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More About Drugs – Antiseptics and Antibiotics.

When **plants** are attacked by pathogens they can sometimes produce **chemicals** to defend themselves. Some of these chemicals have **antibacterial** effects that protect the plant against **bacteria**.

Humans have been using these plant chemicals for centuries.

For example:

- The **leaves** of the **tea tree shrub** produce an **oil** that kills **bacteria**.
- Today the oil is **purified** and used in all sorts of **antibacterial products**, e.g. **facial cleansers** and **aftershaves**.



Antibacterial products are called **antiseptics** or **antibiotics**.

Antiseptics.

Antiseptics are chemical substances that **kill bacteria** or **stop them growing** and are used **outside** the body. They are used to **prevent infection** rather than treat it.

Antiseptics are used to **clean wounds** and **surface areas** where there are lots of pathogens, such as round the toilet or kitchen work tops where food is being prepared. Many **household products** contain antiseptics, e.g. bathroom cleaners.

Antiseptics are also used in **hospitals** and surgeries to try and prevent the spread of infections like **MRSA**.

Antibiotics.

Antibiotics are **drugs** used **inside** the body and they are used to treat patients who are **already infected** with **bacteria** or **fungi**. However, antibiotics don't destroy **viruses**, e.g. flu and cold viruses.

There are **two** types of antibiotics:

1. Antibacterials

Antibacterial antibiotics, for example penicillin, are used to treat bacterial infections. They work by **killing bacteria** or **stopping them growing**.

However, some bacteria can evolve **resistance** to certain antibacterial antibiotics, meaning the antibiotics **don't work any more**.

2. Antifungals

Antifungal antibiotics, for example nystatin, are used to treat fungal infections.

They work by **killing** the fungi or **stopping them from growing**.

