Infection Prevention and Control (IPC): Sexually Transmitted Infections (STIs)



**Key Stage 4**

# Lesson 6: Sexually Transmitted Infections

A classroom-based activity demonstrates how easily STIs can be transmitted. Using chlamydia as an example, this lesson helps pupils to understand an individuals’ susceptibility to sexually transmitted infection and the potential severity of its consequences.

## Learning Intention

### All pupils will:

* Understand that infections can be spread easily through sexual contact.
* Understand what they can do to protect themselves against STIs.
* Know that not everyone with an STI has symptoms.
* Understand that non-barrier forms of contraception do not protect against STIs.

### Most pupils will:

* Understand how easily infections like chlamydia can spread among young people.
* Begin to explore effective communication around condom use

## Northern Ireland Curriculum Links

### Curriculum Skills

* Communication
* Problem Solving
* Working with Others

### Areas of Learning

Learning for Life and Work (Personal Development statutory content)

* Develop an understanding of how to maximise and sustain their own health and well-being.
* Recognise, assess, and manage risk in a range of real-life contexts.

Science and Technology (including relevant CCEA qualifications)

* GCSE Biology
* GCSE Learning for Life and Work
* GCSE Science Double Award
* GSCE Science Single Award

**Lesson 6: Sexually Transmitted Infections**

## **Resources Required**

### Introduction

#### Per class

* Copy of PP1

### Main Activity: Test Tube Experiment

#### Per pupil

* 3 clean test tubes
* Copy of SW1

*Per class*

* Test tube rack
* Iodine
* Starch Water
* Gloves
* Cling film

### Activity 2: Looking for legitimate sources of information

#### Per pupil

* Copy of SW2
* Copy of TS1

### Activity 3: Safer Sex: Risks, Communication, and Information

#### Per pupil

* Post-it notes
* Pens/pencils

### Activity 4: Raising Awareness about Gonorrhoea

#### Per pupil/group

* Device to create a presentation (optional)
* Pens/ pencils
* Paper

### Activity 5: Condom Negotiation

#### Per pupil

* Copy of SH1
* Copy of SH2
* Copy of SW3

### Extension Activity 1: Sexual Health Bingo

#### Per pupil

* Copy of SW4
* Pens

#### Per class

* Copy of TS2 Box/hat (to draw cards out of)
* Prizes (optional)

### Extension Activity 2: STI Quiz

#### Per pupil

* Copy of SW5

### Extension Activity 2: STI Quiz

#### Per student

* Copy of SW5

## Supporting Materials

## Supporting Materials

* TS1 STI Misconceptions
* TS2 Sexual Health Bingo Caller Cards
* SH1 Let’s Talk About Condoms – Ineffective
* SH2 Let’s Talk About Condoms – Effective
* SW1 Spread of STIs Test Tube Experiment
* SW2 STI Misconceptions
* SW3 Let’s Talk STEM Worksheet
* SW4 Sexual Health Bingo
* SW5 STI Quiz

## Advanced Preparation

Test Tube Experiment

1. Section A
	1. Half-fill a test-tube with milk – one per pupil
	2. Replace one of the test-tubes with starch
2. Section B
	1. Half-fill a second set of test-tubes with milk
	2. Replace one of the test-tubes with starch
3. Section C
	1. Fill 4 test-tubes with milk
	2. Place cotton plugs or cling film over the top of 2 of the test tubes
	3. Fill an extra test-tube with starch
4. Photocopy SW1 for each pupil

NOTE: This activity can be used to demonstrate the spread of other types of infection.

Extension Activity: Sexual Health Bingo

1. Print bingo playing cards (SW4).
2. Print, cut and fold Sexual Health Bingo Caller Cards (TS2) and put in box/hat etc.
3. Organise prizes if required

 **Lesson 6: Sexually Transmitted Infections**

## Key Words

Chlamydia

Condom

Contraception

Gonorrhoea

Safe Sex

Sexually Transmitted Infections (STI)

Health & Safety

For safe microbiological practices in the classroom consult CLEAPSS

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

## **Weblinks**

e-bug.eu/eng/KS4/lesson/ STIs

## Introduction

1. Recap on your sex education ground rules or use the suggested rules provided in the teacher refresher at the start of the pack.
2. Begin the lesson by explaining to pupils 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 encourage pupils to talk about the topic, ask if they have ever heard of any STIs and if they know what causes them. Use the MS PowerPoint activity found at (e-bug.eu/eng/KS4/lesson/STIs) to help explain this.

