



Client Health Record #
 Client Surname
 Given Name
 Date of Birth
 Gender
 MFRN
 PHIN

Spirometry Screening Tool & Patient Handout

Refer to Spirometry if you suspect any respiratory diagnosis whether COPD, Asthma or other.

COPD pre-screening: Smoker or ex-smoker more than 40 years old; and answers yes to any question below:

- | | |
|---|--|
| 1 Do you cough regularly? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 2 Do you cough up phlegm regularly? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 3 Do even simple chores make you short of breath? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 4 Do you wheeze when you exert yourself or at night? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 5 Do you get frequent colds that persist longer than those of other people? | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Asthma pre-screening: Answers yes to any question below:

- | | |
|---|--|
| 1 Frequent episodes of breathlessness, chest tightness, wheezing or cough | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 2 Symptoms are worse at night and in the early morning | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 3 Symptoms develop with a viral respiratory tract infection, after exercise, or exposure to aero-allergens or irritants | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Relative Contraindications (For full details see Page 3):

- | | |
|--|---|
| <input type="checkbox"/> Recent surgery within 4 weeks | <input type="checkbox"/> Aneurism – cerebral, thoracic, abdominal |
| <input type="checkbox"/> Pregnant (near term) | <input type="checkbox"/> Hemoptysis |
| <input type="checkbox"/> Hypertension (uncontrolled) | <input type="checkbox"/> Pneumothorax |
| <input type="checkbox"/> Unstable Cardiac Status | <input type="checkbox"/> M.I. within last month |
| <input type="checkbox"/> Cross Infection Concerns | <input type="checkbox"/> Other: _____ |

If contraindications, refer to specialist and/or Pulmonary Function Lab.

OVER →

Spirometry Test Required?

- Yes – pre-test only
 Yes – pre-post bronchodilator spirometry

Note: A medication order must be completed for Salbutamol 4 puffs of 100 mcg by metered-dose-inhaler, totaling a 400 mcg dose

No

AND/OR**Pulmonary Function Test Required?**

Yes No

Internal Referral Initiated?

Yes No

OR**External Referral Initiated?**

Yes No

If Spirometry required: Depending on the reason for doing the test, the patient should be instructed whether or not medications are to be withheld prior to testing, and if so, which medications should be withheld and for how long. It is important to instruct any patient withholding medications that, if needed for symptom relief, a rescue inhaler should be used and the time of use noted so that it can be reported to the technologist conducting the test.

Patient advised to WITHHOLD

short-acting bronchodilators 4-6 hours before testing (i.e., salbutamol) Yes No N/A

short-acting muscarinic antagonists 12 hours before testing (i.e., ipratropium bromide) Yes No N/A

long-acting bronchodilators 24 hours before testing (i.e., Salmeterol, formoterol) Yes No N/A

ultra-long acting bronchodilators 36 hours before testing (i.e., indacaterol, vilanterol, olodaterol) Yes No N/A

long-acting muscarinic antagonists 36-48 hours before testing (i.e., tiotropium, umeclidinium, or glycopyrronium) Yes No N/A

The patient should be instructed to **avoid** the following prior to testing:

- Smoking within at least 1 hour of testing
- Performing vigorous exercise within 30 minutes of testing
- Consuming alcohol within 4 hours of testing
- Eating a large meal within 2 hours of testing
- Wearing clothing that substantially restricts full chest and abdominal expansion

Instruction sheet given and completed with the patient (see last page): Yes No



RELATIVE CONTRAINDICATIONS FOR SPIROMETRY ¹

RELATIVE CONTRAINDICATIONS	MECHANISMS	COMMENTS
Cerebral Aneurysm Recent Brain Surgery Recent Concussion Recent Eye Surgery Significant Glaucoma	Increases in intracranial / intraocular pressure due to decreased venous return	Increases in intraocular pressure during weightlifting ⁵ suggest spirometry testing may lead to clinically significant changes in intraocular pressure in most patients Most experts suggest a three – to six – week recovery period
Recent sinus surgery or middle ear surgery or infection	Increases in sinus and middle ear pressures	There is a risk that forced manoeuvres cause excessive pain or even ear drum rupture in cases of middle ear infection
Pneumothorax Significant aortic aneurysm Recent thoracic surgery Recent abdominal surgery Pregnancy	Increases in intrathoracic and intra-abdominal pressure	Increases in intrathoracic or intra-abdominal pressures may increase blood pressure, but are not expected to increase aortic transmural pressure Postoperative physiotherapy including coughing is actually believed to be beneficial after cardiothoracic and abdominal surgery. Cough generally increases intrathoracic pressures up to 400 cm H ₂ O, compared with 70 cm H ₂ O – 200 cm H ₂ O during Spirometry. The risk is likely low in most patients Lung function tests may increase the risk of early delivery in case of cervical incompetence
Systemic Hypotension or severe hypertension (for example, > 200/120 mmHg) Significant atrial / ventricular arrhythmia Noncompensated heart failure Recent myocardial infarction or pulmonary embolus History of syncope related to forced exhalation / cough	Increases in myocardial demand or changes in blood pressure	Exercise testing one week after myocardial infarction appears to be safe. A shorter period could be appropriate following reperfusion therapy (i.e., angioplasty), whereas caution is necessary in case of persistent myocardial ischemia Prudence is also called in many of these conditions with the use of B ₂ -sympathomimetics, although the risk of a single administration is likely to be minimal
Active Tuberculosis Hepatitis B Hemoptysis or oral bleeding	Infection Control Issues	General infection control measures should be adopted in accordance with Infection Prevention Control Procedures
Inability to follow directions (i.e., confusion, dementia, young age, language barrier)		In some cases, successful spirometry can be obtained with increased coaching. For language barriers request of WRHA Interpreter services

Note: If the patient requires a Pulmonary Function Test, referral forms are located in the EMR.

Canadian Thoracic Society (2013) Spirometry in Primary Care¹



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Patient Instruction Handout for Spirometry Testing

On the date of your test, please withhold the following medications as directed below
(Provider to check off and write name of medications in space provided):

- Short-acting bronchodilator 4-6 hours prior to test: _____
- Short-acting muscarinic antagonist 12 hours prior to test: _____
- Long-acting bronchodilator 24 hours prior to test: _____
- Ultra Long-acting bronchodilator 36 hours prior to test: _____
- Ultra Long-acting muscarinic antagonist 36-48 hours prior to test: _____

If needed for symptom relief, a rescue inhaler should be used and the time of use noted so that it can be reported to the technologist conducting the test.

Please AVOID the following prior to testing:

- Smoking within at least 1 hour of testing
- Consuming alcohol within 4 hours of testing
- Performing vigorous exercise within 30 minutes of testing
- Wearing clothing that substantially restricts full chest and abdominal expansion
- Eating a large meal within 2 hours of testing

Referring Provider (please contact if you have questions):

Referring Provider Name: _____

Address: _____

Phone number: _____