

# Workplace Health leadership Group Introducing the Occupational Health Risk Navigator Tool

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# Helping you on a journey to navigate & plot a course through Occupational Health Risks





### Occupational Health Risk Navigator - Home Page <u>https://www.whlgni.org.uk/navigator</u>





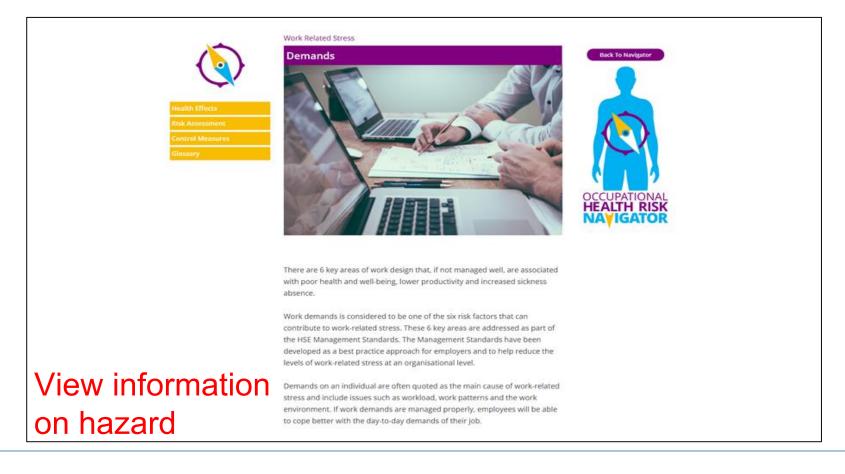
### **Select Health Hazard – Then Work Related Stress**

An estimated 16,000 workers in Northern Ireland suffered from stress, depression or anxiety that or made worse by their work in 2018-19.





# Select Health Hazard – The 6 elements -Select Demands to start..





### Occupational Health Risk Navigator - Home Page <u>https://www.whlgni.org.uk/navigator</u>





# 1.Select Occupational Lung Disorders 2. Select List of Hazard





# **Select Health Hazard – Asbestos**

	Occupational Lung Disorders	
	Asbestos	Back To Navigator
Health Effects		
Risk Assessment		
Control Measures		
Health Surveillance		
Glossary	Asbestos is the name given to a group of naturally occurring fibrous minerals.	
	There are several different types of asbestos however the most common ones	OCCUPATIONAL
	are:	HEALTH RISK
	Chrysotile - white asbestos	NAVIGATOR
	Amosite – brown asbestos	

Asbestos fibres compose of long, thin fibrous crystals with each fibre composing of many microscopic fibrils that can be released into the atmosphere by abrasion and other abrasive processes.

Because of its reinforcing strength, chemical inertness, electrical insulating and thermal insulation properties it was almost a wonder material and for many years was used within the construction sector until 1999. From then of all types of asbestos was banned making it illegal to manufacture, import or supply any asbestos containing materials within the UK due to its serious effects on human health.

To this day it can be found in many areas including:

- · Sprayed coatings on ceilings, walls, beams and columns
- · Asbestos cement water tank, roof sheeting, guttering and down spouts
- Loose fill insulation and lagging
- Asbestos insulation board (AIB) ceiling tiles, partition walls and door panels.
- Toilet seat and cistern

Crocidolite - blue asbestos

# View information on hazard



# Occupational lung disorders - Asbestos -Select Health Effects

### Occupational Lung Disorders



Health Effects	
Risk Assessment	
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### Asbestos

### Health Effects

Asbestos is a Category 1 Carcinogen and inhalation of fibres can over time lead to various serious lung conditions, including asbestosis and cancer.

Where asbestos materials are in good condition and unlikely to be disturbed they do not present a risk. However, where asbestos materials are in poor condition, disturbed or damaged, asbestos fibres may become airborne, which when breathed in can cause serious lung disease.

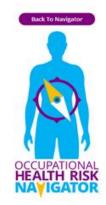
Between 2015 and 2019, 341 people within Northern Ireland have died from asbestos related diseases with asbestosis or mesothelioma being the primary or secondary cause of death. This level of death is likely to continue for the foreseeable future due to historic exposures and the long latency period between exposure and diagnosis.

