

# Understanding Animal Research

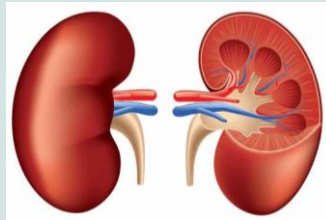
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Liz Danner • Schools Liaison Officer • [www.uar.org.uk](http://www.uar.org.uk)

# Please stand up

Sit down if you have ever:



# Diagnosis

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What is making this girl sick?

# Research- the discovery of insulin



# Treatment- a life transformed

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# Brief history of animal research

## 1600-1900

- Smallpox vaccine (cows)
- Typhoid, cholera, plague vaccines (mice, rats)
- Rabies vaccine (dogs, rabbits)

## 1900s

- Rickets treatment (dogs)
- Corneal transplants (rabbits)
- Discovery of vitamin C/ Scurvy (guinea pigs)

## 1910-1920s

- Blood transfusions (dogs, guinea pigs, rabbits)
- Insulin for diabetes (dogs, rabbits, mice)

## 1930-1940s

- Antibiotics- Penicillin / streptomycin (mice)
- Diphtheria vaccine (guinea pigs, rabbits, horses, monkeys)
- Kidney dialysis (guinea pigs, rabbits, dogs, monkeys)

## 1950-1960s

- Polio vaccine (mice, monkeys)
- Kidney transplants (dogs)
- Heart transplants (dogs)
- Cardiac pacemakers (dogs)

## 1970-1980s

- Chemotherapy (mice)
- Leprosy treatment (armadillos, mice)
- Asthma inhalers (guinea pigs, rabbits)
- MRI scanning (rabbits, pigs)
- River blindness treatment (rodents, cows)

