

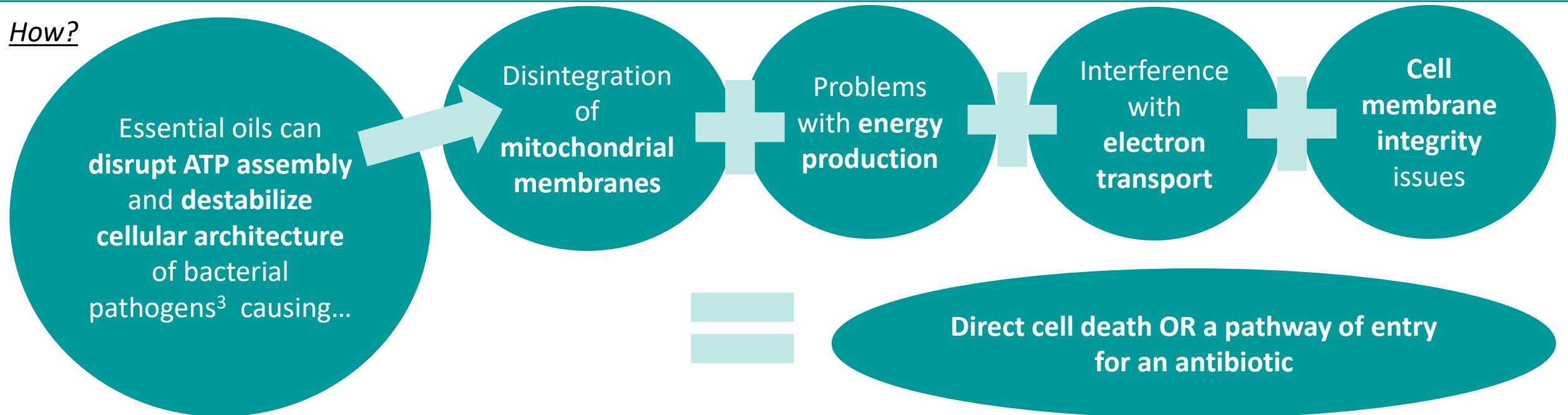
What?

Antibiotics treat **bacterial infection**. Without them, simple infections may become life-threatening and mortality from infectious disease could rise in the “**post-antibiotic era**”<sup>1</sup>. Few novel classes of antibiotics have been discovered since the 1960s<sup>1</sup>, and very few are in the pipeline due to the high **cost of development and the limited potential for profit**. Combination therapies may be one solution.

Why?

Combination therapies can reduce the likelihood of resistant strains emerging<sup>1</sup>, potentially attributed to a synergistic effect between agents. Essential oils found in **cinnamon, clary sage and basil**<sup>2</sup> have **bactericidal properties** that may be useful when used in combination with standard antibiotics. This may make them more effective and reduce the risk of emergent resistant bacteria.

How?



Who?

**Many bacterial infections** are mild and self-limiting and **do not necessarily need treatment with antibiotics**. However, some are potentially lethal, such as bacterial **meningitis**, where the membranes around the brain become infected, or **septicaemia**, where infection is disseminated around the body through the bloodstream. Much routine and surgery, **including joint replacement**, has become possible over the past seventy years because of the antibiotic revolution, and it would be lost if bacterial resistance became too commonplace.

Author Comments

Laboratory studies suggest some **essential oils** have anti-bacterial properties that **may be useful** in the treatment of infections<sup>3</sup>. The research suggests **promising interactions between essential oils and antibiotics**, with synergistic effects reported most frequently with basil, clary sage and rosemary. **Studies in-vivo are needed** to evaluate the potential of this new class of antibacterial agents.

References

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