Asbestos related diseases are caused by breathing in very fine respirable asbestos fibres. As these fibres accumulate in the lungs, four main types of disease may occur:

- Asbestosis is a scarring of the lung tissue caused by breathing in asbestos fibres over a period of years leading to a progressive loss of elasticity and lung function. It is a slowly developing disease with the time between exposure and disease onset typically 15 to 20 years.
- Lung Cancer is a cancer of the lungs. Individuals exposed to asbestos fibres have an increased risk of developing lung cancer which is further greatly increased by smoking. Again the disease has a long latency period of approximately 20 years.

### Now delve further. into the hazard

Diffuse Pleural Thickening/Pleural Plaques is a non-malignant disease due to exposure to significant levels of airborne asbestos fibre. It causes scarring and thickening of the membrane of the lungs. This thickening of the membrane can restrict lung expansion leading to breathlessness.





# Occupational lung disorders - Asbestos – Select Risk Assessment

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HEALTH RISK

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### Occupational Lung Disorders



### Risk Assessment

The Control of Asbestos Regulations (Northern Ireland) 2012 requires employers to carry out an assessment of the risks to a person's health from asbestos that is present within the workplace. It also requires employers to identify whether their premises contains any asbestos through an asbestos survey and record its location in an asbestos register.

A suitable and sufficient risk assessment is required to assess the potential risk of exposure to asbestos, and appropriate steps put in place to prevent or reduce exposure.

Where there are five or more employees a written copy of the risk assessment should be provided and employees informed of any significant findings from the assessment process.

Understanding when employees and others may be exposed to asbestos fibres is important when conducting a risk assessment. All potential sources of exposure should be identified as well as who is likely to be exposed.

A risk assessment should include full details of the work to be carried out and how long the work is expected to take. It should also include:

- · details of the type and quantity of the asbestos;
- · details of the expected level of exposure;
- · details of the controls to be used to reduce exposure, e.g. use of controlled wetting, adequate personal protective equipment (PPE) or respiratory protective equipment (RPE), or use of enclosures;
- · decontamination procedures for tools, equipment and PPE;
- · details on how asbestos waste will be managed and disposed of as hazardous waste;
- · what will be done in the event of an emergency.

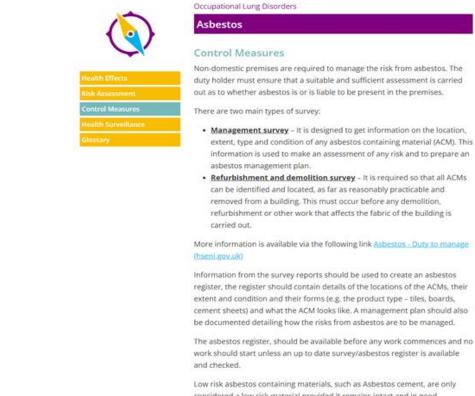
The findings of the assessment should be communicated to employees and anybody else who could be affected. A copy of the risk assessment must be available on site.



# Occupational lung disorders - Asbestos – Select Control Measures

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EALTH RISK



Low risk asbestos containing materials, such as Asbestos cement, are only considered a low risk material provided it remains intact and in good condition. The asbestos fibres are tightly bound in the structural makeup and will not be released unless it becomes damaged or broken.



# Occupational lung disorders - Asbestos -Health Surveillance

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### Occupational Lung Disorders

Asbestos

### Health Surveillance

If any of your employees carry out asbestos removal which is notifiable as licensable work, then you as an employer have a legal duty to ensure that they are under medical surveillance by an appointed doctor. Health surveillance by an appointed doctor is a statutory requirement for licensable work at intervals not exceeding 2 years. Health surveillance is a statutory requirement for notifiable non licensable work and must not exceeding 3 years. Health surveillance is not a statutory requirement for non-licensable/low risk asbestos work.

Health surveillance comprises of ongoing checks of your employee's health. As Asbestos can cause cancer as well as other debilitating illnesses any health effects must be picked up early. This can be done using health surveillance.

The importance of health surveillance is as follows:

- · It detects ill-health effects as early as possible,
- · It provides data to help employers evaluate health risks
- It enables employees to raise concerns about how their work may be affecting their health
- · It can highlight lapses in existing control measures,
- · It can provide an opportunity to reinforce training where necessary.

