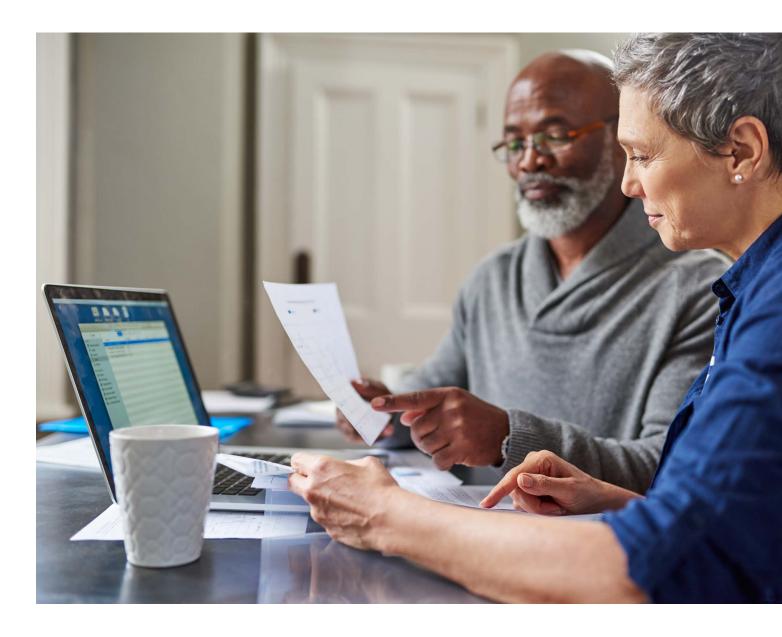


# **Underwriting**annuities

A guide to our underwriting requirements



This is not a consumer advertisement. It is intended for professional advisers and should not be relied upon by private customers or any other persons.

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## An introduction to our underwriting process

Accurate underwriting is essential to providing your clients with the maximum income we can offer.

We aim to provide the highest income we can for all our annuity customers, based on the information they provide, as quickly as possible.

We understand it can be difficult to discuss health issues with your clients. However, as their health and lifestyle have such an impact on the annuity income they could receive, it's important to understand the process, so you can support your clients to be candid about their medical conditions.

With our bespoke in-house underwriting system we aim to provide a guaranteed automated decision in minutes. However, for more complex cases, you can also rely on the 90 years of cumulative experience within our medical underwriting team.

#### In this guide we explain:

- Health and lifestyle factors that impact the underwriting process
- Common medical conditions that we underwrite
- The key underwriting information we need for certain medical conditions

# Health and lifestyle factors that impact our underwriting process



#### The questions we ask

There are a number of common factors that are considered as part of the underwriting process.

These questions are asked during the quotation stage and sent electronically to our underwriting system. The information will form the basis of the annuity quote, so it's important to answer the questions as accurately as possible to receive the best available quote for your client.



#### **Relationship status**

Whether married, in a civil partnership, co-habiting, single, divorced, dissolved civil partnership, separated or widowed.



#### **Postcode**

The postcode of the client's main residence.



#### Height and weight

From these two values we can work out the client's Body Mass Index.



## Blood pressure and cholesterol

We ask whether the client has high blood pressure and/or high cholesterol. If so, we go on to request:

- Date of diagnosis
- Last two readings taken and the dates of the readings
- The name and dosage of any treatment



#### **Drinking alcohol**

We ask how much alcohol your client drinks on average each week. This must be the specific number of units rather than a range of units, for example 24 units, not 20-30 units.

We use the assumptions that 1 unit = ½ pint of beer, lager, cider (normal strength), 125ml wine or a single measure of spirits.



#### **Smoking tobacco**

If your client currently smokes tobacco, we ask:

- The date they started smoking
- Whether they smoke manufactured cigarettes and/ or cigars and how many per day
- Whether they smoke loose rolling tobacco and/or pipe tobacco and how many grams per week

If your client smoked tobacco in the past, we ask:

- The dates they started and stopped smoking
- Whether they smoked manufactured cigarettes and/ or cigars and how many per day
- Whether they smoked loose rolling tobacco and/ or pipe tobacco and how many grams per week



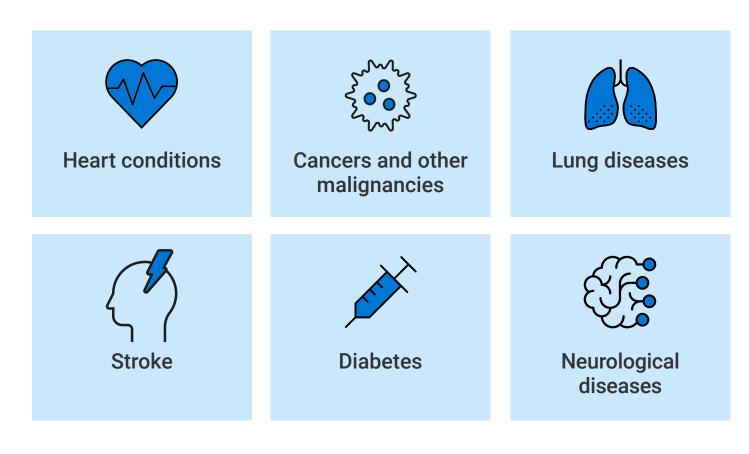
## Past and current medical history status

We ask about symptoms, treatment and whether the health issue is ongoing or not. Details about the medical conditions we underwrite can be found later in this guide.

It is important that an accurate representation of symptoms is made.

# Common medical conditions that we underwrite

The health questions we ask during the underwriting process are grouped into several categories. These categories are:



This list is not exhaustive of all the conditions we underwrite.

For medical conditions not included in this guide, please contact our medical underwriting team.

During the application process, you will only see and need to answer the questions that are relevant to your client's circumstances, as the system works out which questions to ask as you go through the application.

