Update 2013: revision of the 2011 version  

ACUTE COUGH  

NHG GUIDELINE (summary) M78  

TERMS  

Acute cough: cough lasting less than three weeks.  

DIAGNOSTIC RECOMMENDATIONS FOOD ALLERGY  

History  

★ Determine the degree of urgency during a (telephone) consultation:  
- **Warning symptoms in young children:** being severely ill (including fever, feeding problems, drowsiness, persistent crying, tachypnoea), severe dyspnoea, periods of apnoea (in young infants);  
- **Warning symptoms in older children and adults:** being severely ill (fever, tachypnoea and/or confusion or drowsiness), severe dyspnoea, haemoptysis, pain linked to breathing;  
- Age < 3 months or > 75 years.  
★ Ask about the cause:  
- nature of the cough, dyspnoea or wheezing, barking cough and whooping fits of coughing possibly followed by vomiting;  
- duration of the symptoms, recurrent cough symptoms (asthma, COPD);  
- additional symptoms (ENT, fever, general) consistent with asthma, COPD, an upper respiratory tract infection or influenza;  
- environmental factors: smoking, contact with diseased birds (psittacosis) or other animals (Q fever);  
- recent travel (penicillin-resistance, legionella);  
- use of medication such as ACE inhibitors, other factors such as foreign body aspiration.  
★ Determine what the request for assistance is and finally pay attention to any relevant co-morbidity.  

Considerations during the telephone consultation  

Evaluate in the short term in the case of: warning symptoms; age < 3 months or > 75 years; relevant co-morbidity; fever > 3 days or renewed fever after being afebrile for several days; shivering; increased dyspnoea and/or wheezing.  

Physical examination  

★ **Extent of illness in children:** fever, tachypnoea, intercostal retractions, nostril flaring, tachycardia, skin colour (pale, cyanotic), reaction to surroundings (for example, drowsy or inconsolable crying) and signs of dehydration;  
★ **Extent of illness in adults:** fever, tachypnoea, tachycardia, signs of hypotension and changes in consciousness;  
★ Auscultation (and percussion if indicated) of the lungs;  
★ Further investigations based on the history.  

Additional investigations  

★ No added benefit in most patients.  
★ CRP: in moderately ill adult patients with several general and/or localised symptoms of disease.  
★ Chest X-ray: with persistent uncertainty, lack of (speed of) recovery and if other conditions are suspected.  
★ Consider additional diagnostics for specific pathogens if recovery does not take place or if a disease with obligatory reporting is suspected.  

Evaluation  

Uncomplicated respiratory tract infection  
Acute cough without indications for a complicated respiratory tract infection and without other risk factors for a complicated course (refer below).  

Complicated respiratory tract infection  
Probability diagnosis pneumonia: patients with acute cough and:  
★ characteristics of being severely ill, such as tachypnoea, tachycardia, hypotension (SBP < 90, DBP < 60 mmHg) or confusion;  
★ being moderately ill and:  
- unilateral auscultatory abnormalities (absence of auscultatory abnormalities does not rule out pneumonia);  
- CRP > 100 mg/L in moderately ill adults; CRP > 20 mg/L almost certainly rules out pneumonia. Clinical presentation and presence of risk factors determine the management for CRP of 20 to 100 mg/L.  
- an infiltrate on the chest X-ray;  
- a course > 7 days with fever and coughing (without abnormalities upon physical examination).  
Other risk factors for a complicated course:  
★ age < 3 months or > 75 years;  
★ relevant co-morbidity (in children particularly heart and lung conditions, except for asthma; in adults particularly heart failure, more severe forms of COPD, diabetes mellitus (particularly with use of insulin), neurological conditions, severe renal insufficiency, impaired immune system).
The following also result in (an increased risk of) a complicated course:

- children with moderately severe or severe croup;
- infants with bronchiolitis and one or more warning symptoms;
- (suspected) pertussis in a patient from a family with non-vaccinated or incompletely vaccinated children < 1 year old or a woman who is > 34 weeks pregnant.

