SUPPLEMENTAL MATERIAL

Occupational exposure to asthmagens and adult onset wheeze and lung function in people who did not have childhood wheeze: a 50-year cohort study.

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Table S1. Jobs in the WHEASE cohort categorised by exposure to at least one asthmagen and to 11 major occupational asthmagen groups by intensity of exposure based on the usual workplace environment in the UK during the 1990s

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
1113	Senior officials in local government	No	None	None	None	None	None	None	None	None	None	None	None
1114	Senior officials of special interest organisations	No	None	None	None	None	None	None	None	None	None	None	None
1121	Production, works and maintenance managers	No	None	None	None	None	None	None	None	None	None	None	None
1122	Managers in construction	Yes	None	Low	None	None	None	None	Low	None	None	None	Low
1123	Managers in mining and energy	No	None	None	None	None	None	None	None	None	None	None	None
1131	Financial managers and chartered secretaries	No	None	None	None	None	None	None	None	None	None	None	None
1132	Marketing and sales managers	No	None	None	None	None	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
1134	Advertising and public relations managers	No	None	None	None	None	None	None	None	None	None	None	None
1135	Personnel, training and industrial relations managers	No	None	None	None	None	None	None	None	None	None	None	None
1136	Information and communication technology managers	No	None	None	None	None	None	None	None	None	None	None	None
1137	Research and development managers	No	None	None	None	None	None	None	None	None	None	None	None
1141	Quality assurance managers	No	None	None	None	None	None	None	None	None	None	None	None
1152	Office managers	No	None	None	None	None	None	None	None	None	None	None	None
1161	Transport and distribution managers	No	None	None	None	None	None	None	None	None	None	None	None
1162	Storage and warehouse managers	No	None	None	None	None	None	None	None	None	None	None	None
1181	Hospital and health service managers	No	None	None	None	None	None	None	None	None	None	None	None
1183	Healthcare practice managers	No	None	None	None	None	None	None	None	None	None	None	None
1219	Managers in animal husbandry, forestry and fishing nec.	Yes	Medium	Low	Low	Low	None	None	Medium	Medium	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
1221	Hotel and accommodation managers	No	None	None	None	None	None	None	None	None	None	None	None
1223	Restaurant and catering managers	No	None	None	None	None	None	None	None	None	None	None	None
1231	Property, housing and land managers	No	None	None	None	None	None	None	None	None	None	None	None
1233	Hairdressing and beauty salon managers and proprietors	Yes	None	Low	Low	High	None	None	None	None	None	None	None
1234	Shopkeepers and wholesale/retail dealers	No	None	None	None	None	None	None	None	None	None	None	None
1235	Recycling and refuse disposal managers	Yes	Low	None	None	None	None	None	None	None	None	None	None
1239	Managers and proprietors in other services nec.	No	None	None	None	None	None	None	None	None	None	None	None
2111	Chemical scientists	Yes	Low	Low	High	Low	None	Low	None	None	Low	None	Low
2112	Biological scientists and biochemists	Yes	Low	None	High	Low	None	Low	Low	Medium	Low	None	None
2113	Physicists, geologists and meteorologists	No	None	None	None	None	None	None	None	None	None	None	None
2121	Civil engineers	No	None	None	None	None	None	None	None	None	None	None	None
2125	Chemical engineers	Yes	None	Low	None	Low	None	None	None	None	None	None	Low

