# Myths and common public misconceptions about hygiene, cleaning and bacteria:

# Handwashing/showering (skin)

* FDA says there isn’t enough evidence to show that anti-microbial soaps are any better and preventing the spread of disease than regular soap and water
  + Ref : [Antibacterial Soap? You Can Skip It, Use Plain Soap and Water | FDA](https://www.fda.gov/consumers/consumer-updates/antibacterial-soap-you-can-skip-it-use-plain-soap-and-water)
* Antibacterial soap with Triclocarban (TCC) is no more effective than plain bar soap
  + Ref: [Microbicidal effects of plain soap vs triclocarban-based antibacterial soap - ScienceDirect](https://www.sciencedirect.com/science/article/pii/S0195670116302614)
* Soap and water are best but hand-sanitizer is more appropriate in areas of high populations and where sufficient water/soap washing facilities are not available
  + Ref: [fc4845e7c3d0f5d8ef34d69bf526b6d81623.pdf (semanticscholar.org)](https://pdfs.semanticscholar.org/911c/fc4845e7c3d0f5d8ef34d69bf526b6d81623.pdf)
* Evidence suggests that overuse of hand sanitizers and using them instead of soap and water can lead to increased viral outbreaks
  + Ref: [COVID-19 and frequent use of hand sanitizers; human health and environmental hazards by exposure pathways - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7320712/)
* Dry/damaged skin caused by santizers has also meant an increase in skin infections
  + Ref: [COVID-19 and frequent use of hand sanitizers; human health and environmental hazards by exposure pathways - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7320712/)
* Overuse of hand sanitizers results in antimicrobial resistance due to repeated exposure, the microorganisms adapt to survive.
  + Ref: [COVID-19 and frequent use of hand sanitizers; human health and environmental hazards by exposure pathways - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7320712/)
* Showering/bathing more frequently may cause more damage than good. It can damage the skin structure and lead to more skin infections caused by our own microbiome
  + Ref: [Hygiene of the Skin: When Is Clean Too Clean? - Volume 7, Number 2—April 2001 - Emerging Infectious Diseases journal - CDC](https://wwwnc.cdc.gov/eid/article/7/2/70-0225_article)
* Showering has little impact on the microbiome but is more important for aesthetics and mental health
  + Ref: [Hygiene of the Skin: When Is Clean Too Clean? - Volume 7, Number 2—April 2001 - Emerging Infectious Diseases journal - CDC](https://wwwnc.cdc.gov/eid/article/7/2/70-0225_article)
* Being too clean can lead to an increase in asthma and allergies
  + Ref: [Can you be too clean? - BBC Future](https://www.bbc.com/future/article/20151118-can-you-be-too-clean)

# Laundry

* Even when aiming to remove microbes during washing – the washing machine itself can cause re-contamination of the textiles if not cleaned properly
  + Ref: [Laundry and textile hygiene in healthcare and beyond - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6600116/#:~:text=In%20this%20regard%2C%20oxidizing%20compounds%2C%20such%20as%20chlorine,an%20efficient%20antimicrobial%20action%20of%20the%20laundering%20process.)
* Temperatures above 60 degrees are known to be effective against microorganisms to ensure hygiene of the clothing / bedding
  + [Laundry and textile hygiene in healthcare and beyond - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6600116/#:~:text=In%20this%20regard%2C%20oxidizing%20compounds%2C%20such%20as%20chlorine,an%20efficient%20antimicrobial%20action%20of%20the%20laundering%20process.)
* Temperatures above 50 degrees can generally reduce the microbial presence on the laundry even without detergents containing a chemical antimicrobial such as bleach
  + [Laundry and textile hygiene in healthcare and beyond - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6600116/#:~:text=In%20this%20regard%2C%20oxidizing%20compounds%2C%20such%20as%20chlorine,an%20efficient%20antimicrobial%20action%20of%20the%20laundering%20process.)
* There are eco-friendly alternatives to everyday laundry detergent like ‘ecoeggs’ but there is no evidence to their antimicrobial application.
  + [FAQs - Ecoegg](https://www.ecoegg.com/faqs/)
* New antibacterial laundry detergents can be used a low temperatures and shorter cycles
  + Is 99% effective against types of Influenza and some types of Coronavirus and bacteria
  + Ref: [Laundry Hygiene FAQ: How to Disinfect Clothes | Persil](https://www.persil.com/uk/laundry/laundry-tips/washing-tips/how-to-disinfect-clothes.html)
* Freezing jeans will not work – most of the bacteria will simply remain dormant until they return to a normal, non frozen, temperature.