**Cough as a result of an uncomplicated respiratory tract infection usually goes away without treatment, but can last for two to six weeks.**

- Discourage (passive) smoking and repeated clearing of the throat.
- There is no benefit of antibiotics to alleviate or shorten the disease symptoms of pertussis.
- Croup without severe shortness of breath generally dissipates within several hours without any specific measures. The effectiveness of steaming has not been demonstrated.
- A child with bronchiolitis will usually improve spontaneously within three to seven days. Severe or progressive shortness of breath, brief spells of apnoea and poor feeding are reasons to seek immediate contact with the general practitioner.

**Drug treatment**

**Uncomplicated respiratory tract infection**

- Cough medicines and antihistamines are not recommended. Efficacy of inhalation drugs has not been demonstrated sufficiently.
- A watchful waiting policy is acceptable for mild croup or bronchiolitis.

**Complicated respiratory tract infection**

Prescribe antibiotics for patients with pneumonia:

- in children: amoxicillin 30 mg/kg in 3 doses, for 5 days; in the case of hypersensitivity, azithromycin 10 mg/kg once daily for 3 days;
- in adults: amoxicillin 500 mg 3 times a day for 5 days; in the case of hypersensitivity, doxycycline 200 mg once daily on the first day, followed by 100 mg once daily thereafter for 6 days;
- in pregnant women and women who are breastfeeding: amoxicillin 500 mg 3 times a day for 5 days; in the case of hypersensitivity, erythromycin 500 mg 4 times daily for 7 days;
- in the case of insufficient improvement after 2 days on amoxicillin in a patient who is not severely ill: replace amoxicillin with doxycycline, or another drug taking into consideration any risk of a specific pathogen.

**Specific circumstances or conditions**

- Areas where Q fever is endemic: in adults: doxycycline 100 mg 2 times a day, for 14 to 21 days; in children: trimethoprim-sulphamethoxazole; also refer to the Q fever dossier on the NHG website.
- Risk factor for legionella pneumonia: consider doxycycline and consult with the specialist.
- Recent stay in a country with a high percentage of penicillin-resistant pneumococci: start amoxicillin and check after 24 to 48 hours.
- Pertussis: anti-microbial treatment is only indicated for prevention of secondary cases of disease if there are infants or heavily pregnant women in the immediate surroundings: in children: azithromycin 10 mg/kg once daily for 3 days; in adults: azithromycin 500 mg once daily for 3 days; with pregnancy and lactation: erythromycin 500 mg 4 times a day for 7 days.
- Moderately severe croup: single dose of dexamethasone (0.15 mg/kg) oral/intramuscular or 2 mg budesonide by jet nebuliser.
- Bronchiolitis: in the case of dyspnoea, consider a trial treatment with a beta-sympathicomimetic if it is difficult to distinguish between bronchiolitis and a (first) asthma attack.

**Check-up and referral**

- Pneumonia: Check a severely ill patient within 24 hours or refer immediately (based on clinical assessment).
- Monitor a patient who has recently been to a country with a high incidence of penicillin-resistant pneumococci after 24 to 48 hours and consult with the pulmonologist, internist-infectious disease specialist or medical microbiologist in the case of inadequate clinical improvement.
- In all other cases, instruct the patient to seek (telephone) contact if improvement has not occurred within 3 days of starting the course of antibiotics.
- Refer the patient if anti-microbial therapy does not result in adequate improvement.
- Request a chest X-ray if the symptoms of cough have not disappeared after 6 weeks.

**Croup**

- Moderately severe: monitor after half an hour and refer if corticosteroid treatment does not result in adequate improvement.
- Severe croup: refer to the paediatrician immediately.

**Bronchiolitis**

- Monitor daily for the first few days and refer if warning symptoms are observed.
- Refer children with acute cough and fever < 1 month old and in the case of suspected foreign body aspiration.
- Consult a specialist in the case of suspected legionella pneumonia. Refer in the case of suspected TB, Q fever in pregnant women or patients with a severe cardiac valve abnormality and patients with chronic Q fever.