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
2128	Planning and quality control engineers	No	None	None	None	None	None	None	None	None	None	None	None
2129	Engineering professionals nec.	No	None	None	None	None	None	None	None	None	None	None	None
2131	IT strategy and planning professionals	No	None	None	None	None	None	None	None	None	None	None	None
2132	Software professionals	No	None	None	None	None	None	None	None	None	None	None	None
2213	Pharmacists/pharmacologists	Yes	None	None	High	None	None	None	None	None	High	None	None
2313	Education officers, school inspectors	No	None	None	None	None	None	None	None	None	None	None	None
2314	Secondary education teaching professionals	No	None	None	None	None	None	None	None	None	None	None	None
2315	Primary and nursery education teaching professionals	No	None	None	None	None	None	None	None	None	None	None	None
2319	Teaching professionals nec.	No	None	None	None	None	None	None	None	None	None	None	None
2329	Researchers nec.	No	None	None	None	None	None	None	None	None	None	None	None
2411	Solicitors and lawyers, judges and coroners	No	None	None	None	None	None	None	None	None	None	None	None
2421	Chartered and certified accountants	No	None	None	None	None	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
2423	Management consultants, actuaries, economists and statisticians	No	None	None	None	None	None	None	None	None	None	None	None
2431	Architects	No	None	None	None	None	None	None	None	None	None	None	None
2432	Town planners	No	None	None	None	None	None	None	None	None	None	None	None
2433	Quantity surveyors	No	None	None	None	None	None	None	None	None	None	None	None
2434	Chartered surveyors (not quantity surveyors)	No	None	None	None	None	None	None	None	None	None	None	None
2451	Librarians	No	None	None	None	None	None	None	None	None	None	None	None
3111	Laboratory technicians	Yes	Low	Low	Medium	None	Low	None	None	Low	None	None	None
3112	Electrical/electronics technicians	Yes	None	Low	Medium	Low	High	None	None	None	None	None	None
3113	Engineering technicians	No	None	None	None	None	None	None	None	None	None	None	None
3119	Science and engineering technicians nec.	Yes	Low	Low	Medium	None	Low	None	None	Low	None	None	None
3122	Draughtspersons	Yes	None	Low	None	Low	None	None	Medium	None	None	None	Low
3211	Nurses	Yes	Medium	None	High	None	None	None	None	None	None	None	None
3212	Midwives	Yes	Medium	None	High	None	None	None	None	None	None	None	None
3217	Pharmaceutical dispensers	Yes	Medium	None	High	None	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
3218	Medical and dental technicians	Yes	Medium	High	High	None	None	None	None	None	None	None	None
3229	Therapists nec.	No	None	None	None	None	None	None	None	None	None	None	None
3231	Youth and community workers	No	None	None	None	None	None	None	None	None	None	None	None
3232	Housing and welfare officers	No	None	None	None	None	None	None	None	None	None	None	None
3311	NCOs and other ranks	Yes	None	Medium	None	Medium	None	None	None	Medium	None	None	Medium
3312	Police officers (sergeant and below)	No	None	None	None	None	None	None	None	None	None	None	None
3313	Fire service officers (watch manager and below)	No	None	None	None	None	None	None	None	None	None	None	None
3413	Actors, entertainers	No	None	None	None	None	None	None	None	None	None	None	None
3415	Musicians	No	None	None	None	None	None	None	None	None	None	None	None
3421	Graphic designers	Yes	None	Low	None	Medium	None	None	None	None	None	None	None
3431	Journalists, newspaper and periodical editors	No	None	None	None	None	None	None	None	None	None	None	None
3441	Sports players	No	None	None	None	None	None	None	None	None	None	None	None
3512	Aircraft pilots and flight engineers	No	None	None	None	None	None	None	None	None	None	None	None
3513	Ship and hovercraft officers	No	None	None	None	None	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
3531	Estimators, valuers and assessors	No	None	None	None	None	None	None	None	None	None	None	None
3534	Finance and investment analysts/advisers	No	None	None	None	None	None	None	None	None	None	None	None
3539	Business and related associate professionals nec.	No	None	None	None	None	None	None	None	None	None	None	None
3541	Buyers and purchasing officers	No	None	None	None	None	None	None	None	None	None	None	None
3542	Sales representatives	No	None	None	None	None	None	None	None	None	None	None	None
3551	Conservation and environmental protection officers	Yes	None	Low	Low	Low	None	None	Low	Medium	None	None	None
3561	Public service associate professionals	No	None	None	None	None	None	None	None	None	None	None	None
3562	Human resources and industrial relations officers	No	None	None	None	None	None	None	None	None	None	None	None
3563	Vocational and industrial trainers and instructors	No	None	None	None	None	None	None	None	None	None	None	None
3564	Careers advisers and vocational guidance specialists	No	None	None	None	None	None	None	None	None	None	None	None
3566	Statutory examiners	No	None	None	None	None	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
3567	Occupational hygienists and safety officers (health and safety)	Yes	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
4112	Civil Service administrative officers and assistants	No	None	None	None	None	None	None	None	None	None	None	None
4113	Local government clerical officers and assistants	No	None	None	None	None	None	None	None	None	None	None	None
4122	Accounts and wages clerks, book-keepers, other financial clerks	No	None	None	None	None	None	None	None	None	None	None	None
4123	Counter clerks	No	None	None	None	None	None	None	None	None	None	None	None
4131	Filing and other records assistants/clerks	No	None	None	None	None	None	None	None	None	None	None	None
4132	Pensions and insurance clerks and assistants	No	None	None	None	None	None	None	None	None	None	None	None
4133	Stock control clerks	No	None	None	None	None	None	None	None	None	None	None	None
4134	Transport and distribution clerks	No	None	None	None	None	None	None	None	None	None	None	None
4141	Telephonists	No	None	None	None	None	None	None	None	None	None	None	None
4142	Communication operators	No	None	None	None	None	None	None	None	None	None	None	None
4150	General office assistants/clerks	No	None	None	None	None	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
4211	Medical secretaries	No	None	None	None	None	None	None	None	None	None	None	None