1. 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.
2. Emphasise that non-barrier forms of contraception, e.g. the contraceptive pill, DO NOT protect against STIs.
3. 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 that alter the normal function of the body, it does not depend upon this to be classed as an infection. A disease, by contrast, causes specific health complications. Therefore, STI is used as a broader term.

## Activity

### Main Activity: Test Tube Experiment

This activity is best carried out as a class exercise. Ask pupils to record their results throughout the experiment on SW1

#### Section A

1. Explain to the pupils that they will be simulating sexual contact by exchanging fluid (representing bodily fluid) between the two test tubes. Pass the test tubes around the class making sure that each pupil gets a test tube full of fluid.

DO NOT let the pupils know that one of the test-tubes contains starch, although the teacher should know who has that test tube.

NOTE: It may be important to select a pupil to take the test tube containing starch who will not be concerned or embarrassed when they realise they have been the ‘carrier’.

1. Tell each pupil that they must exchange fluid with 5 other pupils (for a class smaller than 25 reduce the number of exchanges to three or four). Ask pupils to record this on SW1. Prompt pupils to mix outside their normal group of friends.
2. When finished, tell the class that one of them carried fluid which contained a simulated STI. The teacher should go around the class testing for the STI by adding a drop of iodine to each test tube. If the fluid turns black that person was infected.

This experiment reinforces how easily and inconspicuously and STI can spread from person to person.

#### Section B

1. Repeat the activity by reducing the number of times pupils exchange fluid (have sexual encounters) to one or two. Do the class notice the decrease in the number of infected people?

#### Section C

1. Choose five people from the class to carry out a demonstration. Show the class which pupil has the ‘infected’ test tube. Provide the other four pupils with the remaining test tubes, two of which are covered in cling film.
2. Ask the pupil with the ‘infected’ tube to have a ‘sexual encounter’ with each of the five other pupils in turn. NOTE Do not mix fluids this time, simply let the infected pupil drop some of their fluid into the other test tubes using a dropper, the recipient must mix the sample well.
3. Test each of the pupil samples for an STI using the iodine.
4. Indicate that during these sexual encounters the cling film represented a condom and that these pupils didn’t contract the infection.

Possible discussion points with pupils after this experiment include:

* 1. The ease of transmission: Discuss with the pupils how easy the STI was spread from one person to the next. Were they surprised about any of the ways STIs can spread from person to person?
	2. Reducing the risk of infection: Talk about how far and quickly STIs can spread and how reducing the number of contacts automatically reduces the risk of infection.
	3. Personal responsibility for your own health: It is important that young people are responsible for and feel empowered to look after their own health, this includes their sexual health. We should avoid discussions around ‘blame’ of sexual partners.
	4. Difficult conversations: Imagining a difficult conversation where you have to advise a sexual partner to get checked/treated for an STI - better to prevent infection instead

### Activity 2: Looking for legitimate sources of information (non-lab activity)

Young people are most likely to search the internet for information about pleasure, relationships or symptoms of STIs, or to use sources viewed as legitimate, such as the NHS. Using the internet, ask pupils to bust some common STI misconceptions on SW2. This activity can be adapted to a class discussion. Answers can be found on TS1.

### Activity 3: Brainstormer: Safer sex, Risks and Communication and Information

1. Put four large sheets of paper up around the room, with the following questions written on each sheet:
* What are the risks of having unprotected sex?
* What does safe sex mean to you?
* How can we communicate with each other to make sex safer?
* How can we become more comfortable talking about safer sex with partners and in general?
1. Provide pupils with post-it notes. Ask pupils to write their thoughts and suggestions on the post-it notes and then stick their answers onto the relevant sheets.

### Activity 4: Raising awareness about Gonorrhoea (non-lab activity)

This activity can be conducted in small groups or as an individual task. Making use of classroom devices with internet access and/or textbooks, ask pupils to research the disease-causing microbes in SW3 to fill in the gaps. Answers can be found at TS3. The is a row empty for pupils to select their own pathogenic (harmful) microbe to research. Once completed, this table can serve as a great way to consolidate information.

### Activity 5: Condom Negotiation

1. Building on the discussion using the questions above, reinforce the importance of making individual decisions and discussing sexual decisions and safer sex with partners. This activity focuses on partner communication surrounding decisions to have sex and using condoms to provide good protection from STIs. Ask pupils to practice effective and ineffective communication techniques regarding negotiation of condom use through the following role-play activity.
2. Distribute the ‘Let’s Talk About Condoms: Ineffective’ handout (SH1). After pupils have performed the role-play record feedback on the white board.
3. Repeat the process with the ‘Let’s Talk About Condoms: Effective handout (SH2).
4. As a group discuss the following:
	1. Which communication is more effective?
	2. What makes one communication more effective?
	3. What elements of assertive communication did Tai use?
5. Distribute the Let’s Talk handout (SW3). This final activity gives pupils the opportunity to practice assertive communication regarding condom use.
6. Ask pupils to pair up, agree on the narrative of the conversation and role play to either groups or to the class.
7. Debrief the exercise by asking pupils to reflect upon their responses and to decide if they have demonstrated assertiveness.