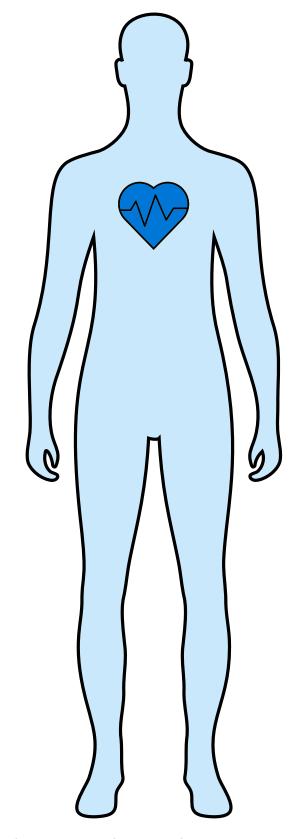
There will be some questions that ask how any pre-existing medical conditions affect everyday living.

In the next section we describe the main conditions in each health category and provide guidance about the key underwriting information we need.

## **Heart conditions**

There are around 7.6 million people living with heart and circulatory disease in the UK: 4 million men and 3.6 million women. There are an estimated 1.4 million people alive in the UK who have survived a heart attack<sup>1</sup>. There are many types of heart conditions that we assess but the most frequently presenting types are:

- · Heart attack
- Angina
- Atrial Fibrillation
- Cardiomyopathy
- Heart failure
- · Aortic aneurysm



 $<sup>^{1}.\</sup> bhf. org. uk/-/media/files/for-professionals/research/heart-statistics/bhf-cvd-statistics-uk-factsheet.pdf$ 



#### **Heart attack – Myocardial infarction**

Blood supply to the heart stops due to complete blockage of the coronary arteries.

The heart is permanently damaged as a result, with the outlook determined by which part of the heart is affected and how much damage is caused.

Multiple heart attacks worsen prognosis, and full details of all events are required.

Extensive damage as a result of heart attack can cause a subsequent heart failure.

#### **Key underwriting information**

- Date of diagnosis for each event
- Full completion of current symptoms questions
- If hospitalised, the date of last event
- Medications
- If treated with surgery:
  - Type of surgery (CABG or stent)
  - Number of arteries treated
  - Date of each surgery
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Angina**

Symptoms of chest pain prompted by exercise or other prolonged effort that causes the heart to need more oxygen-rich blood than is supplied to it by the arteries.

The supply of blood is reduced due to partial narrowing of the arteries due to atheroma – the build-up of scar tissue and fatty deposits in the artery walls.

Left untreated, there is a high risk of a future heart attack, if these blockages completely restrict blood flow through the affected arteries.

- Date of diagnosis for each event
- Full completion of current symptoms questions
- If hospitalised, the date of last event
- Medications
- If treated with surgery:
  - Type of surgery (CABG or stent)
  - Number of arteries treated
  - Date of each surgery
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Atrial Fibrillation (AF)**

Atrial fibrillation is an abnormally fast and inconsistent heart beat caused by irregularities in the heart's conduction system.

As a result, the heart doesn't pump blood effectively, leading to symptoms of chest pain, shortness of breath, fatigue and dizziness.

It can lead to the formation of dangerous blood clots and is a major risk factor for a future stroke. If left untreated, it may also cause heart failure.

#### **Key underwriting information**

- · Date of diagnosis for each event
- Full completion of current symptoms questions
- Medications
- If treated with surgery:
  - Type of surgery (e.g. pacemaker, cardioversion or ablation)
  - Date of each surgery
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### Cardiomyopathy

Cardiomyopathy is a general term that describes disease of the heart muscle, where the chambers of the heart don't pump effectively because they have become damaged. The two most common types are Hypertrophic and Dilated Cardiomyopathy.

#### Symptoms can include:

- Shortness of breath
- Extreme tiredness
- Dizziness and fainting

Complications can include ankle swelling (oedema), abnormal heart rhythms (such as AF described above), heart valve problems and the presence of blood clots as blood collects in the heart chambers.

Severe cardiomyopathy can be a significant and life-threatening disease, although milder forms may be well managed by a combination of medication and lifestyle changes.

- Date of diagnosis
- Exact type of Cardiomyopathy:
  - Dilated (DCM)
  - Hypertrophic (Obstructive; HCM; HOCM)
  - Restrictive Cardiomyopathy
  - Arrhythmogenic Right Ventricle cardiomyopathy (ARVC)
- Full completion of current symptoms questions
- If hospitalised, the date of last event
- Medications
- If treated with surgery:
  - Type of surgery (e.g. pacemaker)
  - Date of each surgery
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Heart failure**

Heart failure is a condition where the heart is unable to pump blood effectively around the body. The heart doesn't fail completely, but its activity and output are significantly reduced.

It's a gradually progressive disease and treatment aims to control symptoms, as it can't usually be cured.

#### Symptoms can include:

- Shortness of breath following activity or exercise, or even at rest in more severe types
- · Persistent fatigue
- Swelling in the ankles and legs

When symptoms occur quite rapidly it is known as acute heart failure. If symptoms develop over several weeks or longer, it's classed as chronic heart failure.

#### **Key underwriting information**

- Date of diagnosis
- · Whether acute or chronic
- Full completion of current symptoms questions
- If hospitalised, the date of last event
- Medications
- If treated with surgery:
  - Type of surgery (e.g. pacemaker, bypass or heart transplant)
  - Date of each surgery
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Aortic aneurysm**

The aorta is the largest artery in the body. It supplies blood from the heart to the rest of the body via the systemic blood circulation.

An aneurysm is a swelling or bulge in the wall of a blood vessel, caused by various diseases or a hereditary condition, that weakens the blood vessel wall.