# Surface cleaning

* Probiotic cleaners can reduce the presence of pathogens by up to 90%
  + Ref: [Impact of a probiotic-based hospital sanitation on antimicrobial resistance and HAI-associated antimicrobial consumption and costs: a multicenter study - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6398408/)
* Probiotic cleaners to not lead to the development of antimicrobial resistance
  + [Impact of a probiotic-based hospital sanitation on antimicrobial resistance and HAI-associated antimicrobial consumption and costs: a multicenter study - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6398408/)
* Biocides that are not of a concentration high enough to kill the bacteria will cause the bacteria express mechanisms of survival
  + [Resistance of Bacteria to Biocides | Microbiology Spectrum (asm.org)](https://journals.asm.org/doi/10.1128/microbiolspec.ARBA-0006-2017?url_ver=Z39.88-2003)

# Antibiotics

* It is the body that becomes resistant to the action of antibiotics
  + Ref : Antibiotic Research UK, [Myths About Antibiotic Resistance | Antibiotic Research UK](https://www.antibioticresearch.org.uk/about-antibiotic-resistance/bacterial-infections/myths-about-antibiotic-resistance/?msclkid=3122bea5c08511ecac2a4039b4f7ee21)
* The body does not respond to repeated use of antibiotics
  + [Public attitudes towards bacterial resistance: a qualitative study | Journal of Antimicrobial Chemotherapy | Oxford Academic (oup.com)](https://academic.oup.com/jac/article/59/6/1155/714641?msclkid=e7e095f5c08c11eca78c6c3bbea75eb4)
* Antimicrobial and antibiotic resistance are the same thing
  + Ref : Antibiotic Research UK, [Myths About Antibiotic Resistance | Antibiotic Research UK](https://www.antibioticresearch.org.uk/about-antibiotic-resistance/bacterial-infections/myths-about-antibiotic-resistance/?msclkid=3122bea5c08511ecac2a4039b4f7ee21)
* Antibiotics treats all types of infections
  + Ref [Myths About Antibiotic Resistance | Antibiotic Research UK](https://www.antibioticresearch.org.uk/about-antibiotic-resistance/bacterial-infections/myths-about-antibiotic-resistance/?msclkid=3122bea5c08511ecac2a4039b4f7ee21)
* Antibiotics can be used to treat viral infections
  + Ref: [Public beliefs on antibiotics and respiratory tract infections: an internet-based questionnaire study | British Journal of General Practice (bjgp.org)](https://bjgp.org/content/57/545/942.short)
  + [Germs Are Germs, and Why Not Take a Risk? Patients’ Expectations for Prescribing Antibiotics in an Inner-City Emergency Department - David A. Broniatowski, Eili Y. Klein, Valerie F. Reyna, 2015 (sagepub.com)](https://journals.sagepub.com/doi/full/10.1177/0272989X14553472?casa_token=dgOpatUzvOcAAAAA%3AXy_tItVxs-0trkEzhZqKXyjLCFRAurH2L-3IqGXXEsdejpFN6UswEZrhPHjfdZhEaW36zgq_dF4M)
* Doctors commonly prescribe antibiotics to their patient based on the misconceptions of antibiotics and what a patient expects from medical professionals
  + Ref: [Germs Are Germs, and Why Not Take a Risk? Patients’ Expectations for Prescribing Antibiotics in an Inner-City Emergency Department - David A. Broniatowski, Eili Y. Klein, Valerie F. Reyna, 2015 (sagepub.com)](https://journals.sagepub.com/doi/full/10.1177/0272989X14553472?casa_token=dgOpatUzvOcAAAAA%3AXy_tItVxs-0trkEzhZqKXyjLCFRAurH2L-3IqGXXEsdejpFN6UswEZrhPHjfdZhEaW36zgq_dF4M)
* We can use unused antibiotics for a different infection
  + [8 common myths about germs experts want you to stop believing - The Irish News](https://www.irishnews.com/magazine/science/2018/07/24/news/8-common-myths-about-germs-experts-want-you-to-stop-believing-1389967/?msclkid=395842ecc08f11ecbbdae3f77a5fa2e2)
* 4 out of 10 people would take antibiotics for a cough
  + [Entrenched misconceptions about antibiotics revealed in new survey - GOV.UK (www.gov.uk)](https://www.gov.uk/government/news/entrenched-misconceptions-about-antibiotics-revealed-in-new-survey?msclkid=0815e026c09011ec9503afcefa8624b6)

