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2022 Aerospace Medical Certification Statistical Handbook

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Final Report



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16. Abstract <p>Introduction. The biennial Aerospace Medical Certification Statistical Handbook reports descriptive characteristics of all active U.S. civil aviation airmen. The 2022 handbook documents the most recent and most widely relevant data on active civil aviation airmen.</p> <p>Methods. Medical certification records from 2017–2022 were selected from the Document Imaging Workflow System, which is the Federal Aviation Administration's (FAA's) medical certification database. All data used in this handbook was sourced from each airman's most recent medical examination, with the exception of the data for medical conditions, which were derived from a comprehensive compilation of both recent and historical medical certificates. Only those with a non-expired medical certificate remained in the dataset. Airman variables include age, issued and effective medical classes, height, weight, body mass index (BMI), gender, select medical conditions, special issuances (SIs), and FAA region of residence.</p> <p>Results. As of December 31, 2022, 589,242 medically certified airmen were age 16 and older, and 50.1%, 15.8%, and 34.1% were issued a first-, second-, and third-class medical certificate, respectively. Across all medical classes, the average age was 39.6 years, 90.8% were male, and 9.2% were female. The mean BMI for female and male airmen was 24.3 kg/m² and 27.1 kg/m², respectively. Nearly 5.9% of issued certificates required an SI. The most-reported medical condition was hypertension treated with medication, reported among 6.3% of the population.</p> <p>Summary. This report contains widely requested data on the active U.S. civil airman population. This report is updated biennially and is used by the aerospace community, including FAA leadership, aerospace researchers, advocacy groups, legislative staff, and the general public.</p>					
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2022 Aerospace Medical Certification Statistical Handbook

Introduction

The biennial Aerospace Medical Certification Statistical Handbook reports descriptive characteristics of all active U.S. civil aviation airmen. The 2022 handbook documents the most recent and most widely relevant data on active civil aviation airmen.

Methods

Medical certification records from 2017–2022 were selected from the Document Imaging Workflow System, which is the Federal Aviation Administration's (FAA's) medical certification database. All data used in this handbook was sourced from each airman's most recent medical examination, with the exception of the data for medical conditions, which were derived from a comprehensive compilation of both recent and historical medical certificates. Only those with a non-expired medical certificate remained in the dataset.

Airman variables include age, issued and effective medical classes, height, weight, body mass index (BMI), gender, select medical conditions, special issuances (SIs), and FAA region of residence.

Results

As of December 31, 2022, 589,242 medically certified airmen were age 16 and older, and 50.1%, 15.8%, and 34.1% were issued a first-, second-, and third-class medical certificate, respectively. Across all medical classes, the average age was 39.6 years, 90.8% were male, and 9.2% were female. The mean BMI for female and male airmen was 24.3 kg/m² and 27.1 kg/m², respectively. Nearly 5.9% of issued certificates required an SI. The most-reported medical condition was hypertension treated with medication, reported among 6.3% of the population.

Summary

This report contains widely requested data on the active U.S. civil airman population. This report is updated biennially and is used by the aerospace community, including FAA leadership, aerospace researchers, advocacy groups, legislative staff, and the general public.

Section I. Airman Medical Certification

The Aerospace Medical Certification Division is the central screening facility and repository within the FAA to collect, investigate, adjudicate, and analyze medical data.

Activities of the Aerospace Medical Certification Division are presented in this section. Data are presented by calendar year and represent the most recent medical examination data for all active civil aviation airmen in the United States and its territories as of December 31, 2022. Data may fluctuate slightly annually from systematic changes and corrections to the records.

Class issued represents the medical class certificate that was issued at the time of the examination. As of July 24, 2008, if the airman is under age 40, first- and second-class certificates are valid for one year, and third-class certificates are valid for five years. If the airman is 40 or older, first-class certificates are valid for six months, second-class for one year, and third-class for two years. The length of certificate validity varies for those requiring an SI.

Effective medical class is determined by class issued, the airman's age, time since the examination, and whether the airman had a time-limited certificate. A certificate can be issued as a higher class (e.g., first-class) and become valid as a lower class certificate (e.g., third-class) as the validity period expires for each higher class.