#### Symptoms can include:

- Abdominal and/or lower back pain
- Dizziness
- · Rapid heartbeat
- Shortness of breath
- · Loss of consciousness

If they are left to grow beyond a certain size, they carry a significant risk of rupture, which can lead to episodes of potentially lifethreatening internal bleeding.

- Date of diagnosis
- Full completion of current symptoms questions
- If hospitalised, the date of last event
- Medications
- If treated with surgery:
  - Type of surgery (e.g. Aortic Aneurysm Repair)
  - Date of each surgery
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Heart valve disorders**

Blood flows through the heart in one direction, through four separate chambers.

A series of heart valves ensures the blood flows through each of these chambers in the correct direction of travel at the correct time and force

#### The heart valves are called:

- Aortic valve
- Mitral valve
- Pulmonary valve
- Tricuspid valve

If these valves get damaged, they can become floppy and won't close properly (valve prolapse/ incompetence/regurgitation/insufficiency), or they become hardened and won't open fully (valve stenosis).

If blood doesn't flow through the heart in a consistent and orderly way, the heart has to work harder to compensate for this inefficiency.

## Over time this can lead to more serious complications:

Longstanding stenosis can lead to the heart becoming enlarged (hypertrophy).

Heart valve regurgitation can lead to both heart failure and/or dilated cardiomyopathy (mentioned above).

Blood can also collect in the heart chambers, which can lead to the formation of blood clots. Clots are a significant risk factor for stroke and coronary artery blockages.

Heart valve disorders can also increase the risk of a serious inflammatory heart disease – endocarditis.

#### Symptoms can include:

- · The detection of an audible heart murmur
- Palpitations
- · Chest pain
- · Shortness of breath
- Fatique

In more extreme cases they can cause swelling to the ankles and feet, dizziness and loss of consciousness.

- · Date of diagnosis
- Full completion of current symptoms questions
- · Which valves are affected
- If hospitalised, the date of last event
- Medications
- If treated with surgery:
  - Type of surgery (e.g. valvotomy, valvuloplasty or replacement)
  - Date of each surgery
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



## Other irregular heart rhythm/conduction disorders (Excluding Atrial fibrillation)

A group of heart disorders in which the heart beats either too quickly (tachycardia), too slowly (bradycardia) or irregularly. They can also be referred to as cardiac arrhythmia or dysrhythmia, or simply irregular heartbeat.

#### **Symptoms can include:**

- Palpitations
- The feeling of a 'skipped' heartbeat
- · Shortness of breath
- · Chest pain
- · Loss of consciousness

Frequently, they will occur in the absence of any presenting symptoms. Some are trivial, but others can lead to serious complications such as stroke, heart failure and cardiac arrest if left untreated.

#### **Key underwriting information**

- Date of diagnosis
- Exact diagnosis, if known (there are many types with different associated outcomes)
- Full completion of current symptoms questions
- If hospitalised, the date of last event
- Medications
- If treated with surgery:
  - Type of surgery (e.g. cardioversion, defibrillation, pacemaker or implanted defibrillator)
  - Date of each surgery
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### Other heart conditions

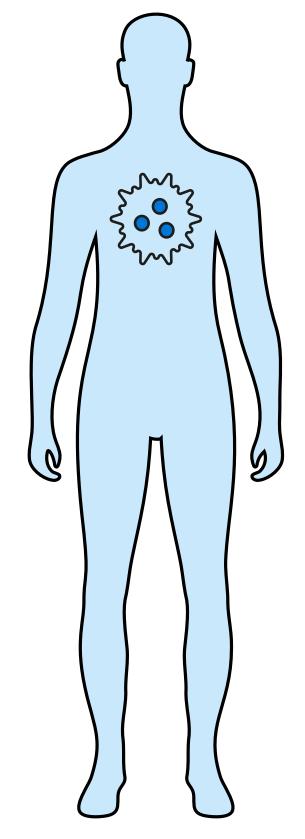
For any other heart conditions not listed, please contact us for further guidance.

## Cancers and other malignancies

There are over 200 types of cancer<sup>2</sup> and other forms of malignancy (such as lymphoma and leukaemia), and patient outcomes are determined by a variety of factors.

For the enhanced annuity product, we assess lots of cancer types, but the most frequently presenting types are:

- · Breast cancer
- Colorectal cancer
- · Prostate cancer
- Skin cancer
- Kidney cancer
- · Lung cancer



<sup>&</sup>lt;sup>2</sup>. macmillan.org.uk/information-and-support/understanding-cancer/what-is-cancer.html



#### **Cancers and other malignancies**

Cancer is a condition where uncontrolled growth and reproduction of cells occurs in a particular organ or area of the body.

How far a cancer has progressed is confirmed by a process called 'staging'. The cancer type and stage of cancer are key rating factors that contribute to determining the annuity amount.

#### Stage 1 localised disease

When these cells invade and destroy healthy cells in the organ of origin only, it is referred to as 'localised disease'.

#### Stages 2 and 3 regional disease

If the cancer spreads beyond the organ of origin into surrounding tissues or nearby lymph nodes, this is referred to as 'regional disease'. These types of cancer won't normally have spread across the diaphragm in the chest.

#### Stage 4 metastatic disease

'Distant spread' or 'Distant Metastases' occurs where the cancer spreads to secondary organs such as the brain, lungs, liver or bone and/or to lymph nodes beyond the diaphragm.

Most cancers can be described by a diagnostic labelling system called TNM – which classifies the cancer in terms of the Tumour size, the Nodal status and whether it has Metastasised.

Some cancers have their own individual staging system, such as Duke (colorectal), FIGO (female gynaecological tumours), Ann Arbor (Hodgkin Lymphoma and Non-Hodgkin Lymphoma) and Clark Level or Breslow Thickness (skin cancer).

