

# LUNG FUNCTION

## Knowledge Piece



It has long been known there are substances or processes using certain substances which damage a person's lungs, can affect their breathing, impacting their everyday way of life, and can bring a premature end to their life. Many have been primarily identified as risks within a workplace and interestingly, it is only in recent historical terms, where this exposure to risk is acknowledged and accepted by the PCBU as well as the worker and more so, where protecting the worker and measuring the effectiveness of the solutions put in place to protect them, has become a global legal necessity.

One well-known material, asbestos, and its uses have been identified as far back as 2400BC where it was used in Finland to create cooking utensils. Asbestos was widely used in the mid 1800's and the first asbestos mine was opened in 1874 in Quebec. Asbestos was mined and manufactured into all sorts of products, globally, well into the mid-1980's and we even experience it today, where New Zealand still has many classrooms, buildings and homes being renovated, or completely rebuilt to remove the asbestos used to build the facility in the first place.

*"What is fascinating is that from the birth of the industrial revolution it took less than 40 years to identify asbestos was harmful however, it took another 40 years to do something about it!"*

Wayne Upton, Life Care Consultants Clinical Manager – Clinical Advice & Projects

The start of the asbestos revolution was quickly followed by the U.S. reporting an abnormally high risk of early death amongst asbestos workers in 1918 and just 12 years later, the discovery of the disease, asbestosis. By the 1930's, British asbestos-based factories introduced regulations and worker protection. It took only another four years for the link between workplace asbestos exposure and cancer to be discovered, during a time of consistent, rapid, improvement in medical knowledge and

the understanding of the effects of asbestos exposure. Surprisingly however, it was only in 1967 for the first successful personal injury claim from asbestos exposure to be accepted, which was later upheld in 1971.

Today, there are far more known respiratory irritants, processes, and carcinogens, detailed in the form of the Health and Safety at Work Act 2015 and the various Approved Codes of Practice, which are

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## Knowledge Piece



primarily designed to protect the worker, encourage the use of PPE, and motivate best practice for health and safety in the workplace. However, beyond codes of practice and legal acts guiding and advising PCBUs, is the necessity to understand, acknowledge and responsibly adhere to these guidelines, for both the PCBU and the employee, to work towards the effectiveness of minimised risk to life.

Through our partnerships with our customers, Life Care Consultants' assessments, reporting and referrals process are an effective solution-piece to support, protect and monitor the lung function health of your workforce and, help you achieve the wellbeing objectives set out to look after your people.

### **Solutions in place to minimise risk**

Spirometry measurement is an integral part of the health and safety process to protect the worker's lungs and, Life Care Consultants has always included spirometry (lung function) testing in our health services offering, as well as education and reporting to track, monitor and support PCBUs in managing risks their workers are exposed to.

From January to April 2022, we have conducted 37 871 spirometry assessments and have, since 2018, conducted over 80 000, which is an average of more than 16 500 per year. Overall, we see an average 2% deterioration in spirometry results annually (all age groups) and, while this seems minimal, the impact on the livelihood of an individual and their whanau, plus the productivity as a worker, is enough to encourage and motivate PCBUs to use the best PPE suitable for the job, ensure staff know how to use it, are compliant in using it and, as a PCBU offer annual health monitoring and education to proactively minimise risk and the long term effects of exposure, no matter the substance or process your worker is exposed to.

### **Life Care Consultants & our Customers**

We provide clear visibility of results to effectively identify lung function changes, without which the collection of data becomes somewhat obsolete. Good, clear, concise, baseline (first assessment) data, are key to allowing PCBUs and health professionals map the worker's lung function progress and identify any trends, thereby improving the opportunity for early identification and intervention, potentially preventing further and irreversible health deterioration. We have found that 42% of all spirometry assessments conducted are for workers between 19-29 and 30-39 years old, and 63% of

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## Knowledge Piece



these assessments are baseline. This is a strong foundation to use for future trending because these workers will have the longest time in the workforce and longest years of annual health monitoring. As long as the employee works for a PCBU that is our customer, we can monitor that employee's health status throughout their career.

*“Thankfully, when adhered to, modern-day practices protect the worker by identifying the hazard, understanding the risk, putting steps in place to protect the worker, and finally measuring the effectiveness of those steps, in this case, spirometry. Since our inception and introduction of health services, we have offered and encouraged lung function testing, while spirometry is a small piece of the health and safety jigsaw, it is arguably key to ensuring the ongoing health of the worker because without it, there will be no trend!”* Janet Brothers, Managing Director & Founder, Life Care Consultants.

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