It goes without saying good personal hygiene and practices and correct use of Personal Protective Equipment, including Respiratory Protection are important safeguards in preventing disease, including asbestos related diseases.

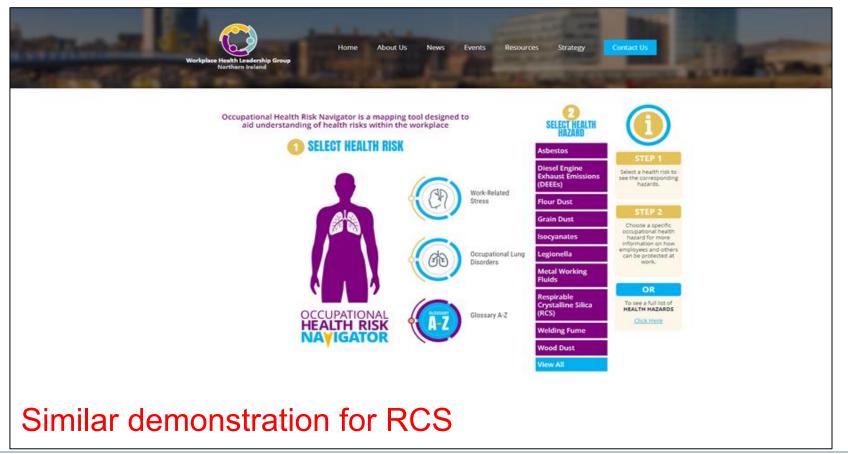
Health surveillance for workers working with asbestos may include:

- · Health questionnaires
- · Lung function tests
- Chest X-rays

Health questionnaires should be used to assess workers' respiratory health before they start employment. At appropriate intervals, as recommended by a

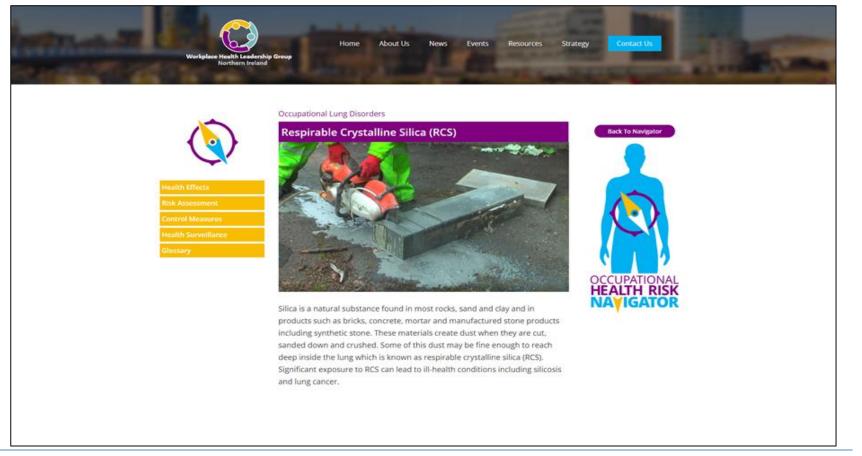


# 1.Select Occupational Lung Disorders 2. Select List of Hazard





# Occupational Lung Disorder – Respirable Crystalline Silica (RCS) Introduction





# Occupational lung Disorders – Respirable Crystalline Silica (RCS) Select – Health Effects



#### Occupational Lung Disorders

### **Respirable Crystalline Silica (RCS)**

### **Health Effects**

### By breathing in respirable crystalline silica dust, a worker could develop the following lung diseases:

Silicosis – a progressive disease which can cause severe breathing problems and increases the risk of lung infections and even death. Silicosis usually follows exposure to Respirable Crystalline Silica (RCS) over many years, but extremely high exposures can cause acute silicosis more quickly. A <u>video case</u> <u>study</u> featuring Terry, a former stoneworker, highlights the impact of silicosis following prolonged exposure to RCS.