#### **Cancer treatment**

#### Cancer can be treated in a number of ways:

- Surgical removal the cutting out (excision) of the solid mass\* of the affected area is often the first approach, if it is considered that the cancer is ultimately curable
  - \* Not applicable in cases of lymphoma or leukaemia.
- Chemotherapy an approach where particular medicines are used with the intention to stop cancer cells reproducing, growing and spreading within the body. Chemotherapy uses:
  - Curative intent can be used on its own to try to cure the underlying cancer
  - Neo-adjuvant approach used prior to surgery (for example to shrink a tumour's size) to enable easier surgical removal
  - Adjuvant approach used after surgery or radiotherapy to reduce the likelihood of the cancer recurring
  - Chemo-radiation combined with radiation to improve the chances of successful outcome
  - Palliative treatment to give relief from symptoms where cure isn't possible
- Radiotherapy the use of radiation to interrupt the reproduction of cancerous cells, stopping their growth and spread within the body. Treatment can take the form of:
  - External beam radiotherapy, where a machine aims radiation beams at the affected area(s)
  - Brachytherapy where radioactive implants are placed inside the body near the site of the cancer for short periods
  - Radioisotope treatment, where radioactive liquids are given by mouth in the form of capsules or drinks, or by injection

 Like chemotherapy, radiotherapy can be used in a number of different clinical settings – for curative intent, chemoradiation, adjuvant and neo-adjuvant therapy and palliative therapy

Unfortunately there are a number of side effects that can be experienced with both chemotherapy and radiotherapy, including fatigue, hair loss, nausea, vomiting and weight loss, diarrhoea or constipation, increased susceptibility to infections, and dry, sore or itchy skin.

#### **Key underwriting information**

- · Date of diagnosis
- Type of cancer (in cancers that have spread, the organ or type originally affected)
- The stage of cancer
- TNM staging if known

or

Disease specific staging if known or

Confirmation of:

- Stage 1 locally invasive
- Stage 2/3 regionally invasive
- Stage 4 distant or metastatic disease
- Treatment details completed and ongoing
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team

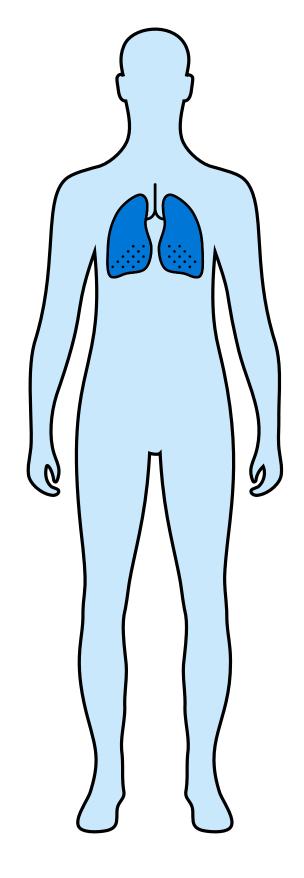


## Lung diseases

Respiratory disease affects one in five people in England<sup>3</sup>.

The most frequently presenting types of lung diseases that we assess are:

- Chronic Obstructive Pulmonary / Airways Disease
- Emphysema
- Asthma
- Bronchiectasis
- · Sleep Apnoea
- · Lung diseases related to occupation



<sup>3.</sup> england.nhs.uk/ourwork/clinical-policy/respiratory-disease/



## Chronic obstructive pulmonary (Airways) disease (COPD/COAD)

Chronic Obstructive Pulmonary (Airways)
Disease is a generic label applied to chronic
and irreversible respiratory disease.

COPD describes the combination of overproduction of mucus and recurrent chest infections (chronic bronchitis), and damage to the structure of the lung tissue itself resulting in obstruction to the flow of air (emphysema) that almost always co-exists.

It is possible that emphysema has been caused by another underlying medical condition (such as cystic fibrosis, or in rare cases a condition called alpha-1 antitrypsin deficiency) but, like chronic bronchitis, the vast majority are caused by prolonged tobacco exposure.

It is characterised by a slowly progressive deterioration in lung function over many years (some studies suggest that diagnosis can be made up to 20 years after the initial deterioration of lung function starts).

As a result, a diagnosis is highly unusual before the age of 40.

Treatments can't alter the long-term progression of the disease (its 'irreversible' nature), but are given to provide relief to acute exacerbations, improve exercise function, and to respond to respiratory infections.

Long-term complications can include heart and respiratory failure.

- · Date of diagnosis
- Confirmation of type COPD/COAD, or emphysema
- Information regarding the current Pulmonary Function (The 'FEV1' result – the amount of air forcibly expired in one second, expressed as a percentage of a theoretical normal value for age)
- Full completion of the symptoms questions
- Medications
- · Details of any hospital admissions
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Asthma**

Asthma is a respiratory disease that is characterised by tightening and inflammation of the airways in the lungs, which can lead to the production of phlegm and mucus.

These reactions cause the airways to become obstructed, resulting in symptoms of shortness of breath, wheezing, tight chest and cough.

It is a reactive disease, in the sense that it is usually triggered by an external cause – such as allergy, viral infection or exercise.

It is a reversible and controllable disease in all but the most resistant cases – typically, the airways obstructions do not persist and frequently resolve spontaneously, or with administration of simple inhaled medications.

Repeated use of oral steroids, and repeating hospital admissions, indicate more severe or troublesome disease.

#### **Key underwriting information**

- Date of diagnosis
- Information regarding the current Pulmonary Function (The 'FEV1' result – the amount of air forcibly expired in one second, expressed as a percentage of a theoretical normal value for age)
- Full completion of the symptoms questions
- Medications
- Details of any hospital admissions
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Bronchiectasis**

Bronchiectasis is a disease where the airways tubes in the lungs (the bronchi and bronchioles) are inflamed with excessive mucus.

