

Appendix I: Sarin

Sarin is an organophosphorus compound, part of a family of chemicals that include other chemical warfare agents such as Tabun, Soman, and VX, as well as various pesticides and insecticides. In its pure form, sarin is a colorless and odorless liquid. It can evaporate, forming a gas that is toxic when even low concentrations are inhaled. Munitions are often designed to distribute the nerve agent as an aerosol, consisting of fine droplets of the liquid. When inhaled or deposited onto the skin, these droplets are extremely toxic. The aerosol is heavier than air, and eventually tends to collect in lower lying areas around the site of impact.

Sarin binds to and inhibits acetylcholinesterase, an enzyme that catalyzes the breakdown of acetylcholine, which is a biochemical messenger that activates muscles. Sarin exposure therefore leads to the over-stimulation of muscles and glands. Sarin also has a negative influence on the autonomic nervous system, which exerts “involuntary” control throughout the body, including secretion of internal fluids produced to moisten airways leading to the lungs, and on the involuntary muscles that control the gastrointestinal tract.

Symptoms depend both on the level and route of sarin exposure. Low levels can cause increased production of saliva, temporary excessive contraction of the pupils, a runny nose, and a feeling of pressure on the chest. Moderate exposure can cause coughing, excessive fluid discharge from the nose and mouth, difficulty breathing, muscular weakness, and tremors and convulsions. Diarrhea and vomiting are also often observed at these levels of exposure. High exposure can cause convulsions and loss of consciousness, and affects muscles and the part of the nervous system involved in breathing. Sarin exposure can cause death by suffocation due to the excessive buildup of fluids in the breathing airways and to loss of activity of the muscles used for breathing.

Exposure to other nerve agents, including some pesticides, can cause similar symptoms, but much higher levels of exposure are required in these cases.

Poisoning by sarin works faster when the agent is absorbed through the respiratory system, because the multiple blood vessels in the lungs distribute the toxic agent rapidly throughout the body. The injury caused by a sarin weapon therefore depends on the extent

to which the weapon turns liquid sarin, the form in which it is at room temperature, into aerosol, a mist of fine droplets, that can be inhaled or absorbed by the skin. In a sarin bomb, the liquid is converted into an aerosol by a small explosive detonation that bursts the carrier munition and creates an aerosol cloud. If the detonation is too large, however, the heat will damage the sarin, which decomposes rapidly at its boiling point of 158 degrees Celsius. This limitation usually means that not all the sarin liquid contained in a bomb turns into aerosol or vapor, and that liquid sarin is often found at an impact site immediately after an attack.

Sarin is a non-persistent nerve agent, which means that the agent quickly chemically degrades and disperses into the atmosphere. A non-persistent nerve agent dissipates and rapidly loses the ability to cause casualties after 10 to 15 minutes. The area of contamination will depend on many different factors, including the amount and purity of the sarin used, the effectiveness of the chemical munition in dispersing the agent, the outside temperature and humidity, the wind direction and speed, and the presence of buildings in the area, which might shield victims from the effects of the toxic cloud. Nerve agents are so toxic that munitions containing only a small amount of sarin, such as the 49 kilogram chemical payload of a 250-kilogram sarin bomb, can readily disperse millions of lethal doses over an area several hundreds of meters in radius away from the impact site, depending upon the local meteorological conditions.

Many types of chemical bombs are stored empty without the payload because of the limited shelf-life of chemical agents like sarin after it is produced. The precursors for sarin are stored separately and only combined into the final product prior to use; the shelf-life of sarin depends on the specific reaction process used, the addition of other chemicals to stabilize the substance, and the amount of impurity present in the precursor chemicals.

The munitions and filling equipment used for chemical agents must have sealed joints in order prevent leakage and exposure. The integrity of these seals are tested prior to loading live agent into the munition to ensure no leaks occur. Once produced, the agent then needs to be transferred into the munition by a filling system through a filler hole in the bomb body. The crews filling chemical munitions with live agent must take precautions like using protective masks or respirators and wearing impermeable suits and boots.

The physical infrastructure necessary to produce multiple liters of live agent, successfully transfer this agent into a weapon, and effectively deliver the agent to the battlefield as an aerosol, droplet, or vapor form requires knowledge of chemical production and functioning equipment. Also required is a cadre of trained personnel operating equipment in a safe manner without exposing themselves to the effects of the live agent.