Chronic obstructive pulmonary disease (COPD) – a long-term illness where the lungs and airways are damaged making it difficult to get air in and out of the lungs. It includes diseases such as bronchitis and emphysema. Symptoms include shortness of breath (even when walking), a persistent chesty cough and phlegm, wheeze and more frequent and troublesome chest infections. COPD may be caused by breathing in any fine dusts, including RCS. It can be very disabling and is a leading cause of death. Cigarette smoking can make it worse.

Lung Cancer - heavy and prolonged exposure to RCS can cause lung cancer. When someone already has silicosis, there is an increased risk of lung cancer, Recent figures suggest an estimated 25 deaths every year in Northern Ireland due to lung cancer as a result of exposure to silica.

Although the health conditions associated with exposure to RCS are very serious, the health risks from RCS are insignificant when exposure to dust is adequately controlled.

The largest amount of silica someone should be breathing in a day after using the right controls is shown below next to the penny.









# Occupational lung Disorders Respirable Crystalline Silica (RSC) Select - Risk Assessment



### Occupational Lung Disorders Respirable Crystalline Silica (RCS)

### Risk Assessment

Health Effects
Risk Assessment
Control Measures
Health Surveillance
Glossary

Health and safety regulations require employers to carry out an assessment of the risks to the health from hazardous substances present in the workplace. A suitable and sufficient risk assessment is required wherever exposure to respirable crystalline silica (RCS) is likely to occur.

Where there are five or more employees a written copy of the risk assessment should be provided and employees should always be informed of any significant findings from the assessment process.

Understanding when employees and others may be exposed to RCS dust is important when conducting a risk assessment. All potential sources of exposure should be identified as well as who is likely to be exposed, and for how long.

Occupational exposure to (RCS) can occur in many industries including construction, quarrying and manufacturing. Certain activities such as cutting, sanding, abrading, crushing and sweeping are associated with higher levels of dust. Slica is only a risk once it forms fine respirable dust. In general terms, the greater the level of dust in air, the higher the risk.

High dust levels are generally associated with the use of high energy tools, such as cut-off saws, grinders, wall chasers and grit blasters that can produce a lot of dust in a very short time.

Dry sweeping will also generate high dust levels in contrast to vacuuming or wet cleaning that help to keep dust levels to a minimum. High efficiency filters should be used when using vacuum cleaners to prevent harmful respirable dust from re-entering the work space.

Although dust levels are more likely to build up in an enclosed space, it is wrong to assume that levels will always be low when working outside. As stone cutting saws can result in very high levels of dust being generated, they should only be used with water suppression in line with manufacturer's recommendations.





### Occupational lung Disorders Respirable Crystalline Silica (RSC) Select - Control Measures

	Occupational Lung Disorders	
	Respirable Crystalline Silica (RCS)	Back To Navigator
	Control Measures	
Health Effects Risk Assessment Control Measures	Occupational exposure to respirable crystalline silica (RCS) dust can occur in many industries including construction, quarrying and manufacturing. Certain activities such as cutting, sanding, abrading, crushing and sweeping are associated with higher levels of dust.	
Health Surveillance Glossary	When working with materials containing silica first consider if it is possible to complete the task without creating a risk to health. It may be possible to substitute the material with a lower RCS content.	
	Sand blasting with sand (silica) is not permitted and a silica-free abrasive should be used as a substitute.	OCCUPATIONAL HEALTH RISK
	Where exposure cannot be avoided it must be adequately controlled. Control measures may involve the use of engineering controls such as local exhaust ventilation systems (LEV) designed to take harmful dust away from a person's breathing zone.	NAVIGATOR
	Use of a hand-held cut-off saw with a water suppression attachment is a good example of an effective engineering control. More information on controlling the risks from using cut-off saws is available within the Health and Safety Executive leaflet <u>Using cut-off saws - A guide to protecting your lungs</u> (INDG461).	
	Control measures may be very straightforward such as not using compressed air to remove dust from clothing or other surfaces which should not be permitted. Other examples may include changes to the process or the way the task is carried out such as:	
	<ul> <li>Using water to supress dust when cutting,</li> <li>Using vacuums with high efficiency filters instead of sweeping,</li> <li>Using LEV when cutting, sanding, abrading.</li> </ul>	
	Where LEV is used, employers should ensure that employees are trained on how to operate the equipment and that it has been suitably maintained and	



# Occupational lung Disorders Respirable Crystalline Silica (RSC) Select - Health Surveillance



### **Respirable Crystalline Silica (RCS)**

#### Health Surveillance

Occupational Lung Disorders

Health Effects Risk Assessment Control Measures Health Surveillance Glossary Employers may need to arrange for employees exposed to respirable crystalline silica (RCS) to be placed under health surveillance. Health surveillance is collecting and using information about workers' health, related to their work. This can be done using health surveillance.