As a result, the airways' self-cleaning mechanism stops working, which causes a progressive build-up of infected mucus, which if not cleared leads to both scarring and respiratory infections.

Scarring of the airways is irreversible and requires regular treatment in order to manage symptoms.

Other typical symptoms include fatigue, shortness of breath, and in more severe instances, joint and chest pain.

- · Date of diagnosis
- Information regarding the current Pulmonary Function (The 'FEV1' result – the amount of air forcibly expired in one second, expressed as a percentage of a theoretical normal value for age)
- Full completion of the symptoms questions
- Medications
- Details of any hospital admissions
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### (Obstructive) Sleep Apnoea (OSA)

A disease characterised by either partial or complete temporary blockages of the upper respiratory airway during sleep.

It is frequently diagnosed following complaint by sleeping partners of the common symptom of excessive snoring.

If left untreated, it can lead to excessive levels of daytime tiredness, due to continuing disturbance to a regular sleep pattern.

Obesity is the most prevalent underlying cause, but some cases can be caused by acute episodes of tonsillitis and other upper respiratory infections.

The most common treatment for OSA is a CPAP machine, which provides a continuous flow of air into the airways via a mask worn over the nose and/or mouth.

Weight loss, elevations to mattresses and postural changes in body shape during sleep can also provide some benefit in milder cases.

Effective treatment by CPAP is unlikely to lead to significant daytime symptoms of shortness of breath, chest infections, or use of oxygen or steroids.

Surgery to modify airways restrictions is not commonly seen, given the effectiveness of the CPAP approach.

- Date of diagnosis
- Information regarding the current Pulmonary Function (The 'FEV1' result – the amount of air forcibly expired in one second, expressed as a percentage of a theoretical normal value for age)
- Full completion of the symptoms questions, particularly relating to CPAP use
- Medications
- · Details of any hospital admissions
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team





#### Lung diseases related to occupation

Pneumoconiosis and variants, including but not limited to:

- Asbestosis and pleural plaques
- Aluminosis
- Bauxite fibrosis
- Berylliosis
- Silicosis
- Hypersensitive lung disease
- Pneumonitis
- Allergic Alveolitis

## There are numerous types, including for example:

- Bird breeder's/bird fancier's lung
- Farmer's lung
- Tobacco worker's lung

Pneumoconiosis diseases are caused by dust accumulation in the lungs due to exposure to certain mineral fibres and dusts, inhaled as a by-product of certain occupations.

Hypersensitive lung diseases are a range of inflammatory diseases of the alveoli in the lungs, caused by reactions to inhaled environmental organic dust(s) or spores as a result of occupation or pastime.

The main feature of these diseases is the presence of scarring of the lung tissues that prevents oxygen getting to the bloodstream, whereas obstructive lung disorders such as COPD prevent this oxygen exchange by way of blockages caused by excess mucus secretions.

Acute symptoms can vary – fever, cough and shortness of breath, tightness of chest, rash and headache are all common.

Recurrent and persistent episodes can lead to the more serious group of lung disorders called interstitial lung disease, of which pulmonary fibrosis is the most common.

#### Treatments can include:

- Avoidance of exposure to specific dust antigens; steroid and immuno-suppressant medications; and in more severe disease, oxygen
- Lung transplant is a surgical intervention of last resort if other therapies are unable to stop progression (although this would be unusual)

#### Key underwriting information

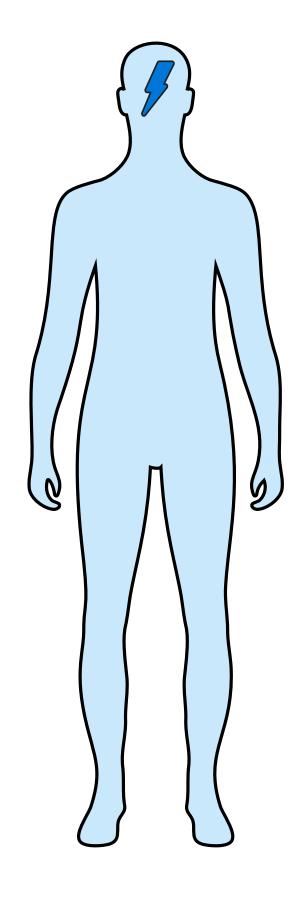
- Date of diagnosis
- Information regarding the current Pulmonary Function (The 'FEV1' result – the amount of air forcibly expired in one second, expressed as a percentage of a theoretical normal value for age)
- Full completion of the symptoms questions
- Medications
- Details of any hospital admissions
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team

#### Other lung conditions

For any other lung conditions not listed here, please contact us for further guidance.

## Stroke

There are over 1.3 million stroke survivors in the UK. The effects of a stroke depend on where it takes place in the brain, and how big the damaged area is<sup>4</sup>.



<sup>4.</sup> stroke.org.uk/what-is-stroke/stroke-statistics



#### Stroke

Most strokes are caused by reduced blood supply to the brain due to prolonged or permanent blockage in the cerebrovascular arteries, or the smaller arteries in the brain itself. These are known as ischemic, or thrombo-embolic, strokes and account for approximately 80% of all strokes.

The other 20% of strokes are referred to as haemorrhagic strokes, and occur when a blood vessel on the surface of the brain bursts.

These strokes cause bleeding onto the brain itself or into spaces between the brain and skull (known as a subarachnoid haemorrhage, or SAH).

#### Stroke can also be referred to as:

- Brain attack
- Brain infarction
- Cerebral haemorrhage
- Cerebral infarction
- Cerebral thrombosis
- Cerebrovascular accident (CVA)
- Lacunar infarct
- Vertebrobasilar artery thrombosis
- Cryptogenic stroke
- Thrombo-embolic stroke

Multiple strokes worsen prognosis, and full details of all events are required.

