

# The Medical Surveillance Program for Nanotechnology

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## Who Should Participate

- Workers exposed to concentrations of carbon nanotubes (CNT) or carbon nanofibers (CNF) in excess of the REL (i.e., at above 1 µg/m<sup>3</sup> EC as an 8-hr TWA).
- Workers exposed to more than 0.3 mg/m<sup>3</sup> for ultrafine titanium dioxide
- Workers in areas or jobs that have the potential for intermittent elevated air-borne concentrations of any kind of nanomaterials.

## When Should This Be Done

A basic medical surveillance program should contain the following elements:

- An initial medical evaluation performed by a qualified health professional
- Periodic evaluations
  - symptoms surveys,
  - physical exams, or specific medical tests based on data gathered in the initial evaluation
- Post-incident evaluations
- Periodic analysis of the medical screening data to identify trends or patterns

## Who Should Perform the Medical Evaluations

Oversight of the medical surveillance program should be assigned to a qualified health-care professional who is informed and knowledgeable about potential workplace exposures, routes of exposure, and potential health effects related to nanomaterials.

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## What Should be Included in the Initial (Baseline) Evaluation

An initial (baseline) evaluation should include:

- An occupational and medical history with respiratory symptoms assessed by use of a standardized questionnaire, such as the American Thoracic Society Respiratory Questionnaire
- A physical examination with an emphasis on the respiratory system
- A spirometry test
- A baseline chest X-ray (digital or film-screen radiograph).. A radiologist or B-Reader should clinically interpret all baseline chest images
- Other examinations or medical tests deemed appropriate by the responsible health-care professional

Evaluations should be conducted at regular intervals when:

- An incident has occurred and is deemed appropriate by a responsible health-care professional,
- Based on data gathered in the initial evaluation and ongoing work history,
- Changes in symptoms such as new, worsening, or persistent respiratory symptoms, and
- Process changes occur in the workplace (e.g., change in the quantity of the material used).



If you have any questions or concerns, please contact Occupation Health & Safety (OH&S) at 934-2487.