All medical data were abstracted from the most recent medical examinations, except for medical conditions. Medical conditions are determined by whether the airman has ever reported the condition on any past or current medical examination. BMI classifications are as follows: *Underweight* ($<18.5 \text{ kg/m}^2$), *Normal* ($18.5 \text{ to } 24.9 \text{ kg/m}^2$), *Overweight* ($25 \text{ to } 29.9 \text{ kg/m}^2$), and *Obese* ($\geq 30 \text{ kg/m}^2$).

Table 1. Number of Medical Applications Processed by Year

Year	Number of Applications	Percent Change From Previous Year
2006	440,271	N/A
2007	452,594	2.8
2008 ^a	425,275	-6.0
2009	397,180	-6.6
2010	394,727	-0.6
2011	400,137	1.4
2012	396,377	-0.9
2013	394,532	-0.5
2014	391,749	-0.7
2015	393,523	0.5
2016	398,398	1.2
2017	390,263	-2.0
2018	401,169	2.8
2019	410,118	2.2
2020	369,962	-9.8
2021	408,679	10.5
2022	434,674	6.4

Note. N/A = not applicable.

^a Policy change July 24, 2008 lengthened the time of certificate validity for those under age 40.

Table 2. Issued and Effective Medical Class by Region

Region *	First				Second			Third		Total Active Airmen				
		Effective Class				Effective Class			Effective Class			Effective Class		
	1st Class Certified	1	2	3	2nd Class Certified	2	3	3rd Class Certified	3	Total Airmen Certified	Percent of Total Airmen	1	2	3
Alaskan	3,125	2,158	179	788	1,681	1,177	504	2,667	2,667	7,473	1.3	2,158	1,356	3,959
Central	8,328	5,162	493	2,673	4,337	2,775	1,562	9,101	9,101	21,766	3.7	5,162	3,268	13,336
Eastern	27,609	18,222	1,440	7,947	9,367	5,320	4,047	23,044	23,044	60,020	10.2	18,222	6,760	35,038
Great Lakes	38,498	24,640	1,815	12,043	10,356	6,327	4,029	25,804	25,804	74,658	12.7	24,640	8,142	41,876
New England	7,852	5,474	439	1,939	2,576	1,524	1,052	8,019	8,019	18,447	3.1	5,474	1,963	11,010
Northwest-Mountain	34,611	22,609	1,867	10,135	12,602	7,424	5,178	21,920	21,920	69,133	11.7	22,609	9,291	37,233
Southern	76,279	49,518	4,529	22,232	20,942	13,130	7,812	43,863	43,863	141,084	23.9	49,518	17,659	73,907
Southwest	34,675	22,976	2,386	9,313	13,481	8,544	4,937	26,049	26,049	74,205	12.6	22,976	10,930	40,299
Western-Pacific	40,647	25,028	2,140	13,479	13,613	8,343	5,270	33,686	33,686	87,946	14.9	25,028	10,483	52,435
US Total	271,624	175,787	15,288	80,549	88,955	54,564	34,391	194,153	194,153	554,732	94.1	175,787	69,852	309,093
International	23,294	9,179	2,145	11,970	4,199	2,022	2,177	7,013	7,013	34,506	5.9	9,179	4,167	21,160
Total	294,918	184,966	17,433	92,519	93,154	56,586	36,568	201,166	201,166	589,238	100.0	184,966	74,019	330,253
Percent of Total Certified Airmen	50.1				15.8			34.1			100.0	31.4	12.6	56.0

