**Evidence Table E-9. Adverse events in studies comparing of N-acetylcysteine versus placebo or usual care**

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| **Author, Year** | **Adverse events** |
| Allaqaband,2002[7](#_ENREF_7) | Other: Hypotension  Fenoldopam reaction. Definition not reported |
| Azmus, 2005[11](#_ENREF_11) | Other: Nausea: 3 cases placebo 7 cases NAC  Vomitting: 1 case placebo 2 cases NAC  Epigastric pain: 1 case placebo 1 case NAC |
| Baker,2003[12](#_ENREF_12) | Other: Allergic reaction  Itching, flushing or transitory rash in 14% of patients on NAC |
| Carbonell, 2007[26](#_ENREF_26) | no patients presented AEs |
| Carbonell,2010[27](#_ENREF_27) | No patients presented side effects |
| Castini, 2010[28](#_ENREF_28) | only reported acute renal failure (necessitating HD, ultrafiltration or peritoneal dialysis never occurred. |
| Erturk, 2014[34](#_ENREF_34) | NR |
| Fung, 2004[37](#_ENREF_37) | Anaphalaxis: No patient in the NAC group developed an allergic reaction or other adverse event that necessitated withdrawal of NAC.  Other: , No patient in the NAC group developed an adverse event that necessitated withdrawal of NAC |
| Goldenberg, 2004[38](#_ENREF_38) | Heart failure: 2 cases of Congestive heart failure-one in each group  Anaphalaxis  Other: Transient hypotension, 1 case in the acetylcysteine group, |
| Gulel, 2005[41](#_ENREF_41) | Other: GI disturbances, 3 pts in control (12%) 4 pts in NAC group (16%) p>0.05, |
| Heng, 2008[122](#_ENREF_122) | Heart failure: 1 in NAC group  Anaphalaxis  Other: diarrrhea, 1 in NAC group 2 in placebo group, dialysis, 0 in both groups, ,  some adverse events were also entered as outcomes |
| Hsu, 2007[47](#_ENREF_47) | Other: Adverse events after NAC administration, None |
| Izani Wan Mohamed, 2008[49](#_ENREF_49) | Other: mild gastrointestinal upset and nausea, 2 (4%) patients in Arm 2. Arm 1, one patient developed nausea only, , |
| Jaffery, 2012[50](#_ENREF_50) | Other: composite events: in-hospital mortality, mechanical ventilation and acute renal failure requiring dialysis. 2 (1%) Control 3 (1.5%) NAC p=1  adverse event during IV NAC administration |
| Kama, 2014[54](#_ENREF_54) | No contrast or treatment induced adverse events were detected during emergency department care |
| Kimmel, 2008[61](#_ENREF_61) | Other: Diarrhoea, Diarrhoea in Zinc group |
| Kumar, 2014[67](#_ENREF_67) | NR |
| MacNeill, , 2003[75](#_ENREF_75) | Other: , "Acetylcysteine was well tolerated with no adverse events recorded." |
| Marenzi, 2006[78](#_ENREF_78) | Other: Cardiopulmonary resuscitation, ventricular tachycardia, or ventricular fibrillation  High-rate atrial fibrillation  other  High-degree conduction disturbances, Cardiogenic shock requiring intraaortic balloon counterpulsation,Acute pulmonary edema requiring mechanical ventilation  listed under in-hospital complications |

**Evidence Table E-9. Adverse events in studies comparing of N-acetylcysteine versus placebo or usual care (continued)**

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| **Author, Year** | **Adverse events** |
| Miner, 2004[83](#_ENREF_83) | Other: profound thrombocytopenia, Profound thrombocytopenia platelet count 20,000 platelets/mL.NAC=2 Placebo=0 p=ns, blood transfusion, NAC=1 Placebo=2 p=NS  other adverse events are our outcomes of intetrest |
| Ochoa, 2004[85](#_ENREF_85) | Other: Procedurerelated hypotension requiring vasopressors and/or intraaortic balloon counterpulsation, 4 (11%) patients in Arm 2, and in 7 (16%) patients in Arm 1(P = 0.45, Nausea, 1 patient in Arm 1, Serious adverse effects, None |
| Oldemeyer, 2003[86](#_ENREF_86) | Other: General symptoms, Placebo 0 NAC 8: GI symptoms 6 - headache 1- chest tightness 1, |
| Ozcan, 2007[87](#_ENREF_87) | No AES related to tx |
| Rashid, 2004[94](#_ENREF_94) | No patient present any AE due to NAC |
| Ratcliffe, 2009[93](#_ENREF_93) | Other: Serious adverse events, No serious adverse events from any of the medications given or from the procedure itself, |
| Reinecke,2007[95](#_ENREF_95) | adverse events reported as secondary outcome. |
| Tanaka, 2011[105](#_ENREF_105) | Heart failure: Placebo 7/38NAC 4/38p NS  Anaphalaxis: 1 pt in the NAC arm had vomitting |
| Tepel, 2000[106](#_ENREF_106) | Other: GI discomfort-temporary  7% acetylcysteine  12% control group  dizziness  10% acetylcysteine  7% control group  dialysis  0 |
| Thayssen, 2014[107](#_ENREF_107) | Within 3 days:  3 (0.3%) patients had a target lesion revascularization,  4 (0.6%) had a target vessel revascularization.  11 (1.5%) had a new angiogram for a clinical reason without intervention  9 (1.3%)patients had a nonculprit artery PCI.  Within 30 days:  7 (1.0%) patients had a target lesion revascularization,  11 (1.5%) had a target vessel revascularization.  20 (2.8%) had a new angiogram for a clinical reason without intervention,  24 (3.3%) patients had a nonculprit artery PCI. |

**Evidence Table9. Adverse events in studies comparing of N-acetylcysteine versus placebo or usual care (continued)**

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| **Author, Year** | **Adverse events** |
| Traub, 2013[110](#_ENREF_110) | Itching  Arm 1: 2 (1.0)  Arm2: 1  Flushing  Arm 1: 3 (1.5)  Arm 2: 3 (1.5)  Rash  Arm1: 0  Arm2: 1 (0.5)  Hypotension  Arm1: 0  Arm2: 0  Wheezing  Arm1: 1 (0.5)  Arm2: 0  Nausea  Arm1:4 (2.0)  Arm2:4 (2.0)  Vomiting  Arm1: 3 (1.5)  Arm2:1 (0.5) |
| Webb, 2004[115](#_ENREF_115) | reported on death and need for dialysis |
| Yeganehkhah, 2014[117](#_ENREF_117) | NR |

%=percent; AE=adverse event; GI=gastro-intestinal; HD=hemodialysis; IV=intravenous; NAC=N-acetylcysteine; NR=not reported; NS=non-significant;