4214	Company secretaries	No	None	None	None	None	None	None	None	None	None	None	None
4215	Personal assistants and other secretaries	No	None	None	None	None	None	None	None	None	None	None	None
4216	Receptionists	No	None	None	None	None	None	None	None	None	None	None	None
4217	Typists	No	None	None	None	None	None	None	None	None	None	None	None
5111	Farmers	Yes	Medium	Low	Low	Medium	None	Medium	Medium	High	None	Medium	None
5113	Gardeners and groundsmen/groundswomen	Yes	Medium	None	None	None	None	Low	Low	None	None	None	None
5119	Agricultural and fishing trades nec.	Yes	Medium	None	None	Low	None	Low	None	Medium	None	Medium	None
5213	Sheet metal workers	Yes	None	Low	None	Low	Medium	None	None	None	None	None	None
5214	Metal plate workers, shipwrights, riveters	Yes	None	Low	None	Low	Medium	None	None	None	None	None	None
5215	Welding trades	Yes	None	Low	None	Low	Medium	None	None	None	None	None	None
5216	Pipe fitters	Yes	None	Low	None	Low	Medium	None	None	None	None	None	None
5221	Metal machining setters and setter-operators	Yes	Low	Low	None	Low	Medium	None	None	None	None	None	None
5223	Metal working production and maintenance fitters	Yes	Low	Low	None	Low	Medium	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
5224	Precision instrument makers and repairers	Yes	None	Low	Low	Low	Medium	None	None	None	None	None	None
5231	Vehicle technicians, mechanics and electricians	Yes	None	Low	None	Low	Low	None	None	None	None	None	Medium
5232	Vehicle body builders and repairers	Yes	None	Medium	None	Low	Low	None	None	None	None	None	High
5241	Electricians, electrical fitters	Yes	None	Low	None	None	Low	None	None	None	None	None	None
5242	Telecommunications engineers	Yes	None	None	None	None	Low	None	None	None	None	None	None
5243	Lines repairers and cable jointers	No	None	None	None	None	None	None	None	None	None	None	None
5244	TV, video and audio engineers	Yes	None	None	Low	None	Medium	None	None	None	None	None	None
5245	Computer engineers, installation and maintenance	Yes	None	None	Low	None	Medium	None	None	None	None	None	None
5312	Bricklayers, masons	Yes	Low	None	None	None	None	None	None	None	None	None	None
5313	Roofers, roof tilers and slaters	Yes	Low	Low	None	None	Low	None	Low	None	None	None	None
5314	Plumbers, heating and ventilating engineers	Yes	None	Medium	None	None	Medium	None	Low	None	None	None	None
5315	Carpenters and joiners	Yes	Low	Medium	None	Low	None	None	High	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
5322	Floorers and wall tilers	Yes	Low	High	None	None	None	None	Low	None	None	None	None
5323	Painters and decorators	Yes	Low	Low	None	None	None	None	Medium	None	None	None	Low
5411	Weavers and knitters	Yes	Low	None	None	High	None	None	None	Medium	None	None	None
5412	Upholsterers	Yes	Low	Medium	None	Medium	None	None	Low	None	None	None	None
5413	Leather and related trades	Yes	Low	None	None	Medium	None	None	None	Medium	None	None	None
5414	Tailors and dressmakers	Yes	None	None	None	Low	None	None	None	None	None	None	None
5421	Originators, compositors and print preparers	Yes	None	Low	None	Medium	None	None	None	None	None	None	None
5423	Bookbinders and print finishers	Yes	None	Low	Low	Low	None	None	None	None	None	None	None
5431	Butchers	Yes	Low	None	Low	None	None	High	None	High	None	None	None
5432	Bakers and flour confectioners	Yes	None	None	Low	Low	None	High	None	None	High	High	None
5433	Fishmongers, poultry dressers	Yes	Low	None	Medium	None	None	High	None	High	None	None	None
5434	Chefs, cooks	Yes	None	None	Low	None	None	High	None	Low	Low	High	None
5491	Glass and ceramics, makers, decorators and finishers	Yes	None	Medium	None	Low	None	None	None	None	None	None	None
5492	Furniture makers, other craft woodworkers	Yes	Medium	Medium	None	Low	None	None	High	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
5496	Floral arrangers, florists	Yes	Low	None	None	Low	None	High	None	None	None	None	None
5499	Hand craft occupations nec.	Yes	None	Low	None	Low	Low	Low	Low	None	None	None	None
6111	Nursing auxiliaries and assistants	Yes	Medium	None	High	None	None	Low	None	None	None	None	None
6112	Ambulance staff (excluding paramedics)	Yes	Low	None	High	None	None	None	None	None	None	None	None
6113	Dental nurses	Yes	Low	Low	High	None	Medium	None	None	None	None	None	None
6114	Houseparents and residential wardens	Yes	Low	None	None	None	None	None	None	None	None	None	None
6115	Care assistants and home carers	Yes	Low	None	None	None	None	None	None	None	None	None	None
6121	Nursery nurses	No	None	None	None	None	None	None	None	None	None	None	None
6122	Childminders and related occupations	No	None	None	None	None	None	None	None	None	None	None	None
6124	Educational assistants	No	None	None	None	None	None	None	None	None	None	None	None
6131	Veterinary nurses and assistants	Yes	Low	None	High	None	None	None	None	High	None	None	None
6139	Animal care occupations nec.	Yes	Medium	None	Low	None	None	None	None	High	None	Medium	None
6211	Sports and leisure assistants	No	None	None	None	None	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
6214	Air travel assistants	No	None	None	None	None	None	None	None	None	None	None	None
6221	Hairdressers, barbers	Yes	None	Low	Low	High	None	None	None	None	None	None	None
7111	Sales and retail assistants	No	None	None	None	None	None	None	None	None	None	None	None
7112	Retail cashiers and check-out operators	No	None	None	None	None	None	None	None	None	None	None	None
7121	Collector salespersons and credit agents	No	None	None	None	None	None	None	None	None	None	None	None
7123	Roundspersons and van salespersons	No	None	None	None	None	None	None	None	None	None	None	None
7125	Merchandisers and window dressers	No	None	None	None	None	None	None	None	None	None	None	None
7129	Sales related occupations nec.	No	None	None	None	None	None	None	None	None	None	None	None
7211	Call centre agents/operators	No	None	None	None	None	None	None	None	None	None	None	None
7212	Customer care occupations	No	None	None	None	None	None	None	None	None	None	None	None
8111	Food, drink and tobacco process operatives	Yes	Low	None	None	None	None	Medium	None	None	Low	Low	None
8113	Textile process operatives	Yes	Low	None	None	Medium	None	None	None	Low	Low	None	None
8114	Chemical and related process operatives	Yes	None	Low	Low	Low	None	None	None	None	Low	None	Low