## Discussion

Check for understanding by asking the pupils the following questions:

**Who can contract STIs?**

**Answer**: Anyone who has had unprotected sex with someone who has an STI can contract an STI. STIs are NOT exclusive to people who you may consider engage in risky behaviours such as drug use, sex work, multiple sexual partners, and/or anal sex. You only need to have a sexual encounter with an infected person once to contract the infection and that person may not know that they are infected.

**What is an STI?**

**Answer**: Sexually Transmitted Infections (STIs) are infections which are mainly passed from one person to another (that is transmitted) during sexual contact. There are at least 25 different STIs with a range of different symptoms. These diseases may be spread through vaginal, anal or oral sex.

**How can we reduce the risk of contracting an STI?**

**Answer:** There are several ways to prevent contracting an STI. These include:

1. Abstinence: The only sure way to prevent contracting an STI is not to have oral, anal or vaginal sexual contact.
2. Use condoms: Condoms are the recommended preventative measure; however, condoms only protect the skin they cover, any sores or warts found on the genital region not covered by the condom can still spread to another person’s skin.
3. Talk to your partner: Talk to your partner about safer sex practices, for example, using a condom. If you have a new partner discuss the option of you both being tested for an STI before committing to a sexual relationship.
4. People should get tested and have regular check-ups: When sexually active, especially if you change sexual partners, even if you do not appear to have any symptoms, it is still very important to have regular tests and check-ups to make sure you do not have an infection. Not all STIs show symptoms at first, if at all.

Do other forms of contraception, other than the condom, protect against STIs? NO. The other methods of contraception only protect against pregnancy, they will NOT protect against contracting an STI.

**What are the symptoms of an STI?**

**Answer:** Symptoms of sexually transmitted infections vary, but the most common are soreness, unusual lumps or sores, itching, pain when urinating, bleeding between periods and/or an unusual discharge from the genital region.

**Does everyone who contracts an STI show symptoms?**

**Answer:** NO, STIs are a common problem because many people are infected without realising it. In some cases, women do not realise they have an infection until they experience infertility problems in later life.

**Where can I go for further advice and be tested?**

**Answer:** Ask your school nurse or General Practitioner (GP), or visit a GUM clinic. Ordering a home testing kit online is now much more widely available.

## Extension Activities

### Sexual Health Bingo

Reinvention of the classic bingo game using sexual health terms instead of numbers.

Aim: Participants are introduced to sexual health concepts relating to safer sex, STIs and sexual health testing.

Give each participant a Sexual Health bingo playing card (SW4) and pen. Explain game rules. One at a time, draw a Sexual Health bingo caller’s card from the box/hat (TS2). Read the item on the caller’s card and an associated health message. Use the information on the caller’s cards to introduce more information, discuss and check everyone’s understanding. Anyone with this item on their playing card can mark it off with a cross. The first person to cross off a complete horizontal, vertical or diagonal row and call out “Bingo!‘’ wins the game. Alternatively, play can continue until there is a first, second or third place.

When playing this game, be prepared to slow down or speed up the pace of play according to the needs of pupils. Also consider spelling out any words to assist young people in locating them.

Key messages:

* To keep sex safe always use a condom and get tested regularly for STIs
* Condoms are most effective when used properly
* Familiarise yourself with condoms, how to use them and where to get them
* Condoms offer the best protection against STIs and at the same time prevent unplanned pregnancies
* Condoms when used correctly during oral sex, can prevent STIs
* Young people have a right to make their own decisions about sex
* Consent can be given and taken away at any time
* Condoms are strong and flexible
* Most STIs don’t have symptoms – you can’t tell who has an STI
* STI testing is quick, easy, painless and usually free with the NHS/ GUM sexual health clinic
* Most STI tests are self-collected urine tests or swabs
* Young people who are sexually active should be tested for STIs when they change partners or at least every year, even if they have no symptoms
* Talk with your partner/s about sexual health
* Each person is unique and has a right to feel comfortable with who they are

### Guest Speaker

Invite a guest speaker in from a local young persons’ clinic/(school) nurse to give a talk about the free and confidential services they offer. Write up a list of questions you want to ask them in advance.