Where workers are regularly exposed to RCS dust and there is a reasonable likelihood that silicosis may develop, health surveillance must be provided. Examples of high-risk activities, include construction, brick and tile work, ceramics, slate, manufacturing, quarries and stonework.

Health surveillance for silicosis should be determined through discussion with an occupational health provider and may include the uses of health questionnaires and lung function assessments. In some cases a chest X-ray may be undertaken if an occupational health doctor feels it is necessary as part of the clinical investigation of an individual who reports new or worsening respiratory or other symptoms.

The precise form of health surveillance will depend on the particular circumstances of exposure (level, frequency and duration) identified by the risk assessment.

Further detailed information in relation to health surveillance for those exposed to respirable crystalline silica (RCS) is contained within COSHH essential general guidance <u>G404 Health surveillance for those exposed to</u> respirable crystalline silica (RCS).

Employees should always cooperate with their employer or works doctor/nurse if health surveillance is required.

Health surveillance is never an alternative to the proper control of exposure. It is not the same as health screening or health promotion.

More information about choosing an occupational health provider is available by reading Tips for purchasing occupational health services.

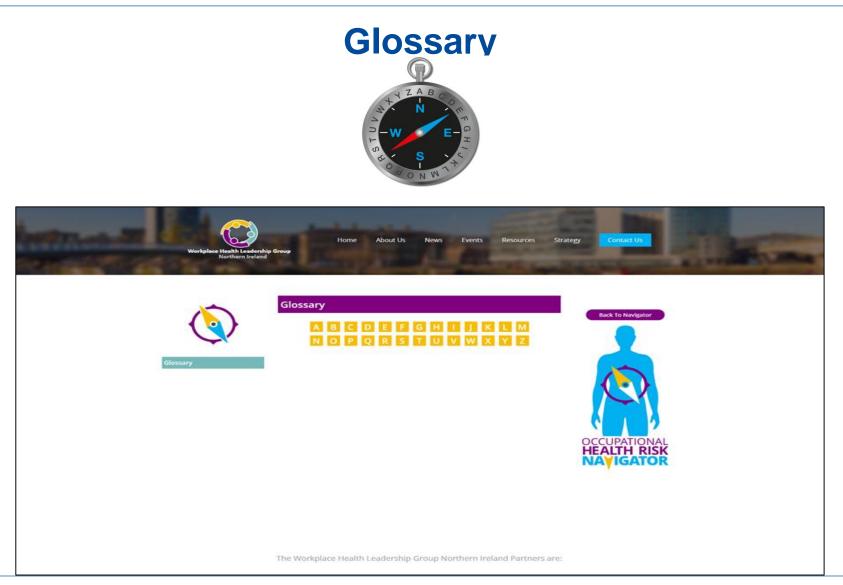




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### **Glossarv – Select Letter A**

### Glossary

### A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



### Allergy

An allergy is a reaction the body has to a particular food or substance. Allergic reactions occur when your immune system reacts to a foreign substance such as pollen, bee venom, pet dander or a food that doesnt cause a reaction in most people. Symptoms may include red eyes, an itchy rash, sneezing, a runny nose, shortness of breath, or swelling.

### Anthrax

A bacterial infection caused by Bacillus anthracis. The infection happens when humans come in direct or indirect contact with infected animals.

### Anxiety

Anxiety is a feeling of unease, like a worry or fear that can be mild or severe. Everyone feels anxious from time to time and it usually passes once the situation is over. It can make our heart race, we might feel sweaty, shaky or short of breath.