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
8119	Process operatives nec.	Yes	None	None	Low	None	Low	None	None	None	None	None	None
8121	Paper and wood machine operatives	Yes	Medium	Medium	Low	Medium	None	None	High	None	Low	None	None
8123	Quarry workers and related operatives	No	None	None	None	None	None	None	None	None	None	None	None
8124	Energy plant operatives	No	None	None	None	None	None	None	None	None	None	None	None
8125	Metal working machine operatives	Yes	Medium	None	Low	Low	Medium	None	None	None	None	None	None
8129	Plant and machine operatives n.e.c.	Yes	Medium	None	Low	Low	Medium	None	None	None	None	None	None
8132	Assemblers (vehicles and metal goods)	Yes	None	Medium	Low	Low	Medium	None	None	None	None	None	None
8133	Routine inspectors and testers	No	None	None	None	None	None	None	None	None	None	None	None
8134	Weighers, graders, sorters	Yes	None	None	Low	None	Medium	Medium	None	Medium	None	Medium	None
8136	Clothing cutters	Yes	Low	None	None	Low	None	None	None	None	None	None	None
8137	Sewing machinists	No	None	None	None	None	None	None	None	None	None	None	None
8138	Routine laboratory testers	Yes	None	None	Medium	None	None	Low	None	None	None	None	None
8141	Scaffolders, stagers, riggers	No	None	None	None	None	None	None	None	None	None	None	None
8142	Road construction operatives	No	None	None	None	None	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
8149	Construction operatives nec.	Yes	Low	Low	None	None	Low	None	Medium	None	None	None	None
8211	Heavy goods vehicle drivers	No	None	None	None	None	None	None	None	None	None	None	None
8212	Van drivers	No	None	None	None	None	None	None	None	None	None	None	None
8213	Bus and coach drivers	No	None	None	None	None	None	None	None	None	None	None	None
8214	Taxi, cab drivers and chauffeurs	No	None	None	None	None	None	None	None	None	None	None	None
8217	Seafarers (merchant navy); barge, lighter and boat operatives	No	None	None	None	None	None	None	None	None	None	None	None
8218	Air transport operatives	No	None	None	None	None	None	None	None	None	None	None	None
8222	Fork-lift truck drivers	No	None	None	None	None	None	None	None	None	None	None	None
9119	Fishing and agriculture related occupations nec.	Yes	Low	None	Low	None	None	High	None	Low	None	None	None
9121	Labourers in building and woodworking trades	Yes	Low	Medium	None	None	None	None	High	None	None	None	None
9129	Labourers in other construction trades nec.	Yes	Low	Medium	None	None	None	None	Medium	None	None	None	None
9132	Industrial cleaning process occupations	Yes	Medium	Medium	None	None	None	None	Low	None	None	None	None
9133	Printing machine minders and assistants	Yes	None	Medium	None	Low	None	None	None	None	None	None	None

