

Policy

Gastrointestinal (GI) cancer resulting from exposure to asbestos in any process, trade, or occupation involving the application, handling, processing, use, remediation, or disturbance of asbestos is recognized as an occupational disease under the *Workplace Safety and Insurance Act, 1997* (WSIA). Workers with asbestos-related GI cancer due to the nature of their employment are entitled to benefits.

Purpose

The purpose of this policy is to:

- recognize asbestos-related GI cancer as an occupational disease
- establish guidelines to expedite the adjudication of GI cancer claims with work-related exposure to asbestos, and
- ensure affected workers and their survivors receive timely benefits.

Guidelines

Definitions

In this policy,

asbestos means any of the following fibrous silicates: actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite;

asbestos dust-generating activity means any activity that generates airborne asbestos fibres through the handling or processing of friable asbestos, friable asbestos materials (e.g., felt, rope, and textiles), or asbestos-containing ores or minerals, or through the modification of non-friable asbestos materials;

fibres per millilitre (f/mL) means the number of asbestos fibres in a millilitre (mL) of air. This unit of measurement is interchangeable with fibres per cubic centimetre (f/cc);

fibre/mL-years means the cumulative exposure to asbestos, which is the product of exposure concentration (measured in f/mL) and exposure duration (measured in years). For example, one f/mL-year is equivalent to an eight-hour time-weighted average exposure of one f/mL of asbestos, five working days each week, over a period of a year;

friable means material that, when dry, can be crumbled, pulverized or powdered by hand pressure, or that is crumbled, pulverized or powdered;

gastrointestinal (GI) cancer means primary cancer of the esophagus, stomach, small intestine, colon, or rectum;

latency period means the time that elapses between the first exposure and the detection of the disease related to it;

non-friable means material that is not easily crumbled, pulverized or powdered by hand, or that is not already crumbled, pulverized or powdered;

primary manufacturing means any industry in Ontario that used friable asbestos as part of the manufacturing process;

secondary manufacturing means any industry in Ontario that used non-friable asbestos or asbestos-containing materials as part of the manufacturing process;

substantial occupational exposure to asbestos means occupational exposure to airborne asbestos, resulting in a cumulative exposure of at least 25 fibre/mL-years;

year means eight hours each day, five working days each week, over a period of 48 weeks.

Standard of proof in asbestos-related GI cancer claims

The standard of proof that applies to all issues when making initial entitlement decisions under this policy is balance of probabilities. However, when the evidence for and against an issue within a worker's claim is evenly balanced, the worker must be given the benefit of the doubt, see 11-01-13, Benefit of Doubt.

Overview of evidentiary requirements for initial entitlement in asbestos-related GI cancer claims

A worker will have initial entitlement to benefits for asbestos-related GI cancer if the decision-maker determines that the following evidentiary requirements have been met:

- a) The worker has or had a diagnosis of GI cancer.
- b) The worker had substantial occupational exposure to asbestos.
- c) The latency period for the worker's diagnosis of GI cancer is biologically plausible with the date of the worker's first occupational exposure to asbestos or the start date of the first employment in which such exposure occurred.

The details of each evidentiary requirement are provided below.

If these evidentiary requirements are met, the worker's occupational exposure to asbestos will be considered a significant contributing factor in the development of their GI cancer.

Claims failing to satisfy the evidentiary requirements for initial entitlement

Claims that do not satisfy the evidentiary requirements for initial entitlement in this policy will be assessed based on their individual merits.

a) Confirming a GI cancer diagnosis

To have initial entitlement to benefits under this policy, a worker must have, or have had, a diagnosis of GI cancer. Various types of medical evidence can be used to support this diagnosis. While not all types of medical evidence need to be present, the decision-maker must consider and weigh all available medical evidence to determine whether the worker has, or had, a diagnosis of GI cancer.

Sources of a GI cancer diagnosis include the following:

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- **A diagnosis from a qualified regulated health professional:** The opinion of a qualified regulated health professional, typically an oncologist, based on supporting evidence such as diagnostic test results, that the worker has a diagnosis of GI cancer, provided that communicating such a diagnosis is within the health professional's scope of practice.
- **A medical certificate of death:** A legal record of the worker's death and its circumstances, completed at the time of death, that identifies GI cancer as a cause of or contributing factor to the worker's death.