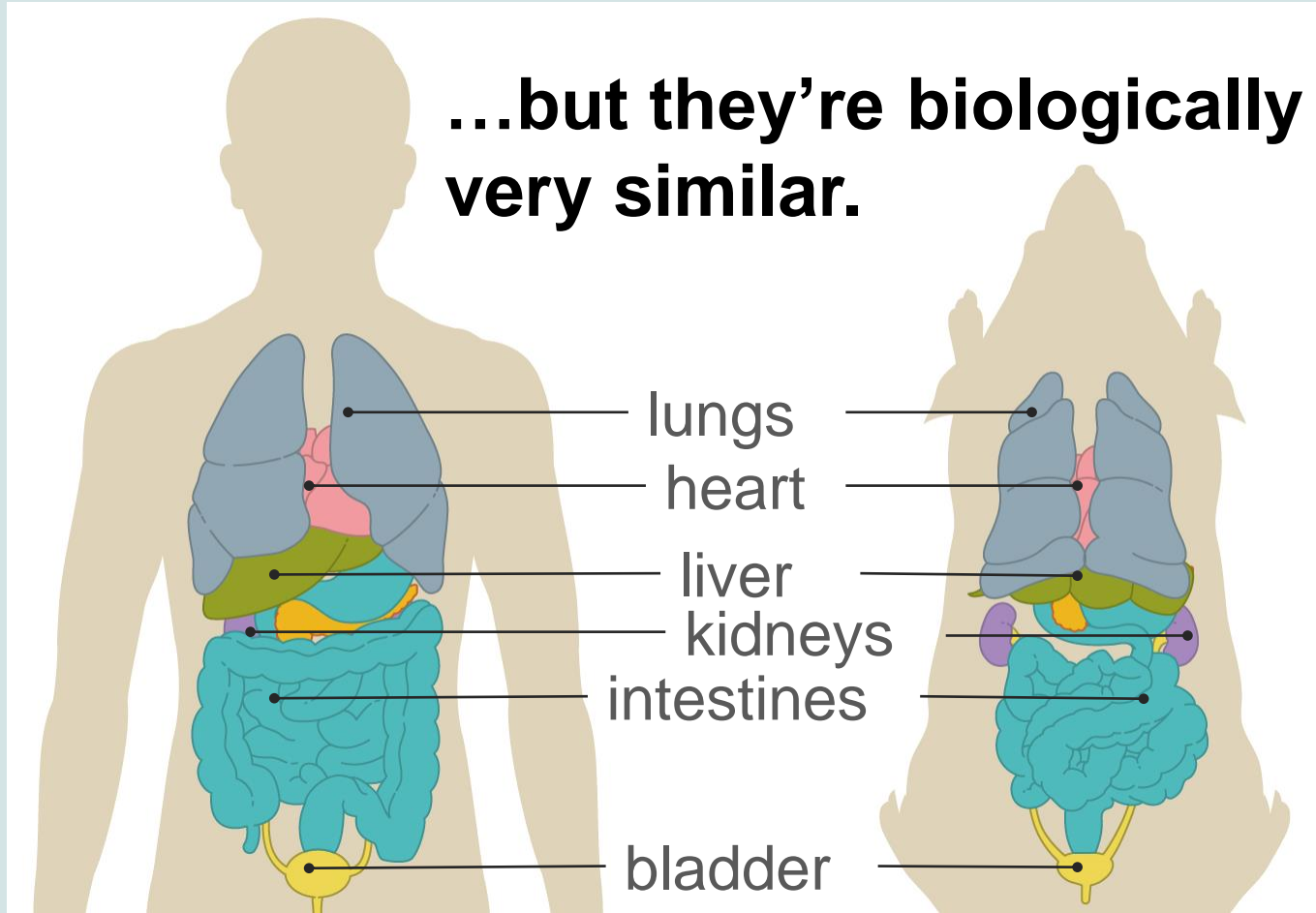
## 1990-2000s

- HIV combined therapy (mice, monkeys)
- Meningitis vaccines (mice)
- Cervical cancer vaccine (rabbits, cows)
- Parkinson's deep brain stim (monkeys)