Table S1. Continued

SOC 2000	Job title	Exposure to at least one asthmagen	Exposure to major occupational asthmagen groups										
			Biocides/ fungicides	Glues/ resins	Latex	Dyes	Solder/ flux	Food-related	Wood dust	Animal dust	Enzyme products	Flour/ grain dust	Isocyanates
9134	Packers, bottlers, canners, fillers	Yes	Low	None	Low	None	None	Medium	None	None	None	None	None
9139	Labourers in process and plant operations nec.	Yes	None	Low	None	None	Medium	Medium	None	None	None	None	None
9141	Stevedores, dockers and slingers	No	None	None	None	None	None	None	None	None	None	None	None
9149	Other goods handling and storage occupations nec.	No	None	None	None	None	None	None	None	None	None	None	None
9211	Postal workers, mail sorters, messengers, couriers	No	None	None	None	None	None	None	None	None	None	None	None
9219	Elementary office occupations nec.	No	None	None	None	None	None	None	None	None	None	None	None
9221	Hospital porters	No	None	None	None	None	None	None	None	None	None	None	None
9223	Kitchen and catering assistants	Yes	Low	None	None	None	None	Low	None	None	None	Low	None
9224	Waiters, waitresses	Yes	Low	None	None	None	None	None	None	None	None	None	None
9225	Bar staff	Yes	Low	None	None	None	None	None	None	None	None	None	None
9233	Cleaners, domestics	Yes	Low	None	None	None	None	None	None	None	None	None	None
9234	Launderers, dry cleaners and pressers	Yes	Low	None	None	None	None	None	None	None	Low	None	None
9241	Security guards and related	No	None	None	None	None	None	None	None	None	None	None	None

	occupations												
9244	School mid-day assistants	No	None	None	None	None	None	None	None	None	None	None	None
9259	Elementary sales occupations nec.	No	None	None	None	None	None	None	None	None	None	None	None