UN inspectors concluded that sarin was used in a chemical attack in Ghouta, near Damascus, in August 2013. Evidence documented by Human Rights Watch strongly suggests that government forces were responsible for the attack. In June 2014, OPCW announced that it had shipped Syria's declared chemical weapons out of the country. OPCW has said that it inspected all declared sites, except two, which it could not reach because of safety and security concerns. It said that Syria declared those sites as abandoned and that the chemical weapons program items they contained were moved to other declared sites, which were inspected.

Appendix II: Air-Dropped Sarin Munitions [Added October 18, 2017]

Little information is publicly known about the origin and extent of Syria's air-dropped chemical munitions in open source materials. Until it was forced to admit to its existence after a major chemical weapons attack in 2013, the Syrian government denied that it even had a chemical weapons program.

Per declassified French and US intelligence assessments, as well as Israeli research reports, many of them published before the breakout of the Syrian conflict in 2011, Syrian authorities possessed air-dropped munitions designed to deliver sarin.¹ It is not clear from these sources, however, whether the stockpile included imported or domestically produced air-dropped sarin bombs. Specific detail on the types of chemical weapons declared by Syria as part of its implementation of the Chemical Weapons Convention is not publicly available.

Declassified US intelligence reports from the 1980s indicate that the Soviet Union supplied Syria with chemical agents, delivery systems, and training related to chemical weapons use.² A Russian official involved in chemical weapons destruction denied this in August 2012, saying that neither Russia nor the Soviet Union had supplied Syria with chemical weapons.³

Some of the few good reference photos of air-dropped sarin munitions in open source materials are of a Soviet-produced bomb exhibited at the Central Armed Forces Museum in

¹ "National Evaluation of Declassified Information: Syrian Chemical Weapons Program, Use of Chemical Weapons by the Regime on 21 August 2013" (Synthèse nationale de renseignement déclassifié: Programme chimique syrien, Cas d'emploi passés d'agents chimiques par le régime, Attaque chimique conduite par le régime le 21 août 2013), Government of France, September 2, 2013, http://www.humanitarian.net/idin/ref/syrie_synthese_nationale_de_renseignement_declassifie_o2_09_2013.pdf (accessed June 12, 2017). For a compilation of relevant US documents, see "Weapons of Mass Destruction: Intelligence Threat Assessments," Federation of American Scientists, February 7, 2012, <https://fas.org/irp/threat/wmd.htm>. See reference to *the Middle East Military Balance, 1994-1995*, in M. Zuhair Diab, "Syria's Chemical and Biological Weapons: Assessing Capabilities and Motivations," in *Report: Syria's Chemical and Biological Weapons*, <https://www.nonproliferation.org/wp-content/uploads/npr/diab51.pdf>, p. 105. See also reference to 1996 Israeli report, *Ibid.*, p. 105.

² Mary Beth D. Nikitin, Paul K. Kerr, Andrew Feickert, "Syria's Chemical Weapons: Issues for Congress," Congressional Research Service, September 30, 2013, <https://fas.org/sgp/crs/nuke/R42848.pdf>.

³ *Ibid.*

Moscow.⁴ The bomb has “Sarin” written in Cyrillic letters on the front, green painted bands, which is a signifier of chemical weapons, and a distinct filling hole cap located on the side. The shape of the bomb indicates that it belongs to the 250-kilogram class of Soviet bombs. Furthermore, Soviet authorities published in 1987 a document describing several chemical munitions after Western observers visited a military facility in the Soviet Union during a disarmament conference. The munitions included a 250 kilogram air-dropped bomb whose purpose was “to disable personnel through respiratory organs” by deploying 49 kilograms of sarin through the use of an instantaneous action percussion fuze, which would detonate the bomb when it hit the ground.⁵ The document included a line-drawing of the bomb, showing a similar shape to the bomb in the museum photos. The filler hole in the drawing, however, appears to be located higher on the bomb than the filler hole on the bomb in the museum.⁶

Neither the museum exhibition nor the 1987 document provide the official name of the air-dropped sarin bomb, although a handwritten label on the bomb in the museum shows the number 9-A-164.⁷ In books and articles about the development and disarmament of chemical weapons in the Soviet Union and Russia, Lev Fedorov, a Russian scientist, mentions several names of Soviet-produced air-dropped sarin bombs. He mentions two air-dropped sarin bombs with the name KhAB (the KhAB-100 and KhAB-250), which is an abbreviation for the Russian term *Khimicheskaya Aviatsionnaya Bomba*, or “Chemical Aviation Bomb.”⁸ The number following the initial letters indicates the size of the bomb in

⁴ Central Armed Forces Museum of the Russian Federation, virtual excursion, hall 22, <http://www.cmaf.ru/ekspo/virtual/>. See also the discussion page from the Weapons of Mass Destruction group on VKontakta (VK) dated March 18, 2015, https://vk.com/wall-60512759_5917.