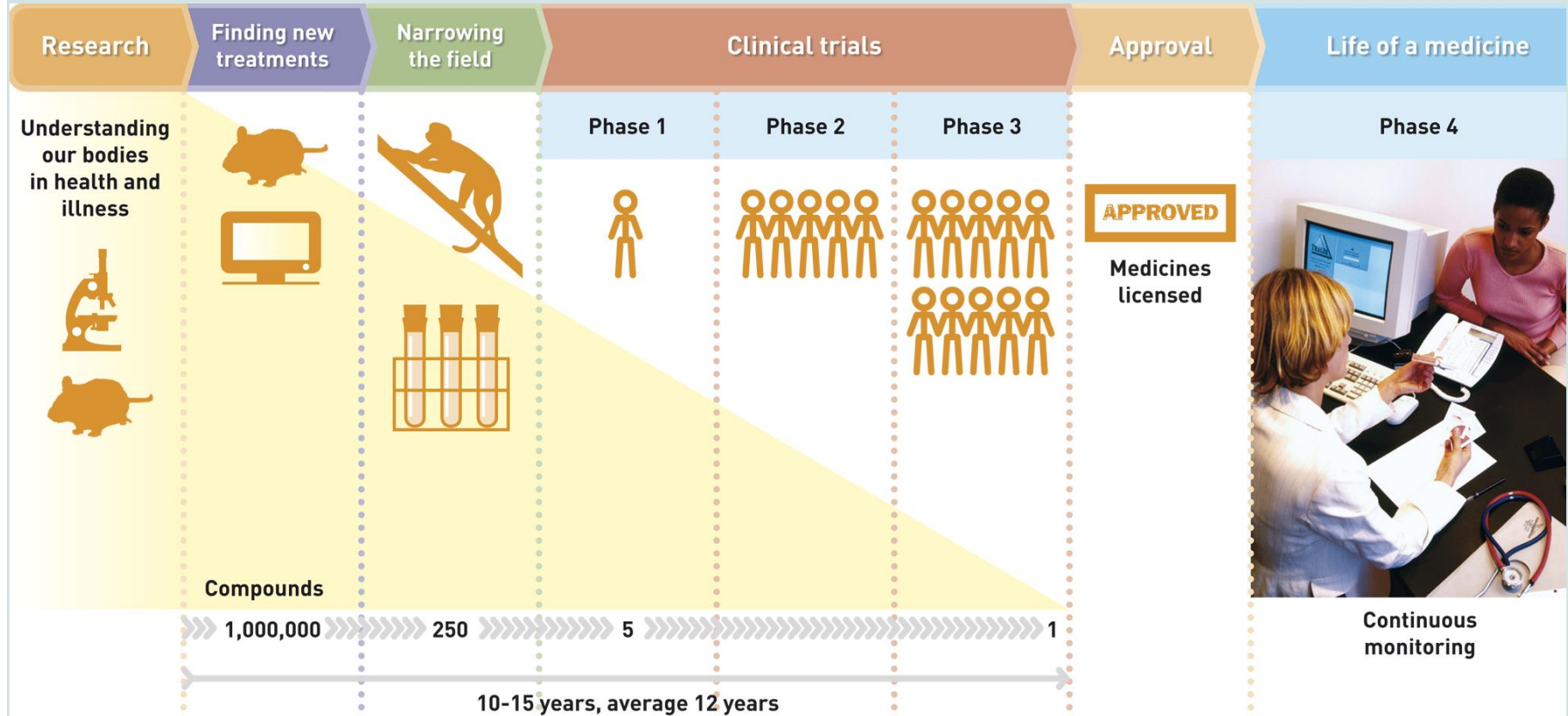


# Animals aren't the same as humans...

**...but they're biologically very similar.**



# The making of a medicine





# Animals in society

Each year in the UK how many animals are:



killed for food?  
2.5 billion



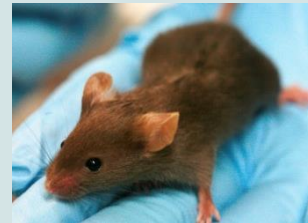
killed as vermin?  
2 million



killed by cars?  
15 million



killed by cats?  
275 million



used in research?  
4.1 million

# Animals and you

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In their lifetime, the average person in the UK will consume:



**1,160  
chickens**



**30 sheep**



**30 pigs**

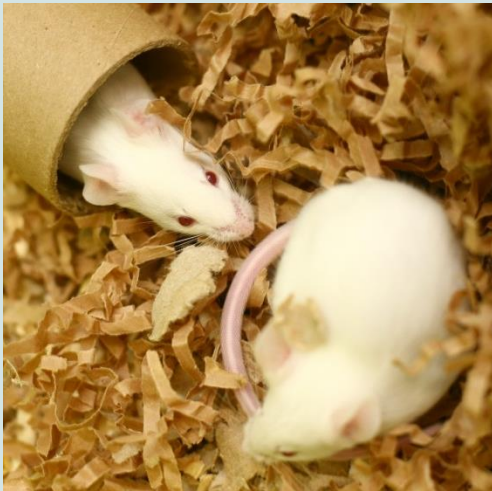


**5 cows**

# Animals and you

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For each person in the UK animal research will use:



**4 mice**



**1 fish**



**1/2 rat**

# The law on animal research

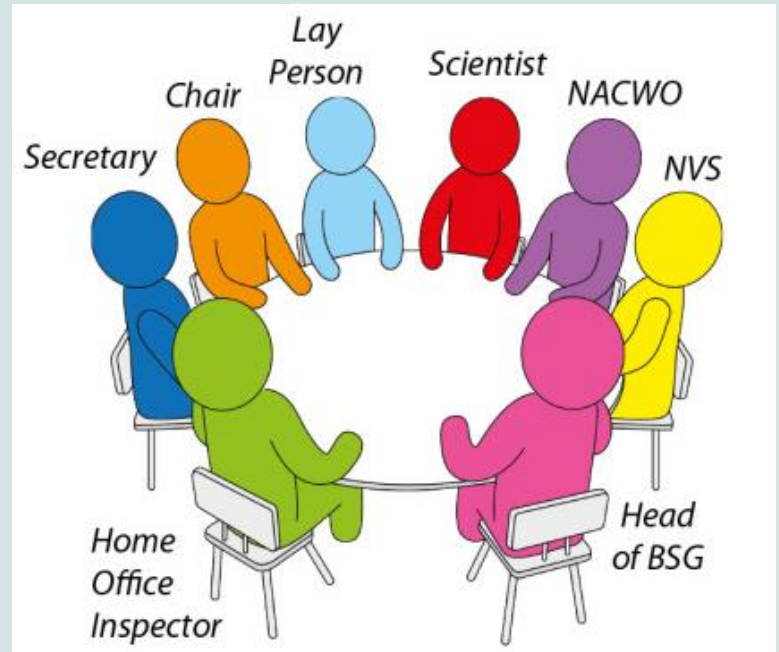
ELIZABETH II



Animals (Scientific  
Procedures) Act 1986

The Government Says:

“We have legislated so experimentation is only permitted when there is no alternative research technique and the expected benefits outweigh any possible adverse effects.”