Table S2 Prevalence of respiratory outcomes in 2014 by lifetime occupational exposure to selected asthmagens, n analysed=237

Outcomes, %	**Asthmagens, n exposed**																				
	Biocides/fungicides, 115			Glues/resins, 92			Latex, 83			Solder/flux, 56			Foodstuff, 53			Wood dust, 48			Animal dust, 43		
	Yes	No	p	Yes	No	p	Yes	No	p	Yes	No	p	Yes	No	p	Yes	No	p	Yes	No	p
AOW	*47.8*	*32.8*	*0.018*	**55.4**	**30.3**	**<0.001**	**56.6**	**31.2**	**<.001**	**55.4**	**35.4**	**0.008**	**60.4**	**34.2**	**0.001**	*54.2*	*36.5*	*0.026*	*55.8*	*36.6*	*0.020*
COPD diagnosis	*10.4*	*2.5*	*0.012*	9.8	4.1	0.082	9.6	4.5	0.125	8.9	5.5	0.361	**17.0**	**3.3**	**<0.001**	8.3	5.8	0.523	11.6	5.2	0.115
FEV_1< LLN	**13.9**	**3.3**	**0.003**	9.8	7.6	0.553	13.3	5.8	0.050	8.9	8.3	0.880	**18.9**	**5.4**	**0.002**	14.6	6.9	0.086	11.6	7.7	0.406
FEV_1/FVC < 0.7	45.2	32.8	0.050	41.3	37.2	0.532	43.4	36.4	0.291	42.9	37.6	0.478	*50.9*	*35.3*	*0.040*	**56.3**	**34.4**	**0.006**	46.5	37.1	0.253

Chi^2 for difference between exposed and non-exposed: p<0.01 highlighted in bold, p<0.05 are in italic

Table S3 Mean difference in FEV_1, FVC and $FEF_{25-75\%}$ % predicted between exposed and not exposed to selected asthmagens in 2014, n analysed=237

Outcomes, % predicted	**Asthmagens, n exposed**													
	Biocides/fungicides, 115		Glues/resins, 92		Latex, 83		Solder/flux, 56		Foodstuff, 53		Wood dust, 48		Animal dust, 43	
	Mean diff	p	Mean diff	p	Mean diff	p	Mean diff	p	Mean diff	p	Mean diff	p	Mean diff	p
FEV_1	*-5.17*	*0.015*	2.02	0.352	-2.61	0.240	3.69	0.139	**-9.26**	**<0.001**	-2.69	0.308	-3.31	0.228
FVC	-3.87	0.054	2.92	0.158	-1.63	0.442	4.18	0.078	**-6.74**	**0.005**	1.52	0.604	-2.73	0.297
$FEF_{25-75\%}$	*-10.01*	*0.022*	-0.11	0.981	-6.37	0.166	6.36	0.263	**-17.45**	**0.001**	*-11.23*	*0.039*	-8.90	0.117

T-test for difference between means in exposed and non-exposed: p<0.01 highlighted in bold, p<0.05 are in italic

Table S4 Prevalence of respiratory outcomes in 2014 by lifetime exposure to a total number of occupational asthmagens, n analysed=237

	N of asthmagens			p for trend*
	0	1-3	≥4	
AOW	**24 (31.2)**	**17 (23.9)**	**54 (60.7)**	**<0.001**
COPD diagnosis	**1 (1.3)**	**2 (2.8)**	**12 (13.5)**	**0.004**
FEV_1< LLN	*2 (2.6)*	*6 (8.5)*	*12 (13.5)*	*0.016*
FEV_1/FVC < 0.7	24 (31.2)	29 (40.8)	39 (43.8)	0.100