If not treated promptly, the brain can be permanently damaged as a result of stroke, with the outlook determined by which part of the brain is affected and how much damage is caused.

Symptoms present rapidly and are always most severe at onset – they don't progressively worsen over time. These symptoms can be concentrated in one area of the body or be more widespread.

The consistent outcome is a permanent reduction of brain and associated body function as a result. This is referred to as neurological deficit.

### Some examples of long-term sequelae include:

- Weakness or paralysis in one or more limbs
- Reduced muscular co-ordination affecting gait, speech, swallowing and motor function
- Sensory symptoms affecting smell, taste, touch
- Loss of autonomic body function (e.g. bladder/bowel control)
- Reduced memory and cognition; mood disorder

- · Date of diagnosis of each event
- · Duration of each event
- Type and cause of each event if known
- Details of residual effect/severity of neurological deficit (how does it affect them?)
- Full details of any underlying causes/risk factors identified (e.g. smoking, high blood pressure, Atrial Fibrillation)
- Full activities of daily living completion
- Medications
- Details of any hospital admissions
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Transient Ischemic attack (TIA)**

Transient ischemic attack presents with similar symptoms and signs to those experienced in a 'full' stroke, but the key difference is that symptoms are fully reversible, and resolve within 24 hours.

#### TIA can also be referred to as:

- · Amaurosis fugax
- · Mini-stroke
- Vertebrobasilar insufficiency
- Vertebrobasilar syndrome

Usually, episodic symptoms of TIA will last for less than one hour.

75% of all strokes would have been preceded by TIA; 40% of all TIAs take place in the preceding seven days prior to a stroke.

The symptoms are caused by a temporary reduction in ischemic blood supply to the brain through the cerebrovascular arteries.

Symptoms usually present in one place (focal) and are normally 'negative' in character – a loss of muscle power/ grip, or loss of the ability to speak or swallow. However, loss of consciousness is unusual for a TIA.

'Positive' symptoms, such as pins and needles, are a rare presentation in TIA. Headache is not a typical symptom of either TIA or ischemic stroke.

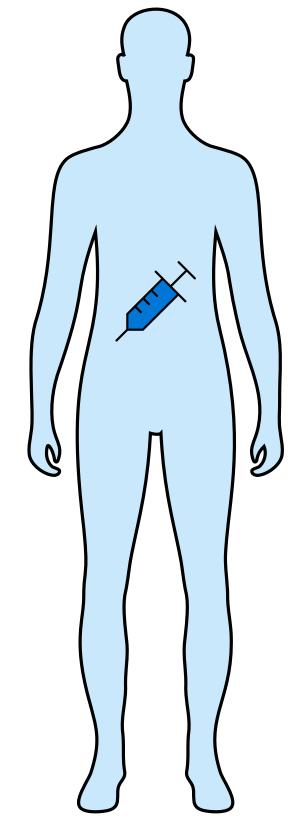
TIA is by nature a retrospective diagnosis. Presenting symptoms can be suggestive of several differential diagnoses, with the obvious alternative being ischemic or haemorrhagic stroke. Speed of access to medical investigations and treatments is essential to give best possible intervention, and thus outlook.

- Date of diagnosis of each event
- Duration of each event
- Type and cause of each event if known
- Details of residual effect/severity of neurological deficit (how does it affect them?)
- Full details of any underlying causes/risk factors identified (e.g. smoking, high blood pressure, Atrial Fibrillation)
- · Full activities of daily living completion
- Medications
- · Details of any hospital admissions
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team

## **Diabetes**

Diabetes is a lifelong condition that causes a person's blood sugar level to become too high. There are two main types of diabetes, Type 1 and Type 2.

Type 2 diabetes is far more common than Type 1. In the UK, over 4.3 million have diabetes, with 90% of adults having type 2<sup>5</sup>.



<sup>&</sup>lt;sup>5</sup>. diabetes.org.uk/professionals/position-statements-reports/statistics



#### Type 1 and 2 Diabetes (Mellitus)

The pancreatic hormone, insulin, allows cells to take up glucose (sugar) from the blood stream, which is used as energy.

Diabetes is a metabolic condition characterised by excessive levels of circulating blood sugar, caused either by insulin-deficiency (typically, Type 1 diabetes) or insulin-resistance (Type 2 diabetes).

The disease causes rapidly increasing levels of blood sugar that lead to the requirement for lifelong insulin replacement. Both types are associated with an increased mortality rate at all ages.

Type 1 diabetes occurs when the body is unable to produce any insulin. This is caused by autoimmune damage to certain cells in the pancreas, usually in early life or adolescence.

It is a less common disclosure for enhanced annuity products than Type 2 diabetes.

Type 2 diabetes is characterised by an increasing cellular resistance to the effects of insulin, which ultimately leads to a relative and progressive decline of insulin production by the pancreas.

In most cases, Type 2 diabetes is linked with being overweight, although unlike Type 1, it presents as an insidious, gradual-onset, progressive disease typical of middle age and older (although it is now presenting at a younger age due to the obesity 'crisis' in younger ages).

Longstanding and/or poorly controlled diabetes can lead to a number of significant medical complications, including nerve damage, eye and kidney disease.

In extreme cases, the disease can cause blindness, renal failure, and can lead to limb amputation.