The types of medical evidence that can support a diagnosis of GI cancer, which a decision-maker must consider, where available, include the following:

- **Histopathological examination:** Results from tests, such as endoscopic evaluation with or without biopsy. Examination of a biopsy sample is often the most definitive evidence of GI cancer if cancerous cells are identified.
- **Diagnostic imaging:** Results from a diagnostic imaging test that indicate findings consistent with that of a malignant tumour in the anatomic location relevant to this policy.

b) Substantial occupational exposure to asbestos

A worker will have initial entitlement to benefits if it is determined that their occupational exposure to asbestos significantly contributed to the development of their GI cancer. Not all levels or durations of exposure to asbestos will be sufficient. However, substantial occupational exposure to asbestos, when combined with a biologically plausible latency period, will be considered a significant contributing factor unless it is determined that the worker had such significant non-occupational risk factors that they overwhelmed any occupational exposure to asbestos, rendering it insignificant in the development of their GI cancer.

Substantial occupational exposure to asbestos is defined as cumulative exposure of at least 25 fibre/mL-years, based on the scientific evidence for asbestos-related lung cancer, which provides a reference point for asbestos exposure that doubles the risk of lung cancer. Although a quantitative exposure-response relationship for asbestos and GI cancer has not been established, asbestos-related lung cancer can serve as a reasonable proxy. This policy will be reviewed and potentially revised if future scientific reviews or updated guidelines adjust the threshold for asbestos-related lung or GI cancer.

Historical asbestos exposure in Ontario and GI cancer claim adjudication

The tables in this section are intended to streamline and expedite the adjudication of GI cancer claims based on historical exposure data. They provide a basis for decision-making when specific evidence of a worker's occupational exposure to asbestos may be challenging to obtain due to the passage of time. However, if specific evidence of a worker's exposure to asbestos is available, it will be considered in the decision-making process.

The asbestos exposure and GI cancer claim tables are based on a review of the quantitative exposure data for workers in manufacturing, construction, trades, and other occupations before 1987. This review pertains to the period before the *Regulation respecting Asbestos*

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on Construction Projects and in Building and Repair Operations, Ontario Regulation 654/85, came into force under the *Occupational Health and Safety Act* (effective March 16, 1986). After this date, overall asbestos exposure levels among Ontario workers significantly declined.

Use of the asbestos exposure tables for the determination of cumulative exposure

The tables categorize work activities (e.g., an asbestos-dust generating activity) and roles (e.g., pipefitter, maintenance worker) in Ontario by sector and industry (where applicable), employment period, and levels and duration of asbestos exposure, with entries listed in alphabetical order. These exposure levels range from high (i.e., average of 5 f/mL) to very high (i.e., average of 35 f/mL), dictating the employment duration needed to reach 25 f/mL-years, such as full-time 5 years at 5 f/mL or full-time 8 months at 35 f/mL.

To ensure equivalency, the overall cumulative exposure will be determined by multiplying the level of exposure associated with each role or activity by the proportionally adjusted duration of employment. For example, if a worker engaged in an activity with a high level of exposure for 10 years half-time, the equivalent full-time exposure duration of 5 years would be satisfied, for a cumulative exposure of 25 f/mL-years.

A worker whose employment history satisfies the specific conditions outlined in one of the entries in the tables will be considered to have had substantial occupational exposure to asbestos. However, an exception to the tables may be made if there is more persuasive evidence that the worker's actual occupational exposure to asbestos was not substantial. For example, if it was incidental or negligible in duration or intensity.

Table 1: Asbestos insulation work

| Role | Detailed description |
|--|--|
| <p>Non-sprayed-on asbestos insulation (High exposure – 5 f/mL, at least five years before 1987)</p> | <p>The worker must have been employed in a role that involved non-sprayed-on asbestos insulation work in a non-shipyard setting, such as installing and fastening asbestos-containing insulation materials (e.g., panels, felt, blocks, fastening, lagging), applying asbestos cement, or site cleanup, for a cumulative period of at least five years before January 1, 1987.</p> |
| <p>Sprayed-on asbestos insulation (Very high exposure – 35 f/mL, at least eight months before 1987)</p> | <p>The worker must have been employed in a role that involved sprayed-on asbestos insulation work in a non-shipyard setting, such as the preparation, application, maintenance, removal, or site cleanup of sprayed-on asbestos insulation, for a cumulative period of at least eight months before January 1, 1987.</p> |

