# Test Tube Experiment (10-15 mins)

* This activity is suitable for school and community groups and can be found in the [KS3 lesson plan](http://www.e-bug.eu/en-gb/ks3-stis) “STIs”. This activity will help participants understand how easy it is for STIs to be transmitted from person to person, and the importance of barrier methods of contraception to prevent transmission.

## Recap on your sex education ground rules or use the suggested rules provided in the teacher refresher section at the start of the teaching pack/ training manual.

## Use the introduction in the KS3 lesson plan to discuss:

## Explain to the group that there are many ways in which microbes can be transmitted, e.g., touch, sneezing or through contaminated food or drinking water. Highlight that another important route of transmission is through the exchange of bodily fluid, i.e., unprotected sexual intercourse.

## To prevent participants being shy about the topic, ask if they have ever heard of any STIs and if they know what causes them.

## Explain that STIs are generally transmitted through unprotected sexual contact i.e., not using a condom, although some of the infections can be transmitted in other ways such as shared needles and syringes, or skin to skin contact, or from mother to unborn child and through breast milk.

## This is because some STIs are carried in the blood and transmission of this bodily fluid can also transmit the infection.

## EMPHASISE that non-barrier forms of contraception, e.g., the contraceptive pill, DO NOT protect against STIs.

## Note that the terms STI (Sexually Transmitted Infection) and STD (Sexually Transmitted Disease) are equivalent terms. An infection is defined as the invasion of the body by a microbe. While an infection can cause symptoms and complications, altering the normal function of the body, it does not depend upon this by definition. A disease, by contrast, causes specific health complications. STI is used as a broader term.

## Before you begin you will need:

* Lesson plan for KS3 STIs, available on the website link [here](http://www.e-bug.eu/en-gb/ks3-stis)

## Use the following steps as a guide to implement this activity:

### Advanced preparation:

1. Three-quarter fill each test tube with fluid.
2. In one test tube, stir in a teaspoon of starch – make sure to keep track of which test tube this is, but do not tell anyone in the group you have done this.
3. This works best when the test tubes are filled with milk as this will disguise the starch, however, you can use water for the demonstration instead.

### Experiment:

1. Explain to the group that they will be simulating sexual contact by mixing fluids in the two test tubes.
2. Pass the test tubes around the group making sure that everyone gets a fluid filled test tube and make sure to know who has the starch-filled test tube.
3. Ask each participant to mix fluids with three others (for smaller groups reduce exchanges to one or two).
4. Once done, tell the group that one of them carried fluid containing a simulated STI. Test each participant for the STI by adding a drop of iodine to each test tube. If the fluid turns black that person was infected.
5. At this stage, you may wish to discuss how easily the STI unknowingly spreads around the group from a single infection.
6. You may wish to refill the test tubes, again, adding starch to one. This time, cover most test tubes with cling film or cotton wool to represent barrier contraception and repeat the step two to four.
7. Discuss how far the simulated STI spread this time. You should notice a marked reduction in transmission.

**Use the plenary or discussion questions to check participant’s understanding after the activity is completed.**