*4 airmen with unknown region

Table 3. Issued Medical Class by State of Residence and Gender

State of Residence *	Issued Medial Class						Total Airmen^	
	First		Second		Third			
	Female	Male	Female	Male	Female	Male	Female	Male
Alabama	236	2,136	69	1,985	284	2,686	589	6,807
Alaska	407	2,718	143	1,538	380	2,286	930	6,542
Arizona	1,311	10,631	210	2,722	663	6,364	2,184	19,717
Arkansas	119	1,437	47	1,170	209	2,002	375	4,609
California	2,386	19,281	690	7,829	2,462	21,047	5,538	48,157
Colorado	1,245	9,273	232	2,494	598	4,728	2,075	16,495
Connecticut	152	1,706	30	471	160	1,691	342	3,868
Delaware	64	612	13	189	30	350	107	1,151
District of Columbia	16	217	9	78	36	272	61	567
Florida	3,771	34,448	558	7,899	1,844	15,721	6,173	58,068
Georgia	1,014	10,011	179	2,447	556	5,358	1,749	17,816
Hawaii	440	2,152	89	529	88	455	617	3,136
Idaho	208	1,865	130	1,515	195	1,975	533	5,355
Illinois	814	6,965	156	1,712	395	4,037	1,365	12,714
Indiana	498	4,717	52	1,068	322	3,115	872	8,900
Iowa	110	1,143	57	931	154	1,741	321	3,815
Kansas	147	1,955	57	1,149	244	2,433	448	5,537
Kentucky	253	3,089	50	790	198	1,920	501	5,799
Louisiana	126	1,527	57	1,097	185	1,815	368	4,439
Maine	56	670	35	413	70	781	161	1,864
Maryland	221	2,377	116	1,238	342	2,696	679	6,311
Massachusetts	251	2,514	71	771	340	2,883	662	6,168
Michigan	698	5,959	90	1,399	331	4,014	1,119	11,372
Minnesota	724	6,162	129	1,485	289	3,220	1,142	10,867
Mississippi	108	1,338	36	812	151	1,411	295	3,561
Missouri	346	3,388	85	1,396	269	2,927	700	7,711
Montana	180	1,246	70	839	182	1,335	432	3,420
Nebraska	103	1,136	23	639	99	1,234	225	3,009
Nevada	431	3,779	114	1,341	244	2,155	789	7,275
New Hampshire	133	1,583	41	490	117	1,065	291	3,138
New Jersey	369	3,669	91	948	281	2,883	741	7,500
New Mexico	75	691	62	715	151	1,242	288	2,648
New York	605	5,941	149	1,762	563	5,185	1,317	12,888
North Carolina	711	7,111	142	2,136	491	5,178	1,344	14,425
North Dakota	143	1,149	46	640	109	899	298	2,688
Ohio	573	6,060	103	1,666	438	4,630	1,114	12,356
Oklahoma	223	2,460	131	1,649	294	2,826	648	6,935
Oregon	414	2,788	211	2,033	316	2,872	941	7,693
Pennsylvania	569	5,959	160	2,048	415	4,338	1,144	12,345
Rhode Island	37	367	10	110	33	330	80	807
South Carolina	343	3,358	64	1,090	293	2,871	700	7,319
South Dakota	69	659	51	559	49	626	169	1,844
Tennessee	583	6,498	138	2,169	452	4,010	1,173	12,677
Texas	2,424	25,593	576	7,976	1,562	15,763	4,562	49,332
Utah	652	6,475	123	1,612	152	1,835	927	9,922
Vermont	42	341	19	115	62	487	123	943
Virginia	592	5,673	163	2,075	535	4,478	1,290	12,226
Washington	1,137	8,702	284	2,633	744	6,065	2,165	17,400
West Virginia	61	557	23	247	42	505	126	1,309
Wisconsin	286	3,022	112	1,088	320	3,010	718	7,120
Wyoming	34	392	30	396	81	842	145	1,630
US Territories	171	1,346	31	472	64	643	266	2,461
International	1,638	21,656	249	3,950	604	6,409	2,491	32,015
Total	28,319	266,502	6,606	86,525	19,488	181,644	54,413	534,671