#### **Key underwriting information**

- · Date of diagnosis
- Disease type
- Treatment method
- Medications (current and previous)
- Details of disease-specific complications, such as diabetic kidney disease
- Details of latest diabetic review including HbA1c readings

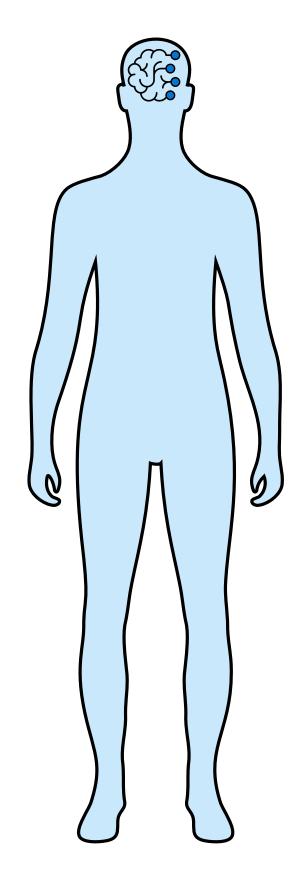
HbA1c is a blood marker that indicates the relative effectiveness (or otherwise) of the patient's control of the disease and compliance with treatment.

## Neurological diseases

There are over 600 types of neurological conditions<sup>6</sup>, some of which are life threatening, with many severely affecting an individual's quality of life.

The most frequently presenting types of neurological diseases that we assess are:

- Multiple Sclerosis (MS)
- Dementia
- Mild cognitive impairment
- Alzheimer's disease
- Vascular dementia
- · Parkinson's disease
- Motor neurone disease



<sup>6.</sup> neural.org.uk/about-us/about-neurological-conditions/



#### Multiple sclerosis (MS)

Multiple sclerosis is a chronic disease of the central nervous system (CNS), typically presenting before the age of 40, although it can be diagnosed at an older age.

The disease is characterised by damage to particular areas of the CNS.

Nerve fibres are surrounded by a protective coating called myelin. This coating allows nerve impulses to flow freely and efficiently to the body's muscles and glands.

MS causes inflammation and scarring (sclerosis) of the myelin coating. This process is known as 'demyelination' and is why MS is frequently referred to as a demyelinating disease.

'Multiple' refers to the scarring that occurs in different sites, which is a fundamental observation needed to make the diagnosis. The disease causes a delay or distortion to the smooth delivery of the nerve impulses, which causes various neurological symptoms.

It typically presents with symptoms that occur, remit and recur, completely or partially, over long periods of time (typically, years rather than months).

Certain symptoms are seen in early phases of disease, while others are only seen once the disease is long established and progressing.

#### Early symptoms can include:

- Visual blurring, temporary loss, double vision
- Sensory tingling, pins and needles, numbness
- Motor fatigue, malaise, clumsiness

#### **Deteriorating disease can show signs of:**

- Rigid movement, poor balance
- Nerve pain
- Tremor of limbs; vertigo
- Autonomic symptoms incontinence; sexual dysfunction; occasional bowel incontinence
- Bulbar symptoms causing speech and swallowing difficulties
- Depression emotional lability/mood variance
- Cognitive impairment and dementia

#### There are four main sub-types:

- Benign type minor symptoms that don't progress over time (about 10% prevalence)
- Relapse remitting (RR) type occurs primarily in younger people and is characterised by acute exacerbations interspersed with disease-free periods (can be many years between relapses). Slowly progresses over time but with only minimal deterioration in disability occurring between attacks (75-80%)
- Secondary progressive type incomplete recovery from the relapses in RR type, leading to a gradual increase in disability over time
- Primary progressive type steadily worsening from the onset of symptoms with no relapses to provide respite from symptoms; constant progression of disease HbA1c is a blood marker that indicates the relative effectiveness (or otherwise) of the patient's control of the disease and compliance with treatment



#### Multiple sclerosis (MS) continued

#### Key underwriting information

- · Date of diagnosis
- Confirmation of the sub-type (most will be relapse-remitting)
- Details of residual, disease-specific complications
- How many attacks in the last five years
- Details of any hospital admissions
- Full activities of daily living completion
- Medications
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### **Dementia**

Dementia is a syndrome of multiple and wideranging cognitive defects, usually as a result of organic brain disease, characterised by progressive deterioration in areas such as:

- Personality and behaviour
- Language and communication
- Thinking, judgement and problem-solving
- Memory

These effects are usually significant enough to interfere with normal social activities, relationships, and the ability to fulfil work requirements (if still working).

- Date of diagnosis
- Type of/cause of dementia (if known)
- Details of any residual effect (how does it affect them?)
- Full details of any hospital admissions
- Full activities of daily living completion
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### Mild cognitive impairment

Mild cognitive impairment is a pre-cursor for dementia, an exact classification hasn't been defined, but it can be summarised as an objectively observed reduction in memory for age and education, but with ADLs and general intellectual function largely preserved. As a result, this differs from dementia.

- Date of diagnosis
- Type of/cause of dementia (if known)
- Details of any residual effect (how does it affect them?)
- Full details of any hospital admissions
- Full activities of daily living completion
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team





#### Alzheimer's disease

Alzheimer's disease is by far the most common form of dementia seen, with approximately 60% of all dementias diagnosed being this type. It is a gradually progressive disease, and currently no treatment exists that can provide a cure.

#### Symptoms can include:

- Increased forgetfulness of names, faces, events and places
- Confusion, disorientation and getting lost
- Regular loss of/misplacement of ordinary day-to-day items (e.g. car keys)
- Progressive reduction in judgement in areas such as awareness of hazards

As the disease progresses, individuals can need prompting to carry out their normal activities of daily life – eating, toileting or getting dressed.

#### **Key underwriting information**

- Date of diagnosis
- Type of/cause of dementia (if known)
- Details of any residual effect (how does it affect them?)
- Full details of any hospital admissions
- Full activities of daily living completion
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### Vascular dementia

Vascular dementia is the second most common dementia to be diagnosed in the UK, accounting for approximately 20% of all dementia cases.

