



## Information on

## Beryllium

1 March 2005

<b>What is Beryllium?</b>	<p>Beryllium is a hard, grayish metal naturally found in mineral rocks, coal, soil, and volcanic dust. Beryllium compounds are commercially mined, and the beryllium is purified for use in aircraft and space vehicle structures, instruments, x-ray machines, nuclear weapons and reactors, and mirrors. Beryllium compounds may also be used in certain medications and are the basis of the gems emerald and aquamarine.</p> <p>Beryllium ores are used to make specialty ceramics for electrical and high technology applications. Beryllium alloys are used in automobiles, computers, sports equipment (golf clubs and bicycle frames), and dental bridges.</p>
<b>What is the link to De-Rusting and De-Scaling Guns?</b>	<p>The Australian Defence Force utilises de-rusting and de-scaling guns to remove paint. The pneumatic-powered gun works by vibrating a set of metal needles, acting much like a scrubbing brush or sander. The needles are worn down during use.</p> <p>Normally a steel needle is used, which may generate sparks. However, in the past, non-sparking copper-beryllium alloy needles were used in potentially explosive environments such as on aircraft carriers or tankers.</p> <p>Most people who have used de-scaling guns will only have used steel needles. Defence personnel who have only used de-scaling guns with steel needles are not at risk from exposure to beryllium.</p>
<b>Why can beryllium be harmful?</b>	<p>Very few persons exposed to Beryllium-related material will ever develop the chronic lung disease. The New South Wales Dust Disease Board, which collects data on all “dust” diseases in the State, has recorded only one possible case of beryllium-induced lung disease in many decades of collecting statewide data.</p> <p>Beryllium can cause a long-term lung disease (berylliosis) in some people by triggering an immune (allergic) response in the body. In general, significant exposure to beryllium in a respirable form is required for any disease to occur, and symptoms may take up to 20 years to develop even after exposure has stopped.</p> <p>The allergic component of the disease is not necessarily dose-related. On average, fewer than 10% of people with significant exposures develop the immune response, and only some of these will develop any related symptoms.</p> <p>Long-term exposure to beryllium can also cause a slight increase in the risk of lung cancer. The risk is very small in comparison with the risk of lung cancer from smoking.</p> <p>The symptoms of berylliosis include shortness of breath, cough, chest pain, weight loss and fatigue. These symptoms are common, so that most people</p>

	<p>who have these symptoms do not have berylliosis. Occasionally, other areas of the body like the skin, eyes, mouth &amp; nose may develop a rash following contact with dust containing beryllium.</p> <p>There is no preventive or curative treatment available for berylliosis or chronic beryllium disease. There are some respiratory and topical medications that can ease the severity of the condition(s).</p>
<p><b>What is Defence doing?</b></p>	<p>A Beryllium Information Service has now been established. A registrar will take the name, contact details and a record of how the Defence-related exposure to beryllium may have occurred. This service is now available. The contact number is 1800 000 644.</p> <p>In addition, the Department of Defence is determining:</p> <ul style="list-style-type: none"> <li>- the extent to which copper-beryllium alloy needles were used in the past;</li> <li>- over what time frame, and;</li> <li>- what safety related information was known at the time.</li> </ul> <p>Today, regulations and safety standards are in place regarding the management and use of beryllium-related materials, and mitigating the risks of exposure to beryllium-related materials, in the Australian Defence Force.</p>
<p><b>What Should I Do?</b></p>	<p>If you are a current ADF member and you think that you may have been affected by exposure to beryllium, please contact your local ADF health centre to make an appointment and receive advice.</p> <p>Current and former ADF members may lodge a claim with the Department of Veterans' Affairs if they believe that their health has been adversely affected by exposure to beryllium. Call 133 254 or 1800 555 254.</p> <p>If any other individual believes they may have had a Defence-related exposure to beryllium, please contact the Beryllium Information Service on 1800 000 644.</p>

Notes: The sponsor for this Fact Sheet is the Directorate of Preventive Health within Defence Health Services Branch. All comments and questions should be forward to DHSB, DPH, Campbell Park Offices (CP 2-7-154), Canberra ACT 2600 or email [DPH.DHS@defence.gov.au](mailto:DPH.DHS@defence.gov.au)