⁵ Conference on Disarmament, Information on the presentation at the Shikhany military facility of standard chemical munitions and of technology for the destruction of chemical weapons at a mobile unit, CD/789, December 16, 1987, [https://disarmament-library.un.org/UNODA/Library.nsf/a61ff5819c4381ee85256bc70068fa14/d775b9d1998f6a6c852575cc0054319a/\\$FILE/cd-789.pdf](https://disarmament-library.un.org/UNODA/Library.nsf/a61ff5819c4381ee85256bc70068fa14/d775b9d1998f6a6c852575cc0054319a/$FILE/cd-789.pdf) (accessed June 12, 2017).

⁶ *Ibid.*, p. 32.

⁷ In a post on its Facebook page commenting on the initial May 1, 2017, release of Human Rights Watch’s report about the Khan Sheikhou attack, the Russian Ministry of Defense appears to refer to the bomb in the photo as a KhAB-250. Facebook page of the Russian Ministry of Defense, post dated May 2, 2016, <https://www.facebook.com/1492252324350852/photos/a.1492313031011448.1073741828.1492252324350852/1918049911771089/?type=3> (accessed June 26, 2017). The Ministry of Defense appears to have subsequently deleted the Russian language post. As of August 28, the English language post could still be found here: <https://www.facebook.com/mod.mil.rus/photos/a.1492313031011448.1073741828.1492252324350852/1918049911771089/?type=3&theater>.

⁸ Lev Fedorov, *Chemical Armaments – War with Its Own People (The Tragic Russian Experience)*, Moscow 2009, <http://levfedorov.ru/chemarmament-7-1/> (accessed June 26, 2017), vol. 1, sec. 7. Responding to Human Rights Watch’s May 1, 2017 report on the Khan Sheikhou attack, a Russian military spokesperson claimed that the KhAB-250 had never been designed to deliver sarin. See the Facebook page of the Russian Ministry of Defense, post dated May 2, 2016, <https://www>.

kilograms. According to Fedorov, a second set of names of air-dropped sarin bombs starts with the letters OKhAB (OKhAB-100, OKhAB-100SP, OKhAB-250, OKhAB-250-135P, OKhAB-250-235P).⁹ Human Rights Watch has not been able to confirm what the O designates in this instance. Finally, Fedorov also mentions an air-dropped sarin bomb with the name OBAS-250-235P. Human Rights Watch has not been able to confirm what the abbreviation OBAS stands for. In one place, Fedorov links the OBAS-250-235P to the index number 9-A-164, which is the number written on the bomb in the museum, saying that this is the bomb that was also showcased to diplomats in 1987.¹⁰ In another place, Fedorov says that it was the OKhAB-250 that was showcased in 1987.¹¹

In an interview with *Agence France-Presse* following the Khan Sheikhoun attack, Syrian President Bashar al-Assad said that the Syrian government was not responsible for the attack since it no longer possesses chemical weapons.¹² The Organisation for the Prohibition of Chemical Weapons has said that all chemical weapons materials that the Syrian government declared have been removed from Syria, but that it has been unable to verify whether the Syrian declaration was accurate and complete.¹³ As of July 2017, the OPCW was still trying to resolve “declaration-related issues.”¹⁴ According the Director General of the OPCW, cited in a Reuters article, the organization is still seeking answers

facebook.com/1492252324350852/photos/a.1492313031011448.1073741828.1492252324350852/1918049911771089/?type=3 (accessed June 26, 2017). This appears incorrect. For example, the five-year plan adopted at the 20th Communist Party Congress in 1956 included the production of 3,500 KhAB-250-140P sarin bombs at factory 91 in Stalingrad; see Lev Fedorov, *Chemical Armaments – War with Its Own People*, <http://lev.fedorov.ru/chemarmament-7-1/>, vol. 1, sec. 7. The Ministry of Defense appears to have subsequently deleted the Russian language post. As of August 28, the English language post could still be found here: <https://www.facebook.com/mod.mil.rus/photos/a.1492313031011448.1073741828.1492252324350852/1918049911771089/?type=3&theater>.

