coin (but mind your wrist).

The operation involves cutting the ligament over the front of the wrist to ease the pressure on the median nerve. It's usually done under local anaesthetic. Complications are rare but can occur.

Other treatments

Lots of different treatments have been tried but they haven't been studied as well as the options mentioned above. You pays your money and you takes your choice.

Which is the best treatment for me?

For mild symptoms, your best bet is splinting or a steroid injection. Constant numbness and/or weakness mean you probably need surgery, as the nerve will be at risk of permanent damage. This is especially true if you have wasting of the muscles at the base of the thumb.

Read more about the treatment of carpal tunnel syndrome.

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Symptoms

Further reading & references

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