Table 2: Primary manufacturing

| Industry | Detailed description |
|---|---|
| <p>Asbestos cement (Very high exposure – 35 f/mL, at least eight months before 1981)</p> | <p>The worker must have been employed in the asbestos cement industry as a hopper or hopper feeder operator for a cumulative period of at least eight months before January 1, 1981.</p> |
| <p>Asbestos cement (High exposure – 5 f/mL, at least five years before 1976)</p> | <p>The worker must have been employed in the asbestos cement industry and engaged in asbestos dust-generating activities for a cumulative period of at least five years before January 1, 1976.</p> |
| <p>Asbestos gypsum and drywall (High exposure – 5 f/mL, at least five years before 1975)</p> | <p>The worker must have been employed in the asbestos gypsum and drywall production industry and engaged in asbestos dust-generating activities for a cumulative period of at least five years before January 1, 1975.</p> |
| <p>Asbestos insulation (Very high exposure – 35 f/mL, at least eight months)*</p> | <p>The worker must have been employed by an asbestos insulation product manufacturer and engaged in one or more of the following activities or roles for a cumulative period of at least eight months:</p> <ul style="list-style-type: none"> • Any activity in a production area including mixing, curing, forming, finishing, warehousing, inspection, packaging, cleaning, or sweeping. • Working in a production area as a millwright, maintenance worker, electrician, pipefitter, or plumber. <p>*If the worker was employed at the Holmes Insulation Plant in Sarnia, the eight-month employment period must have occurred before January 1, 1975.</p> |
| <p>Asbestos insulation (High exposure – 5 f/mL, at least five years)*</p> | <p>The worker must have been employed as an engineer, quality control personnel, or in any other auxiliary role by an asbestos insulation product manufacturer for a cumulative period of at least five years. Throughout this period, the worker occasionally engaged in work in a production area.</p> <p>*If the worker was employed at the Holmes Insulation Plant in Sarnia, the five-year employment period must have occurred before January 1, 1975.</p> |
| <p>Asbestos milling (High exposure – 5 f/mL, at least five years)</p> | <p>The worker must have been employed in the asbestos milling industry and engaged in asbestos dust-generating activities for a cumulative period of at least five years before January 1, 1977.</p> |

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| before 1977) | |
| Asbestos textiles (High exposure – 5 f/mL, at least five years) | The worker must have been employed by a manufacturer with an asbestos textile operation and engaged in asbestos-braiding for a cumulative period of at least five years. |
| Auto friction products (High exposure – 5 f/mL, at least five years before 1981) | The worker must have been employed in the auto friction product industry and engaged in one or more of the following activities for a cumulative period of at least five years before January 1, 1981: <ul style="list-style-type: none"> • An asbestos dust-generating activity. • Buffing, finishing, packaging, or sweeping in a production area. |
| Auto friction products (High exposure – 5 f/mL, at least five years before 1987) | The worker must have been employed in the auto friction product industry and engaged in one or more of the following activities for a cumulative period of at least five years before January 1, 1987: <ul style="list-style-type: none"> • Packaging work. • Operating one or more of the following machines: drill, hopper, mixer, preformer and preform press, or grinder. |
| Ceramics (High exposure – 5 f/mL, at least five years before 1976) | The worker must have been employed in the ceramic industry and engaged in asbestos dust-generating activities for a cumulative period of at least five years before January 1, 1976. |
| Other asbestos products (High exposure – 5 f/mL, at least five years before 1980) | The worker must have been employed by a manufacturer that used friable asbestos as part of the product manufacturing process (e.g., production of asbestos-containing specialty rubber products) and engaged in one or more of the following activities or roles for a cumulative period of at least five years before January 1, 1980: <ul style="list-style-type: none"> • An asbestos dust-generating activity. • Working in a production area as a general maintenance worker, janitor, housekeeper, millwright, or industrial electrician. |
| Pottery products (High exposure – 5 f/mL, at least five years before 1977) | The worker must have been employed as an engineer, quality control personnel, or in any other auxiliary role in the pottery products industry for a cumulative period of at least five years before January 1, 1977. Throughout this period, the worker occasionally engaged in work in a production area. |

Table 3: Secondary manufacturing

| Industry | Detailed Description |
|--|--|
| Asbestos products (Very high exposure, – 35 f/mL, at least eight months before 1983) | The worker must have been employed in an industry using non-friable asbestos-containing products and engaged in cutting asbestos-containing sheets or boards for a cumulative period of at least eight months before January 1, 1983. |
| Asbestos products (High exposure – 5 f/mL, at least five years before 1983) | The worker must have been employed in an industry using non-friable asbestos-containing products and engaged in one or more of the following activities or roles for a cumulative period of at least five years before January 1, 1983: <ul style="list-style-type: none"> • An asbestos dust-generating activity. • Working in a production area as a maintenance mechanic, janitor, housekeeper, millwright, or industrial electrician. |
| Brake and clutch repair and relining (High exposure – 5 f/mL, at least five years before 1987) | The worker must have been employed in brake and clutch repair or relining work and engaged in one or more of the following activities for a cumulative period of at least five years before January 1, 1987: <ul style="list-style-type: none"> • Bonding, clutch inspection, inspecting, riveting and de-riveting brake drums, or sorting used brakes and clutches. • Cleaning or sweeping in a production area. • Working as a brake lining operator, debonding operator, or machinist. |