⁹ See e.g., Lev Fedorov, *Chemical Armaments – War with Its Own People (The Tragic Russian Experience)*, Moscow 2009, <http://levfedorov.ru/chemarmament-10-5/> (accessed June 12, 2017), vol.1, chapter 10.5.

¹⁰ *Ibid.*, table 3.

¹¹ *Ibid.*, table 4.

¹² “Syria’s Bashar al-Assad labels Idlib chemical attack ‘fabrication’ to justify US strike,” *AFP*, April 14, 2017, <http://www.abc.net.au/news/2017-04-14/syria-assad-says-idlib-chemical-attack-was-a-fabrication/8444470>.

¹³ “OPCW-UN Joint Mission Statement on the Complete Removal of Declared Chemical Weapons Materials,” UN press release, June 23, 2014, <https://opcw.unmissions.org/opcw-un-joint-mission-statement-complete-removal-declared-chemical-weapons-materials>. Organization for the Prohibition of Chemical Weapons, *Progress in the Elimination of the Syrian Chemical Weapons Programme, S/2016/678*, August 3, 2016, http://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2016_678.pdf, paras. 7-10.

¹⁴ Organization for the Prohibition of Chemical Weapons, *Progress in the Elimination of the Syrian Chemical Weapons Programme, EC-86/DG.2*, July 24, 2017, https://www.opcw.org/fileadmin/OPCW/EC/86/en/ec86dgo2_e_.pdf.

from Syria about undeclared chemical aerial bombs.¹⁵ The same article claims that 2,000 chemical bomb shells, which Syria said it had converted to conventional weapons and either used or destroyed, are unaccounted for.¹⁶ The article does not specify how many, if any, of those munitions are aerial. A defector who says he was a senior officer in Syria's chemical weapons program has said that Syrian authorities had more chemical weapons than they declared.¹⁷

Syrian government officials, including President Assad, have also denied that Syrian authorities have used chlorine as a weapon, despite extensive documentation to the contrary, including by a UN-OPCW Joint Investigative Mechanism, which concluded that Syrian government helicopters used chlorine on at least three occasions in 2014 and 2015.¹⁸

¹⁵ Anthony Deutsch, "Special Report: How Syria continued to gas its people as the world looked on," Reuters, August 17, 2017, <https://www.reuters.com/article/us-mideast-crisis-syria-chemicalweapons/special-report-how-syria-continued-to-gas-its-people-as-the-world-looked-on-idUSKCN1AX107>.

¹⁶ Ibid.

¹⁷ Harry Cockburn, "Assad still has 'hundreds of tonnes' of chemical weapons in stockpile, former Syrian weapons chief claims," Independent, April 14, 2017, <http://www.independent.co.uk/news/world/middle-east/bashar-al-assad-chemical-weapons-attack-stockpile-syria-obama-trump-moscow-a7684706.html>.

¹⁸ "Syria's Assad denies alleged use of chlorine gas in Idlib," Press TV, April 21, 2015, <http://www.presstv.com/Detail/2015/04/21/407269/Syrias-Assad-denies-chlorine-gas-use>. Organization for the Prohibition of Chemical Weapons-United Nations Joint Investigative Mechanism, Fourth Report, S/2016/888, October 21, 2016, <http://undocs.org/S/2016/888>.