## Hospitals

* Bacteria and antibiotic resistance is a problem for hospitals not the wider community
  + [Public attitudes towards bacterial resistance: a qualitative study | Journal of Antimicrobial Chemotherapy | Oxford Academic (oup.com)](https://academic.oup.com/jac/article/59/6/1155/714641?msclkid=e7e095f5c08c11eca78c6c3bbea75eb4)
* Infections are the result of poor hygiene in hospitals
  + [Public attitudes towards bacterial resistance: a qualitative study | Journal of Antimicrobial Chemotherapy | Oxford Academic (oup.com)](https://academic.oup.com/jac/article/59/6/1155/714641?msclkid=e7e095f5c08c11eca78c6c3bbea75eb4)

## **Individuals**

* An individual has no responsibility or ability to help the problem – whether that be an infection or AMR
  + [Public attitudes towards bacterial resistance: a qualitative study | Journal of Antimicrobial Chemotherapy | Oxford Academic (oup.com)](https://academic.oup.com/jac/article/59/6/1155/714641?msclkid=e7e095f5c08c11eca78c6c3bbea75eb4)
* Poorer people blamed the government and medical practices more than the middle class
  + [Public attitudes towards bacterial resistance: a qualitative study | Journal of Antimicrobial Chemotherapy | Oxford Academic (oup.com)](https://academic.oup.com/jac/article/59/6/1155/714641?msclkid=e7e095f5c08c11eca78c6c3bbea75eb4)
* No personal risk with AMR infections in the community
  + [Public attitudes towards bacterial resistance: a qualitative study | Journal of Antimicrobial Chemotherapy | Oxford Academic (oup.com)](https://academic.oup.com/jac/article/59/6/1155/714641?msclkid=e7e095f5c08c11eca78c6c3bbea75eb4)

## General

* All bacteria are harmful
  + [Misconceptions about bacteria | The Pittsburgh Water Microbiome Project (wordpress.com)](https://pghwatermicrobiome.wordpress.com/learn-about-bacteria/misconceptions-of-bacteria/#:~:text=%20Misconceptions%20about%20bacteria%20%201%20Bacteria%20are,as%20effective%20at%20removing%20bacteria%20as...%20More%20?msclkid=3956f1fcc08f11ec84df6d0a7f35414c)
* Bacteria are viruses
  + [Misconceptions about bacteria | The Pittsburgh Water Microbiome Project (wordpress.com)](https://pghwatermicrobiome.wordpress.com/learn-about-bacteria/misconceptions-of-bacteria/#:~:text=%20Misconceptions%20about%20bacteria%20%201%20Bacteria%20are,as%20effective%20at%20removing%20bacteria%20as...%20More%20?msclkid=3956f1fcc08f11ec84df6d0a7f35414c)
* Superbugs are untreatable
  + [8 common myths about germs experts want you to stop believing - The Irish News](https://www.irishnews.com/magazine/science/2018/07/24/news/8-common-myths-about-germs-experts-want-you-to-stop-believing-1389967/?msclkid=395842ecc08f11ecbbdae3f77a5fa2e2)
* Vaccines are dangerous
  + [8 common myths about germs experts want you to stop believing - The Irish News](https://www.irishnews.com/magazine/science/2018/07/24/news/8-common-myths-about-germs-experts-want-you-to-stop-believing-1389967/?msclkid=395842ecc08f11ecbbdae3f77a5fa2e2)
* Healthy people can’t carry bad bacteria
  + [Entrenched misconceptions about antibiotics revealed in new survey - GOV.UK (www.gov.uk)](https://www.gov.uk/government/news/entrenched-misconceptions-about-antibiotics-revealed-in-new-survey?msclkid=0815e026c09011ec9503afcefa8624b6)