Table 4: Industries with asbestos as a component of equipment, machinery or mechanical or electrical systems*

| Industry | Detailed description |
|---|--|
| Steel production, foundry, and other metal production (High exposure – 5 f/mL, at least five years before 1982) | The worker must have been employed in steel production, at a foundry, or in other metal production and engaged in one or more of the following activities or roles for a cumulative period of at least five years before January 1, 1982: <ul style="list-style-type: none"> • Working as a furnace bricklayer or mason, routinely engaged in furnace/ladle refractory brickwork. • Working as a furnace teardown labourer. • Working as a patchman, performing door seals or performing tundish and furnace leak repairs. • Working in the production of asbestos-lined sheet metals as specialty products. |

*Production workers in these industries, other than in steel production or similar industries with refractory work, are not expected to have had substantial occupational exposure to

asbestos. For claims involving tradespeople in these specific industries, refer to Table 5 and the subsection "Claims outside of the tables".

Table 5: Various trades and other occupations

| Trade or occupation | Detailed description |
|--|---|
| <p>Asbestos abatement workers (High exposure – 5 f/mL, at least five years before 1987) *</p> | <p>The worker must have been employed as a labourer, helper, or in another asbestos abatement role for a cumulative period of at least five years before January 1, 1987. Throughout this period, the worker routinely engaged in one or more of the following activities:</p> <ul style="list-style-type: none"> • Demolition of buildings or other structures containing asbestos or asbestos-containing material. • Removing asbestos insulation or other construction materials such as drywall. • Bagging and cleaning of work sites after asbestos or asbestos-containing material has been removed. <p>*See Table 1 if the worker was engaged in removing sprayed-on asbestos insulation.</p> |
| <p>Concrete workers (High exposure – 5 f/mL, at least five years before 1987)</p> | <p>The worker must have been employed as a concrete worker for a cumulative period of at least five years before January 1, 1987. Throughout this period, the worker routinely engaged in the mixing of friable asbestos with cement for preparation of concrete or mortar.</p> |
| <p>Drywallers (High exposure – 5 f/mL, at least five years before 1987)</p> | <p>The worker must have been employed as a drywaller for a cumulative period of at least five years before January 1, 1987. Throughout this period, the worker routinely engaged in dry wall sanding, taping, or dry mixing.</p> |
| <p>Miners (High exposure – 5 f/mL, at least five years before 1980)</p> | <p>The worker must have been employed as a miner at Munro Mine, Reeves Mine, Matachewan Mine, or Hedman Mine and Mill for a cumulative period of at least five years before January 1, 1980.</p> |
| <p>Painters (High exposure – 5 f/mL, at least five years before 1987)</p> | <p>The worker must have been employed as a painter for a cumulative period of at least five years before January 1, 1987. Throughout this period, the worker routinely engaged in one or more of the following activities:</p> <ul style="list-style-type: none"> • Dry mixing and preparing joint compounds, putty, or spackles using asbestos. • Hand or pole sanding on surfaces with asbestos-containing materials or sweeping the floor after sanding. |

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| | <ul style="list-style-type: none"> Spraying wall texture coating containing asbestos. |
| <p>Pipefitters (High exposure – 5 f/mL, at least five years before 1987)</p> | <p>The worker must have been employed as a pipefitter for a cumulative period of at least five years before January 1, 1987. Throughout this period, the worker routinely engaged in cutting asbestos boards, punching asbestos boards or sheets, or scraping and brushing flanges.</p> |
| <p>Vehicle mechanics (High exposure – 5 f/mL, at least five years before 1983)</p> | <p>The worker must have been employed as a vehicle mechanic for a cumulative period of at least five years before January 1, 1983. Throughout this period, the worker routinely engaged in the machining of asbestos-containing brake pads or cleaning of brake components.</p> |

Claims outside of the tables

Claims that pertain to unlisted job activities, occupations, trades, or time periods, or that otherwise do not satisfy the specific conditions outlined in the table, must be assessed based on their individual facts and circumstances. This includes an occupational hygiene review of the worker's employment and exposure history to determine whether the worker had substantial occupational exposure to asbestos.