Appendix III: Victims Killed in Khan Sheikhoun¹⁹

No.	Name	Sex	Age
1	Melhem Jihad al-Youssef	Male	30
2	Yasser Ahmad al-Youssef	Male	40
3	Ammar Yasser al-Yousef	Male	7
4	Mohammed Yasser al-Youssef	Male	10
5	Sanaa Haj Ali	Female	40
6	Abdalkarim Ahmad al-Youssef	Male	
7	Ahmad Abdel Hamid al-Youssef	Male	9 months
8	Aya Abdel Hamid al-Yousef	Female	9 months
9	Dalal Ahmad al-Sah	Female	
10	Ibrahim Mohamed al-Youssef	Male	
11	Mohamed Hasan al-Youssef	Male	11
12	Hend Turki al-Youssef	Female	69
13	Faisal Raslan	Male	
14	Nouhad Ahmad al-Youssef	Male	
15	Malak Turki al-Youssef	Female	
16	Nour Nouhad al-Youssef	Female	
17	Hasan Mohamed al-Youssef	Male	
18	Ahmad Ibrahim al-Youssef	Male	
19	Imad al-Dein Mohamed al-Qadeh	Male	
20	Mohamed Imad al-Qadeh	Male	A child
21	Hend Imad al-Qadeh	Female	A child
22	Aboudi Imad al-Qadeh	Male	A child
23	Turki Mohamed al-Qadeh	Male	
24	Nour al-Azraq	Female	
25	Hend Turki al-Qadeh	Female	A child
26	Mohamed Turki al-Qadeh	Male	A child
27	Adnan Turki al-Qadeh	Male	A child
28	Rajaa Mohamed al-Mohamed	Female	
29	Anas al-Khalid	Male	
30	Fatima al-Soussi	Female	

¹⁹ The fatality list has been compiled from a range of sources including the Syria Civil Defense, the Idlib Health Directorate, and the relatives of the deceased.

No.	Name	Sex	Age
31	Mustafa Anas al-Khalid	Male	A child
32	Alaa Anas al-Khalid	Female	A child
33	Shahid Anas al-Khalid	Male	A child
34	Abd al-Rahman Anas al-Khalid	Male	A child
35	Khadija Anas al-Khalid	Female	A child
36	Ahmad Khalid Halawa	Male	
37	Khalid Halawa	Male	
38	Shaimaa Ibrahim al-Jawhar	Female	A child
39	Ahmed Shahoud al-Reem Abu Mahanna	Male	
40	Najeeb al-Jawhar	Male	
41	Safiya al-Haj Youssef	Female	
42	Mayar al-Mar'i	Male	A child
43	Mohammed Mohieddin Najem al-Sayed	Male	
44	Siham Mohieddin al-Sayed	Female	
45	Ola Muhhand Makhzoum	Female	
46	Rahaf Suhail al-Youssef	Male	
47	The wife of Mohamed Najem al-Sayed, name unknown	Female	
48	Ahmad Ezzo Najem al-Sayed	Male	
49	The wife of Mustafa al-Sayed, name unknown	Female	
50	The daughter of Mazen al-Sayed, name unknown	Female	
51	Riad Khalid al-Kirowan	Male	
52	Maram Hasan Halawa	Male	A child
53	Abd al-Ghafour Maarati	Male	35
54	Abdallah Ghassan al-Shahna	Male	
55	Badran Abd al-Rahman al-Rahmoun	Male	26
56	Ahmad Hasram	Male	27
57	Amer al-Naif	Male	
58	Alaa al-Naif	Male	
59	Mohamed al-Naif	Male	
60	Alaa Mohamed al-Naif	Male	
61	The wife of Alaa Mohamed al-Naif, name unknown	Female	
62	The sister-in-law of Alaa Mohamed al-Naif, name unknown	Female	
63	Darar al-Alaywi Abu Imad	Male	
64	Ahmad Omar Ramadan	Male	
65	Jamila Hafez al-Qasim	Female	55
66	Mohamed Jamal al-Qasim	Male	30

No.	Name	Sex	Age
67	Faris Mohamed Sayed al-Barhoum	Male	14
68	Maher Mohamed Sayed al-Barhoum	Male	12
69	Suha al-Qassim	Female	22
70	Fatima Jamal Qassim al-Hamoud	Female	15
71	Hayyan al-Ali	Male	40
72	Sara al-Sleiman	Female	32
73	Ahmad Hayyan al-Dibbs	Male	7
74	Mohamed Hayyan al-Dibbs	Male	9 months
75	Hayyan Abdallah al-Dibbs	Male	32
76	Yamen al-Shayeb	Male	
77	Sham al-Shayeb	Female	A child
78	Jude al-Shayeb	Male	A child
79	Mohamed al-Shayeb	Male	A child
80	Sara Mansour	Female	
81	Mustafa al-Azkour	Male	
82	Samer	Male	18
83	Ahmad Hosram	Male	Born in 1990
84	Musa al-Sayed or Musa al-Hussein	Male	
85	Asmaa al-Sayed or Asmaa al-Hussein	Female	
86	Ruba Ahmad al-Saleh	Female	A child
87	Hadeel Ahmad al-Saleh	Female	A child
88	Batoul Ahmad al-Saleh	Female	A child
89	Mohamed Ahmad al-Saleh	Male	
90	Mohamed Awad Turkia	Male	