### Major risk factors for vascular dementia can include:

- A history of stroke, transient ischemic attacks, or coronary heart disease
- Poorly controlled blood pressure or cholesterol level
- Longstanding (poorly controlled) diabetes
- History of sleep apnoea
- Physical inactivity, high alcohol consumption, poor diet
- Smoking

The disease affects an individual's ability to concentrate and communicate. Sufferers can struggle with confusion, physical weakness or even paralysis; they can become disorientated, getting lost or wandering off.

Unlike Alzheimer's disease, which tends to progress gradually over time, vascular dementia has a 'stepped' progression, worsening after each incident of an underlying vascular episode.

#### Symptoms can include:

- Single infarct vascular dementia
- · Multi-infarct dementia
- Sub-cortical vascular dementia
- 'Dementia of mixed type'

- Date of diagnosis
- Type of/cause of dementia (if known)
- Details of any residual effect (how does it affect them?)
- Full details of any hospital admissions
- Full activities of daily living completion
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### Other types of dementia Lewy – Body dementia

This disease affects the function of certain neurotransmitters in the brain and shares certain characteristics of both Alzheimer's disease and Parkinson's disease.

Cognitive symptoms such as wandering attention and reduced alertness progress in a gradual manner, like Alzheimer's, although it should be noted that there can be wide variance of performance between individuals.

Physical deterioration will typically include stiff muscles inhibiting movement, a shuffling gait and trembling of limbs. Nightmares and vivid hallucinations are also particular to this type.

#### Frontotemporal dementia (aka Pick's disease)

This type of dementia is caused by damage to the frontal and temporal lobes of the brain, and so affects behaviour, emotional responses and language.

It presents earlier than other forms of dementia, commonly between the ages of 50 and 60.

Marked changes in character are typical of the disease – introverts exhibit extrovert behaviour; communication becomes more challenging because of rude, tactless comments that lack insight and empathy; sufferers develop aggressive and compulsive behaviours. At its most extreme, professional nursing care may be needed after a period of only two years from diagnosis.

#### **Key underwriting information**

- Date of diagnosis
- Type of/cause of dementia (if known)
- Details of any residual effect (how does it affect them?)
- Full details of any hospital admissions
- Full activities of daily living completion
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### Parkinson's disease

Parkinson's disease describes a clinical syndrome of symptoms, characterised by an involuntary tremor, muscle rigidity, slow movement and an increasing instability of posture.

It is caused by the death of nerve cells in a particular section of the brain. These cells produce a particular chemical (dopamine), which plays a major role in controlling body movements in a smooth and regular way and helping to control the flow of information to the brain's frontal lobes.

When dopamine production is reduced, it is likely that cognitive decline will progress over time in relation to attention, memory and problem-solving capability.

It is unclear what causes the disease, although certain situations have been proven to cause symptoms, including:

- Head injury
- Drug-induced Parkinson's (from certain medications used in psychiatric treatment)
- The effect of toxins, such as carbon dioxide, on the brain
- Encephalitis

Treatment is aimed at alleviating symptoms – at present there is no cure for the disease. The disease progresses from mild, localised tremors only, to more generalised tremor and rigid muscles.

In its most severe form, the individual suffers cognitive impairment, and significant impact on daily living, becoming dependent on others.



#### Parkinson's disease continued

#### **Key underwriting information**

- · Date of diagnosis
- Details of any residual effect (how does it affect them?)
- Full details of any hospital admissions
- Full activities of daily living completion
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team



#### Motor neurone disease

Motor neurones are cells that transmit messages from the brain and spinal cord (the Central Nervous System, or CNS) to muscles that control voluntary actions such as breathing, speech, walking and swallowing food. As a general rule, it is rare that sensory nerves (smell, taste, etc) are affected.

When functioning normally, motor neurones relay these messages to the muscles of the arms, leg and torso, so that movement can take place.

The motor neurone diseases are characterised by a progressive wasting of muscles, as a result of degenerative diseases affecting these areas.

There are multiple underlying factors thought to contribute to the disease, and there is no specific marker or diagnostic test. Diagnosis is made by clinical appraisal of the presenting symptoms, and using medical investigations to rule out other potential causes of the symptoms seen.

#### There are five distinct disease sub-types:

- Amyotrophic Lateral Sclerosis (ALS) accounts for 80 - 85% of all diagnosis
- Progressive bulbar palsy 10-15% of all diagnosis
- Progressive muscular atrophy
- Multifocal motor neuropathy
- Primary lateral sclerosis

It may not be unusual for several of these clinical syndromes to present in a mixed form, although one type will usually predominate.

Treatment aims are mainly focused on improving and alleviating symptoms. Treatments can include physio and speech therapy, strengthening exercises and assistance devices.

Only one specific medication is currently licensed in the UK to treat the underlying disease, Riluzole (Rilutek), which gives a small benefit in marginally slowing the progression of the disease.

- Date of diagnosis
- Details of any residual effect (how does it affect them?)
- Full details of any hospital admissions
- Full activities of daily living completion
- If hospital letters are available, please send these with the application form so they can be interpreted by the underwriting team

## Risks

#### **Pension annuity**

- Pension annuities don't have a 'cash-in' value and the total income paid from your client's annuity could be less than the amount used to buy it
- The amount of pension income we'll offer your client will be based on our rates at the time. If a client buys when rates are low, their income will reflect this
- Price inflation can reduce the real value of your client's income over time, depending on the options chosen, which could mean that it doesn't stretch as far in future years
- Once their annuity is in payment your client can't change any of their payment options, even if their circumstances change
- The pension income we offer is based on the information your client provides when they apply
- We may request a report from your client's doctor after their income starts, to check any medical or lifestyle information provided

If we find the report does not support the information they've given us and the income we're paying your client is too high, we may reduce what we're paying your client but their income will not reduce any lower than our standard annuity rate. We'll then take back any overpayments from your client.



#### Where can I find help?

If you are unsure about the details you need to provide, please contact us for further guidance:

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