## Learning Consolidation

Provide groups of 3 to 4 pupils with SW5 Quiz. The team with the most points wins.

1. Recap on your sex education ground rules or use the suggested rules provided in the teacher refresher at the start of the pack.
2. Begin the lesson by explaining to students 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.


## TS1 - STI Misconceptions Teacher Sheet

STI Misconceptions

I can’t get an STI from oral sex

False. Although the risk of getting an STI through oral sex is generally less than from vaginal or anal sex, there is still a risk. The infections most commonly passed on through oral sex are herpes simplex, gonorrhoea and syphilis.

I can get herpes from a toilet seat

False. Herpes simplex virus (HSV) is spread by direct contact of mucous membranes (the soft tissue located at your genitals and mouth) with a herpes sore, saliva, or genital secretions of a person with a herpes infection. Transmission of herpes usually occurs during kissing, or oral, anal, or vaginal sex.

Getting an STI test is painful and embarrassing

False. Many STI tests are as quick and easy as giving a urine sample. Some tests might also involve having blood taken, a visual examination to look for signs of infection, or using a swab (like a smaller, soft and rounded cotton bud) on the genital area. If a swab is needed, some services will offer you the option of using it yourself. Health professionals carry out sexual health check-ups every day – and they don’t look at an STI test as a reflection on your behaviour, but as a responsible health choice.

The pill can protect you from contracting STIs

False. The contraceptive pill is effective against preventing pregnancy. It is not effective against protecting against STIs. People with many sexual partners have STIs False. STIs do not discriminate against the number of partners a person may have. Anyone can get a STI, it doesn’t matter if you have one partner or multiple. STIs can be passed through unprotected sex.

STIs will go away on their own

 False. It is unlikely that an STI will go away by itself. Getting tested is the first step in seeking treatment for an STI. Delaying treatment could lead to unintended long-term consequences.


## TS2 - Sexual Health Caller Cards

STI
\_ \_ \_ \_ \_
STI stands for Sexually Transmitted Infection

Protection
\_ \_ \_ \_ \_
The best form of protection from STIs is condoms

Oral
\_ \_ \_ \_ \_
Condoms can help you stay safe during oral sex

Painless
\_ \_ \_ \_ \_
Getting a sexual health test is painless

Check-up
\_ \_ \_ \_ \_
Getting tested for STIs should be part of your normal health check-up

Sex
\_ \_ \_ \_ \_
If you’re having sex you can keep it safe by always using a condom

Condoms
\_ \_ \_ \_ \_
Condoms are the only form of protection that prevent pregnancy and STIs

Tested
\_ \_ \_ \_ \_
If you’re having sex, stay safe by testing for STIs regularly


## TS2 - Sexual Health Caller Cards

Common
\_ \_ \_ \_ \_
It’s pretty common for someone to have an STI and not know about it

Symptoms
\_ \_ \_ \_ \_
Most of the time, people who get STIs don’t have symptoms

Free
\_ \_ \_ \_ \_
Most of the time, sexual health tests are free

Urine
\_ \_ \_ \_ \_
The most common STI test for young people is a urine sample

Confidential
\_ \_ \_ \_ \_
STI tests are completely confidential

Quick
\_ \_ \_ \_ \_
Getting a sexual health test is quick

Treated
\_ \_ \_ \_ \_
Most STIs can be treated with no dramas whatsoever

Better
\_ \_ \_ \_ \_
If you have an STI, the earlier you start treatment, the better


## TS2 - Sexual Health Caller Cards

Breaks
\_ \_ \_ \_ \_
If a condom breaks during sex, it will no longer protect you from STIs.

Untreated
\_ \_ \_ \_ \_
Infections that are left untreated can lead to long term negative consequences. The sooner you start treatment, the better.

Anyone
\_ \_ \_ \_ \_
Anyone can get an STI, and they may not know they have one! This is why testing is so important.

Plan
\_ \_ \_ \_ \_
Plan with your sexual partner how you will protect yourself from STIs. This may be by using a condom and agreeing to both get tested.

Contact
\_ \_ \_ \_ \_
Sexual contact can result in catching an STI. Testing and using a condom will reduce this risk.

Lubricant
\_ \_ \_ \_ \_
Lubricant can be used to improve the experience of sex. However, make sure you use a water based lubricant to avoid weakening a condom.

Easy
\_ \_ \_ \_ \_
This word is sometimes used negatively to explain why some people might get an STI. But this is absolutely not true. Anyone can get an STI.