Appendix IV: Victims Killed in al-Salaliyah²⁰

No.	Name	Sex	Age
1	Saleh al-Mohamad	Male	90
2	Khayriah al-Saleh	Female	80
3	Fatima al-Mohamad	Female	40
4	Fatim Mohamad al-Raheel	Female	10
5	Israa Mohamad al-Raheel	Female	6
6	Ahmad Mohamad al-Raheel	Male	2
7	Somaa' al-Raheel	Male	50
8	Fadia al-Saleh	Female	30
9	Ghazal Ali al-Raheel	Female	5
10	Abdallah Ali al-Raheel	Male	4
11	Mohamad Ali al-Raheel	Male	5
12	Maysar al-Saleh	Male	35
13	A'tour al-Mohamad	Female	30
14	Dam al-Hana Maysar al-Saleh	Female	6
15	Ramadan Maysar al-Saleh	Male	2
16	Malak Maysar al-Saleh	Male	1
17	Daughter of Sawah al-Mohamad, name unknown	Female	
18	Daughter of Sawah al-Mohamad, name unknown	Female	
19	Mohamad Walid al-Mohamad	Male	4
20	Mahdi al-Mohamad	Male	60
21	Fasel al-Saleh	Male	55
22	Hakmiya Mahdi al-Mohamad	Female	25
23	Yaa'koub Mahdi al-Mohamad	Male	7
24	Youssef Mahdi al-Mohamad	Male	5
25	Mahdi Mahdi al-Mohamad	Male	3
26	Nawal al-Saleh	Female	17
27	Raeida Musa al-Saleh	Female	35
28	Hussein al-Mohamad	Male	22

²⁰ The fatality list was compiled by a local resident.

No.	Name	Sex	Age
29	Badr Hussein al-Saleh	Male	25
30	Kamara al-Saleh	Female	80
31	Ali Daher al-Musa	Male	4
32	Maryam Daher al-Musa	Female	2
33	Fatima Kassar al-Saleh	Female	13
34	Doha Kassar al-Saleh	Female	9
35	Amouna Ahmad al-Saleh	Female	15
36	Sabouha al-Saleh	Female	32
37	Zamzam Ahmad al-Saleh	Male	12
38	Bilal Ahmad al-Saleh	Male	13
39	Daughter of Ahmad al-Saleh, name unknown	Female	4
40	Ahmad al-Saleh	Male	35
41	Daher al-Moussa	Male	35
42	Sawah al-Mohamad	Male	25

Appendix V: Victims Killed in Jrouh²¹

No.	Name	Sex	Age
1	Maryam Ali al-Mohamad	Female	30
2	Safa' Mohamad al-Hasan	Female	9
3	Hussein Mohamad al-Hasan	Male	5
4	Nour Mohamad al-Hasan	Female	2
5	Zeinab Suleiman al-Mohamad	Female	25
6	<u>Raneem</u> Munzer al-Hassan	Female	7
7	Yasser Munzer al-Hasan	Male	4
8	Mohamad Munzer al-Hasan	Male	2
9	Mamdouh Hasan al-Mohawish	Male	80
10	Sami Mamdouh al-Hasan	Male	35
11	Adnan Mamdouh al-Hasan	Male	30
12	Zaima Mohamad al-Hasan	Female	30
13	Mohamad Sfooq al-Hasan	Male	40
14	Sfooq Mohamad al-Hasan	Male	73
15	Leen Adnan al-Hasan	Female	2
16	Reem Adnan al-Hasan	Female	One month
17	Hashem Sami al-Hasan	Male	6
18	Reem Sami al-Hasan	Female	5
19	Sultan al-Awad	Male	20
20	Mahdi al-Hmeid	Male	29
21	Ahmad al-Hmeid	Male	42
22	Saloua al-Ali	Female	22
23	Khalif al-Thaher	Male	45
24	Abed al-Razzak al-Hussein	Male	70
25	Sobhiah al-Hussein	Female	63

²¹ The fatality list was compiled by an activist from the Syrian Revolution Coordination Committee and many names were corroborated by local residents who spoke to Human Rights Watch.