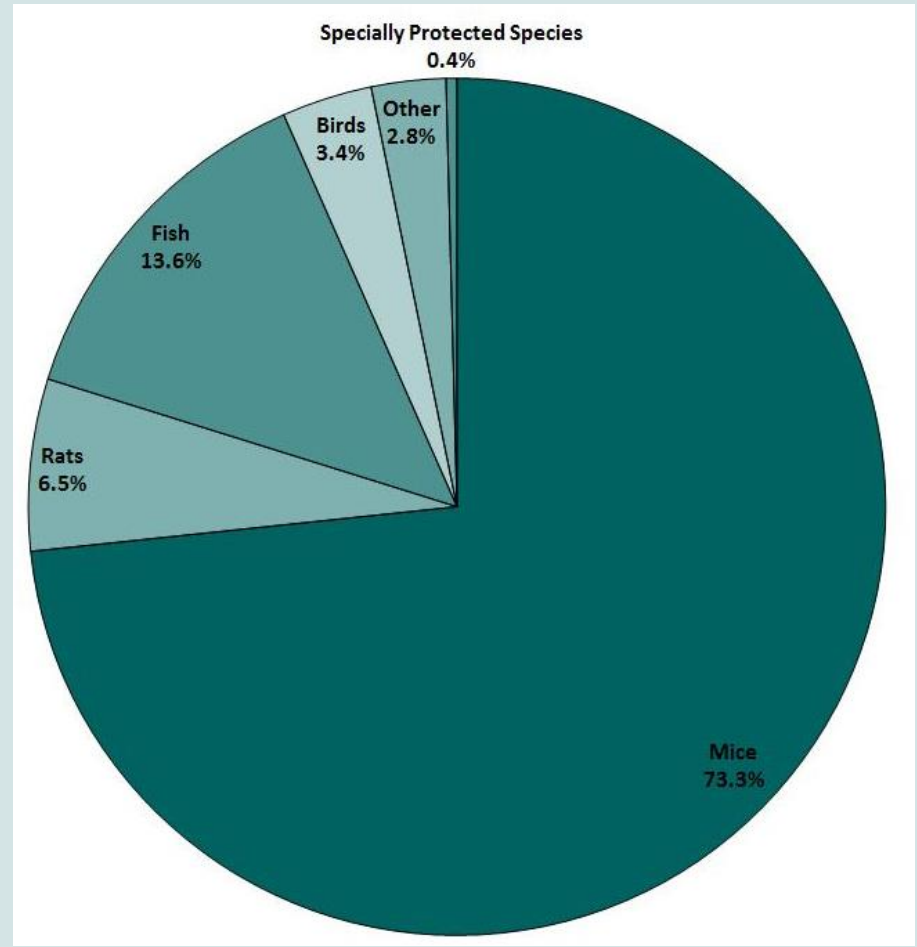




# The 3Rs

- **Replacement**
- **Reduction**
- **Refinement**

[www.nc3rs.org.uk](http://www.nc3rs.org.uk)



**Procedures in Great Britain 2015**

# What refinements do you see?

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# What refinements do you see?

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# What refinements do you see?



# Parkinson's Disease

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# Thank you for listening

More information available at:

- [www.uar.org.uk](http://www.uar.org.uk)
- [www.animalresearch.info](http://www.animalresearch.info)
- [speakingofresearch.com](http://speakingofresearch.com)
- [www.nc3rs.org.uk](http://www.nc3rs.org.uk)

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## Welcome

We aim to provide all you want to know about animal research, whether you are a concerned member of the public or have a special interest.