*p<0.01 highlighted in bold, p<0.05 are in italic

Table S5. Adjusted logistic and linear regression analyses of the associations between respiratory outcomes and binary occupational exposure (exposed/not exposed) to specific asthmagen in the longest held jobs in the WHEASE cohort; n analysed=237

Asthmagen exposure	Adjusted[a] OR 95%CI			Adjusted[a] regression coefficient 95%CI		
	AOW	FEV_1<LLN	FEV_1/FVC<0.7	FEV_1 % predicted	FVC % predicted	$FEF_{25-75\%}$ % predicted
Biocides/fungicides, n 70	2.56 [1.41, 4.64]	3.37 [1.25, 9.09]	1.55 [0.85, 2.83]	-4.19 [-8.64, 0.26]	-1.94 [-6.31, 2.43]	-10.96 [-20.16, -1.76]
Food-related, n 25	2.06 [0.87, 4.89]	2.56 [0.78, 8.38]	1.16 [0.47, 2.79]	-6.15 [-12.70, 0.40]	-7.67 [-14.03, -1.31]	-8.60 [-22.24, 5.03]
Wood dust, n 26	2.40 [0.98, 5.91]	0.90 [0.17, 4.72]	1.64 [0.66, 4.08]	1.22 [-5.58, 8.02]	2.21 [-4.42, 8.85]	-8.26 [-22.34, 5.81]

[a]Adjusted for: sex, smoking ever and highest educational qualification obtained.

Table S6a. Adjusted logistic and linear regression analyses of the associations between respiratory outcomes and binary occupational exposure (exposed/not exposed) to specific asthmagens in the current/last held jobs in the WHEASE cohort; n analysed=237

Asthmagen exposure	Adjusted[a] OR 95%CI			Adjusted[a] regression coefficient 95%CI		
	AOW	FEV_1<LLN	FEV_1/FVC<0.7	FEV_1 % predicted	FVC % predicted	$FEF_{25-75\%}$ % predicted
Biocides/fungicides, n 68	1.59 [0.88, 2.89]	3.27 [1.21, 8.84]	1.11 [0.60, 2.05]	-5.01 [-9.51, -0.51]	-4.17 [-8.58, 0.24]	-7.06 [-16.46, 2.34]
Food-related, n 18	1.16 [0.43, 3.13]	1.75 [0.43, 7.21]	1.15 [0.42, 3.19]	-6.97 [-14.54, 0.59]	-7.76 [-15.12, -0.39]	-11.57 [-27.29, 4.15]
Wood dust, n 19	1.68 [0.61, 4.59]	1.30 [0.23, 7.25]	1.69 [0.60, 4.71]	0.92 [-6.82, 8.67]	2.08 [-5.48, 9.63]	-7.43 [-23.46, 8.60]

[a]Adjusted for: sex, smoking ever and highest educational qualification obtained.

Table S6b. Adjusted logistic and linear regression analyses of the associations between respiratory outcomes and binary occupational exposure (exposed/not exposed) to specific asthmagens in the current/last held jobs in the WHEASE cohort; n analysed=237

Asthmagen exposure	Adjusted[a] OR 95%CI			Adjusted[a] regression coefficient 95%CI		
	AOW	FEV_1<LLN	FEV_1/FVC<0.7	FEV_1 % predicted	FVC % predicted	$FEF_{25-75\%}$ % predicted
Biocides/fungicides, n 68	1.56 [0.86, 2.84]	3.19 [1.18, 8.64]	1.07 [0.59, 2.00]	-5.04 [-9.58, -0.5]	-4.30 [-8.74, 0.14]	-7.05 [-16.52, 2.42]
Food-related, n 18	1.13 [0.42, 3.04]	1.75 [0.43, 7.17]	1.12 [0.41, 3.09]	-6.98 [-14.59, 0.62]	-7.90 [-15.30, -0.50]	-11.53 [-27.33, 4.27]
Wood dust, n 19	1.54 [0.54, 4.42]	1.10 [0.18, 6.69]	1.51 [0.51, 4.47]	1.15 [-6.98, 9.28]	1.89 [-6.04, 9.82]	-7.68 [-24.495, 9.14]

[a]Adjusted for: sex, smoking ever, highest educational qualification and age at first hire.