The Pill
\_ \_ \_ \_ \_
the pill is a form of contraception that can prevent pregnancy. However, it does not protect against STIs.


## SH1 - Let’s Talk About Condoms example Ineffective handout

Let’s Talk About Condoms

Example 1

Ineffective

Luke and Tai have been dating/going out for several months and have come close to having sex. Luke wants to use protection during sex.

Luke: Tai, could I talk to you about something?

Tai: Sure Luke, we can talk about anything. What is it?

Luke: I want to use a condom, I’m worried that you have an STI.

Tai: Why are you being weird? I’m perfectly healthy. Can’t we just see what happens…

Luke: Ok, I'm sorry. I was just hoping we could talk.

Tai: I want to talk, too. Just not about that. Let's talk about

something else…


## SH2 - Let’s Talk About Condoms example effective handout

Let’s Talk About Condoms

Example 2

Effective

Luke and Tai have been dating/going out for several months and have come close to having sex. Tai wants to use protection during sex.

Tai: Luke, could I talk to you about something?

Luke: Sure Tai, we can talk about anything. What is it?

Tai: I want to have sex but I’m worried about STIs and getting pregnant.

Luke: Same, I’m worried about both of those things as well. I was just afraid of bringing it up first.

Tai: I want us to be prepared when we decide to have sex - you know, to use a condom and get tested beforehand.

Luke: Oh, so you mean you want to use condoms?

Tai: Yeah, I care about both of us. I don't want us to take the chance of getting an STI or getting pregnant. Do you agree?

Luke: Yeah! I do agree, I care about you too and want to have sex with you.



## SW1 - Spread of STIs Test Tube Experiment Student Recording Sheet

Spread of STIs Experiment: Worksheet

Section A

Consider the order of people who you had a ‘sexual encounter’ with and whether or not they had the STI:

|  |  |
| --- | --- |
| Sexual encounter | Were they infected? |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |

How many people in the class contracted the infection? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Did you contract the infection? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Section B

Consider the order of people who you had a ‘sexual encounter’ with and whether or not they had the STI:

|  |  |
| --- | --- |
| Sexual encounter | Were they infected? |
| 1 |  |
| 2 |  |

How many people in the class contracted the infection? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Did you contract the infection? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why was there a reduction in the number of people who contracted the infection this time? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Section C - Results

|  |  |  |  |
| --- | --- | --- | --- |
| Sexual encounter | Were they infected? | Colour after | Reason for colour change |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |

What does the cling film or cotton balls represent?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why did some of the people not get infected even though they had a sexual

encounter with someone who had an STI? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_


## SW2 - STI Misconceptions Worksheet

STI Misconceptions

Using the internet, bust these common misconceptions about STIs. Write down accurate information about each of the following issues and what information source you have used.

I can’t get an STI from oral sex

I can get herpes from a toilet seat

Getting an STI test is painful and embarrassing

The pill can protect you from contracting STIs

STIs will go away on their own


## SW3 - Let’s Talk Worksheet

Let’s Talk

You know that your friend is planning on having sex.

You want your friend to know that it is important to use a condom.

Directions:

In pairs, use what you’ve learned about assertive communication and condoms to complete this conversation.

YOU: “I want to talk to you about condoms. You are planning to use them, aren’t you?”

YOUR FRIEND: “Who are you, the health police? I don’t know…condoms interrupt the mood.”

YOU:

YOUR FRIEND:

YOU:

YOUR FRIEND:

YOU:

YOUR FRIEND:

YOU:

YOUR FRIEND:


## SW4 - Sexual Health Bingo worksheet

Sexual Health Bingo

Symptoms

Check-up

Oral

Tested

Untreated

Common

Free

Protection

Anyone

Condoms

Plan

Contact

Painless

Lubricant

Easy

The ‘pill’

Confidential

Better

Quick

Symptoms

Urine

STI

Treated

Breaks


## SW5 – STI Quiz

Quiz: Sexually Transmitted Infections

Please tick as many answers as appropriate

How can sexual transmitted infections spread? (3 points)

* Vaginal sex
* Anal sex
* Sexting
* Oral sex

Who can contract an STI? (1 point)

* Anyone who has had unprotected sex
* Only single people
* Only older people
* Only men

Do sexually transmitted have symptoms (1 point)

* Always
* Never
* It depends on the infection
* Yes, but only in females

The BEST way to prevent transmission of sexually transmitted infections is: (1 point)

* Contraceptive pill
* Condoms
* Shower after sex
* Monitoring basal body temperature

Which of the following are STIs? (2 points)

* Chlamydia
* Gonorrhoea
* Influenza
* Malaria