



DRUGS, OVER THE COUNTER MEDICATIONS AND PRESCRIPTION DRUGS CAN IMPAIR DRIVING

Are you confident that anything you buy over the counter at the chemist must be safe and will not affect your driving? Wrong!

In this article, you'll find out which easily available over-the-counter products can affect you, as well as which prescription drugs.

Driving is difficult!

Driving is a complex information-processing task. It's one of the most challenging activities people engage in on a daily basis. A lot of information has to be processed quickly and acted upon.

The three human factors needed for safe driving are vision, cognition (the ability to think clearly) and motor function (the ability to physically take action), in other words: perception, decision making and reaction.

All of the above factors can be impaired by age, medical conditions, medication, illegal drugs, alcohol, fatigue, inattention, distraction or emotional states, resulting in a crash.

The causes of accidents

Studies have shown that human performance errors are the most common causes of motor vehicle accidents. There are three factors involved in crashes:

- Human factors – cause 93% of crashes (another study says 99.2%)
- Environmental factors – cause 34% of crashes (another study says 5.4%)
- Vehicular factors, e.g. a mechanical fault – cause 13 % of crashes (another study says 0.5%)

**These figures don't add up to 100%, as there is some overlap in causes.*

Recognition errors (problems in perception and comprehension) and decision making errors were most frequently implicated in a study.

The effects of medication

Medication can have a positive or negative effect on driving.

On the plus side, an older driver with untreated depression is at high risk due to decreased concentration and slower decision making, so treating this person helps them drive more safely. Treating diabetes will also improve performance and eyesight.

However, treatment may also carry a risk. For instance, 10mg of diazepam (or Valium) for anxiety can produce more driving impairment than a blood alcohol concentration of 0.10% (the limit in New Zealand is 0.05%).

A Montreal study of over 224,000 drivers aged 67-84 found that those on long-acting benzodiazepines (tranquillizers) had 45% more collisions resulting in injury.

Dangerous combinations

Medicine combinations can produce unexpected side effects. You need to discuss all your over-the-counter medications with your family doctor. The interaction between alcohol and over-the-counter medications can also be a problem.

With age, tolerance for alcohol decreases. Then, if you add medication, risk increases even more. If you add medical conditions or multiple medical conditions to the mix, the risk increases again.

Adding a new medication may change the way other medications are handled by the body, so you must give yourself two weeks to settle into your new medication or combination of medications.

The **side effects** of medications can be incredibly varied. Among the more common are sedation, nausea, impairment of vision, hearing or concentration, dizziness, low blood pressure, fainting and loss of co-ordination.

Tips for older drivers

- Take medications according to instructions.
- Always read the information leaflet.
- Ask your doctor or pharmacist about the effects your medications may have on driving.
- When changing medications, ask how long it will take you to get used to it.
- Ask if alcohol will interact with your medications.
- If you have more than one doctor, check with all of them about mixing medications.
- Never share medications with others.
- Beware of over-the-counter medications that could cause side effects or interfere with your prescribed medications.

Which medications are risky?

Any of them can bring risk, but the most frequent culprits are:

- Sleeping pills
- Pain killers
- Cough and cold medications
- Diabetes medications
- Blood pressure medications
- Any drug that depresses the central nervous system (brain) can potentially impair driving.

Since 90% of driver information is visual, blurred vision is a major risk factor. Blurred vision can be caused by:

- Antiarrhythmics for abnormal heart rhythms or palpitations
- Anticonvulsants for epilepsy
- Antidepressants
- Anti-anxiety drugs
- Bone drugs
- Musculoskeletal agents.

Reduced ability to see at night may result from:

- Some AIDS drugs
- Isotretinoin used for acne and other skin conditions (this may have a permanent effect).

Cognition, especially attention, working memory, visuospatial abilities, and visual search are essential to safe driving. This can be affected by:

- Any central nervous system depressant, e.g. sleeping pill, anticonvulsant, antidepressant
- Alcohol
- Illegal drugs.

Motor and muscle abilities are important in driving, e.g. for physical muscular activities such as fast reaction, braking, steering, etc.

Deterioration and medication type

- **Benzodiazepines** such as oxazepam, diazepam or clonazepam cause impairment equivalent to a blood alcohol concentration of 0.05 -0.10%. Older (age 67-84) drivers on a long-acting benzodiazepine had almost 50% increase in motor vehicle accidents causing injury. It is best to choose a short-acting one such as Halcin, temazepam, Imovane or clonazepam.
- **Tricyclic antidepressants** cause a 2.3 times higher risk of a crash among older drivers.
- **SSRI antidepressants** such as Prozac showed a 59% increase in crashes in one study. You need to get used to this medication, as it may cause impaired judgement, thinking or motor skills.
- **Venlafaxine (SNRI) antidepressant** increases the crash rate by 78%, but settles once you're on it for about a week.
- Note that a combination of antidepressants and benzodiazepines gives a four times higher risk of crashing!
- **Anti-nausea drugs** cause a 63% increase in crashes.

- **Blood pressure medications** may cause dizziness, fatigue and weakness.
- **Diuretics** may cause confusion, drowsiness and lethargy.
- **Antihistamines** commonly available over the counter or prescribed for sleep problems, colds and flu can significantly impair performance, especially the older medications. Older medications show negative effects in 89% of studies, compared to 10% for newer ones.
- **Asthma reliever inhalers** (bronchodilators) can cause increased heart rate, dizziness, heart palpitations, nervousness, muscular pain and fatigue. People using it are 35% more likely to be involved in a crash.
- **Anti-epilepsy drugs** double the chances of a crash.
- **Eye antihistamines** cause a 67% increase in the likelihood of a crash.

Over-the-counter medications

Medications you can buy over the counter cause some of the most common and serious impairments due to their widespread use and because of the common belief that, because these medications are available without prescription, they must be safe. Any drug that depresses the central nervous system can potentially impair driving. Mostly they are for:

- Coughs and colds
- Allergy – 47 % of people with this condition use over-the-counter medications
- Travel sickness
- Pain
- Antidiarrhoea agents.

A single product can have several drugs that increase impairment, e.g. a pain reliever combined with a decongestant. Sleep helpers contain old-fashioned antihistamines which are sedating, e.g. diphenhydramine is found in Sleep Gels and Calm U.

Older people more at risk

Older people buying medications over the counter are more vulnerable for various reasons, as their slowed kidney function slows the eradication of the drug from the body, so the drug accumulates. Watch out for:

- Pain medicines.
- Non-steroidal anti-inflammatories such as Nurofen which can cause drowsiness or dizziness.
- Dextromethorphan, which is added to cough and cold medications.
- Additive drowsiness and impaired performance when medications are taken together with an antihistamine or alcohol.

Paracetamol such as Panadol is fine to use.