### Asbestos

Asbestos is a naturally occurring fibrous minerals. There are several different types of asbestos however the most common ones are; Chrysotile white asbestosAmosite brown asbestosCrocidolite blue asbestosAsbestos fibres compose of long, thin fibrous crystals with each fibre composing of many microscopic fibrils that can be released into the atmosphere by abrasion and other abrasive processes.Because of its reinforcing strength, chemical inertness, electrical insulating and thermal insulation properties it was almost a wonder material and for many years was used within the construction sector until 1999 when it was banned making it illegal to manufacture, import or supply any asbestos containing materials within the UK due to its serious effects on human health.





# **Glossary – Select Letter B**

### Glossary

### A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Bacteria

Bacteria are microorganisms that come in various shapes. They can be spheres, rod shaped or can be the shape of a spiral. Bad bacteria are called pathogenic. They will cause diseases. Good bacteria assist within our digestive system and are very necessary to help our bodies function in a normal way. Within our bodies we have 10 times more bacterial cells than we have human cells.

### Bioaerosols

A bioaerosol is an airborne biological material. Bioaerosols can comprise of bacterial cells and cellular fragments, fungal spores and fungal hyphae, viruses, and by-products of microbial metabolism. Pollen grains and other biological material can also be airborne as a bioaerosol.

### **Biological Monitoring**

Biological monitoring is a way of assessing chemical exposures by measuring the chemical or its breakdown products in a biological sample such as urine, blood or breath.

### Bronchitis

Bronchitis is an infection of the main airways of the lungs (bronchi), causing them to become irritated and inflamed.

### Brucellosis

Brucellosis is an infectious disease caused by bacteria. People can get the disease when they are in contact with infected animals or animal products contaminated with the bacteria. Animals that are most commonly infected include sheep, cattle, goats, pigs, and dogs.

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# **Glossary – Select Letter C**

### Glossary

### A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

#### E.

### Carcinogen

Cancer can be caused by substances, or mixtures of substances, called carcinogens. Occupational cancer can be caused through exposure to carcinogens in the workplace. Carcinogens occur in many forms, they can be solids, liquids, vapours, gases, or dusts and can be breathed in, absorbed through the skin or swallowed.

### **Carpel Tunnel Syndrome**

Carpal Tunnel Syndrome is caused by compression of the median nerve, which controls sensation and movement in the hand. It is not always caused by workrelated factors. Typically, workplace risks are associated with the use of handheld vibrating power tools, such sanders, grinders, chainsaws and other handheld pieces of equipment that vibrate.

### Chronic Obstructive Pulmonary Disease (COPD)

COPD is a major cause of disability and death. Thousands of people die each year from work-related lung diseases and in many cases due to exposures that took place many years before. COPD describes a number of breathing problems where there is damage to the breathing tubes and air sacs within the lung. Breathing in certain dusts, fumes, chemicals or gases in the workplace can cause serious long term lung damage.

### Competence

Competence can be described as the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely. Other factors, such as attitude and physical ability, can also affect someones competence.

### Control Of Substances Hazardous To Health (COSHH)

COSHH is the law that requires employers to control substances that are



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HEALTH RISK

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### **Glossary Select – Letter I**

### Glossary





Ill health may be defined as a condition of inferior health in which some disease or impairment is present. Alternative definition is a state in which you are unable to function properly and without pain. Work related ill health includes physical injuries such as back ache, RSI, hearing loss, asthma and mental ill health such as stress or depression. Ill health retirement is when the person is permanently incapable of continuing their job due to either a physical or mental condition and there are no further treatments or medication or alternative employment available.

### Immune System

The immune system protects the body from external agents such as bacteria, viruses, fungi and toxins. The immune system consists of the bodies organs, cells and proteinswhich work together to give protection. The immune system comprises of two main parts, 1 - the Innate immune system everyone is born with and 2 - the Adaptive system which develops as the body receives new challenges and learns to fight them. These two immune systems work together.

#### Immunosuppressant

Immunosuppressants stop the immune systemor keep it in check. They are used to stop the immune system from damaging healthy tissues and cells. Patients with organ and stem cell transplants take these medicines to prevent transplant rejections. Immunosuppressants are powerful drugs that need to be carefully monitored to avoid potential problems and side effects.

### Infection

An infection is when another organism enters the body and causes disease.Infective agents include viruses, microbes/bacteria, fungi and parasites.Infections can be caused in many ways e.g. directly from a person





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