Additional job activities that indicate potential substantial occupational exposure to asbestos

The following additional job activities, if present in a claim, indicate that a worker may have had substantial occupational exposure to asbestos:

- **Employment in shipyards (pre-1975):** The worker worked in close proximity to others performing asbestos insulation work in a shipyard setting.
- **Dockyard workers and longshoremen (pre-1987):** The worker was employed as a longshoreman or in a dockyard, engaged in hauling, lifting, or rigging asbestos or worked in close proximity to others performing asbestos insulation work.
- **Any industry using asbestos-containing refractory materials to line furnaces (pre-1980):** The worker was employed in an industry that used asbestos-containing refractory material to line furnaces and engaged in refractory work.
- **Proximity to asbestos-related activities (pre-1987):** The worker worked in areas near asbestos-containing products being installed, repaired, or removed under conditions generating airborne asbestos.
- **Work activities involving asbestos (pre-1987):** The worker engaged in one or more of the following activities:
 - Cutting, drilling, sawing, demolishing, or tearing out asbestos-containing materials, such as transite, sheets, boards, panels.
 - Cutting, sawing, or installing asbestos-cement pipes or blocks.
 - Prefabrication sheet metal production, where assembly included insulating metal with asbestos.
 - Loading or mixing friable asbestos.

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- Mixing and preparing asbestos-containing mortar or dry mixing friable asbestos with cement for concrete or mortar preparation.
- Installing and repairing ductwork above, or passing or installing cables above, suspended ceiling spaces containing asbestos insulation or sprayed-on asbestos fireproofing.
- Any inspection, maintenance, or repair work that required stripping and removing sprayed-on asbestos insulation.
- Performing scaffolding for asbestos insulators or asbestos abatement projects.
- Using talc or vermiculite with potential asbestos contamination for various applications, such as attic insulation or product manufacturing.

Post-1986 employment

Workers employed after 1986 are less likely to have had substantial occupational exposure to asbestos due to the implementation of strict legislative controls and protective measures, including those established by Ontario Regulation 654/85. However, elevated levels of occupational exposure to asbestos may still have occurred in cases where controls and protective measures were not adequately followed or where a worker's employment spanned both pre- and post-1986 periods.

In claims involving post-1986 employment, an occupational hygiene review should be conducted to determine whether the worker had substantial occupational exposure to asbestos, with particular consideration given to the following:

- Whether there was noncompliance with mandated controls and protective measures, resulting in elevated levels of occupational exposure to asbestos.
- Whether the worker had elevated levels of occupational exposure to asbestos based on their combined pre- and-post 1986 employment periods, if applicable.

c) Biologically plausible latency period

Latency periods for the development of GI cancer may vary based on several factors, including the intensity, duration, and frequency of occupational exposures. If the time elapsed between the date of the worker's first occupational exposure to asbestos – or the start date of the first employment involving such exposure – and the date of diagnosis for GI cancer, falls within the biologically plausible range, the worker's substantial occupational exposure to asbestos will be considered to have significantly contributed to the development of their GI cancer. If the time elapsed falls outside of the biologically plausible range, it is less likely that the occupational exposure significantly contributed to the development of the worker's GI cancer.

Scientific evidence and historical exposure data informing this policy

This policy is informed by the findings of Koehoorn M. et al. (2023) in their report, *Occupational Asbestos Exposure and Gastrointestinal Cancers: Systematic Review and Meta-analysis Report to The Workplace Safety and Insurance Board*. Additionally, other

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relevant scientific studies and available historical asbestos exposure data have also been considered in the development of this policy.

Retroactivity

This policy will apply to any previously decided asbestos-related GI cancer claim in the following circumstances:

- initial entitlement was previously denied in the claim,
- the date of the denial decision falls on or after April 19, 2021, and before October 1, 2024, and
- the denial decision was made by either a front-line decision-maker of the WSIB or an Appeals Resolution Officer, provided a notice of appeal of the final decision has not been filed with the Workplace Safety and Insurance Appeals Tribunal.

Application date

This policy applies to all decisions made on or after October 1, 2024, for all accidents.

Document history

This document replaces 16-02-11 dated October 12, 2004.

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References**Legislative authority**

Workplace Safety and Insurance Act, 1997, as amended
Sections 2, 15, 159

Approval