*155 airmen missing state

^3 airmen missing gender

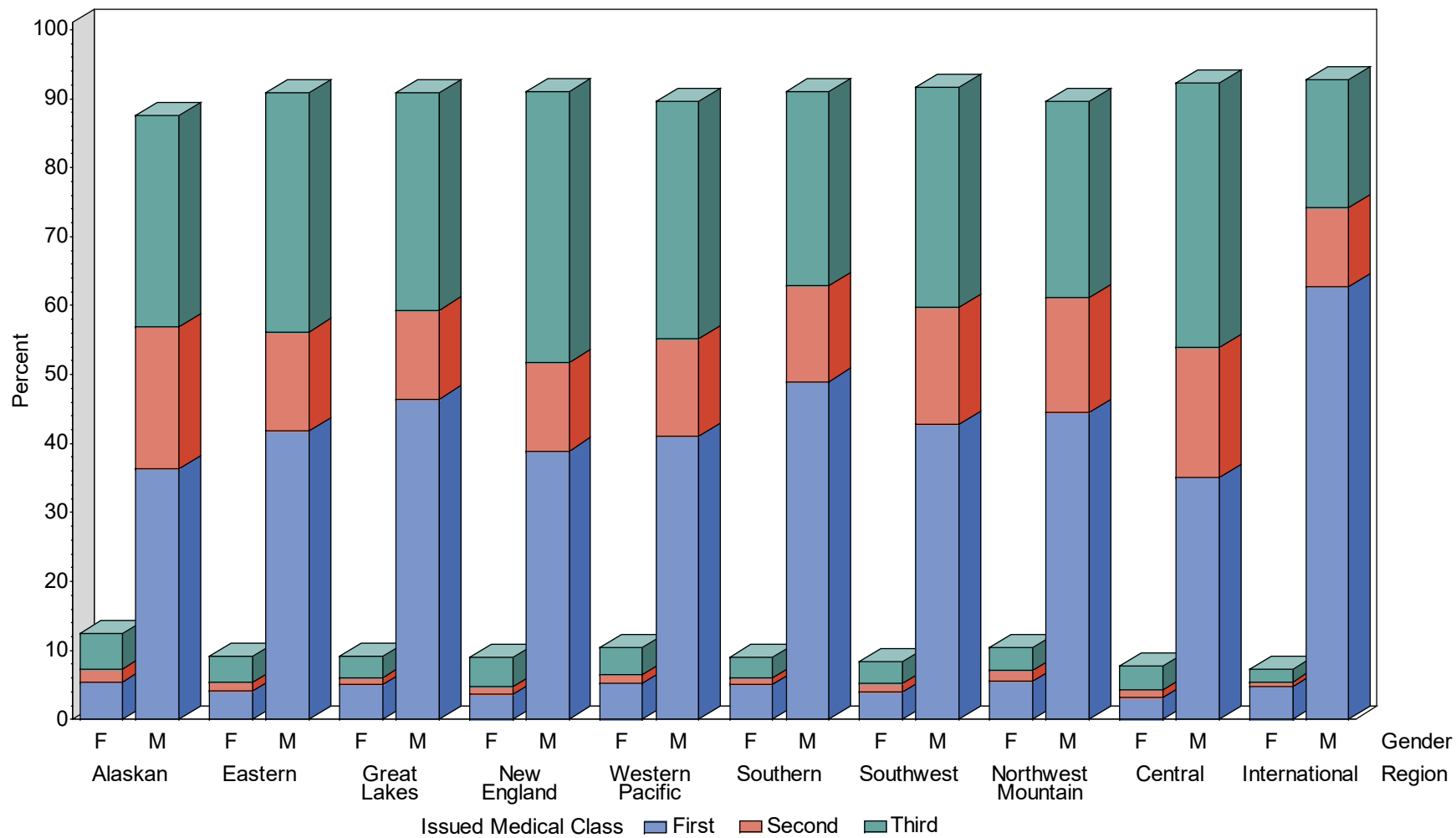


Figure 1. Issued Medical Class by Region and Gender

Table 4. Age (in Years) as of 12/31/2022 of All Active Airmen by Effective Medical Class

Effective Medical Class	Number of Airmen	Mean Age	Median Age	Standard Deviation
First	184,967	40.8	39.7	14.3
Second	74,019	50.2	50.6	13.8
Third	330,256	38.9	34.7	16.2
All Classes	589,242	40.9	38.6	15.7

Table 5. Age Groups of All Active Airmen by Effective Medical Class

Age Group in Years as of 12/31/2022	Effective Medical Class Number (Percent)		
	First	Second	Third
16-19	12,063 (6.5)	1,373 (1.9)	18,132 (5.5)
20-24	19,709 (10.7)	2,592 (3.5)	57,413 (17.4)
25-29	21,499 (11.6)	2,903 (3.9)	51,335 (15.5)
30-34	20,210 (10.9)	3,516 (4.8)	40,189 (12.2)
35-39	20,276 (11.0)	5,037 (6.8)	35,753 (10.8)
40-44	16,466 (8.9)	10,195 (13.8)	27,518 (8.3)
45-49	15,842 (8.6)	10,286 (13.9)	16,283 (4.9)
50-54	18,443 (10.0)	10,102 (13.7)	17,231 (5.2)
55-59	20,009 (10.8)	9,065 (12.3)	17,488 (5.3)
60-64	15,918 (8.6)	7,438 (10.1)	17,599 (5.3)
65+	4,532 (2.5)	11,512 (15.6)	31,315 (9.5)
Total	184,967	74,019	330,256

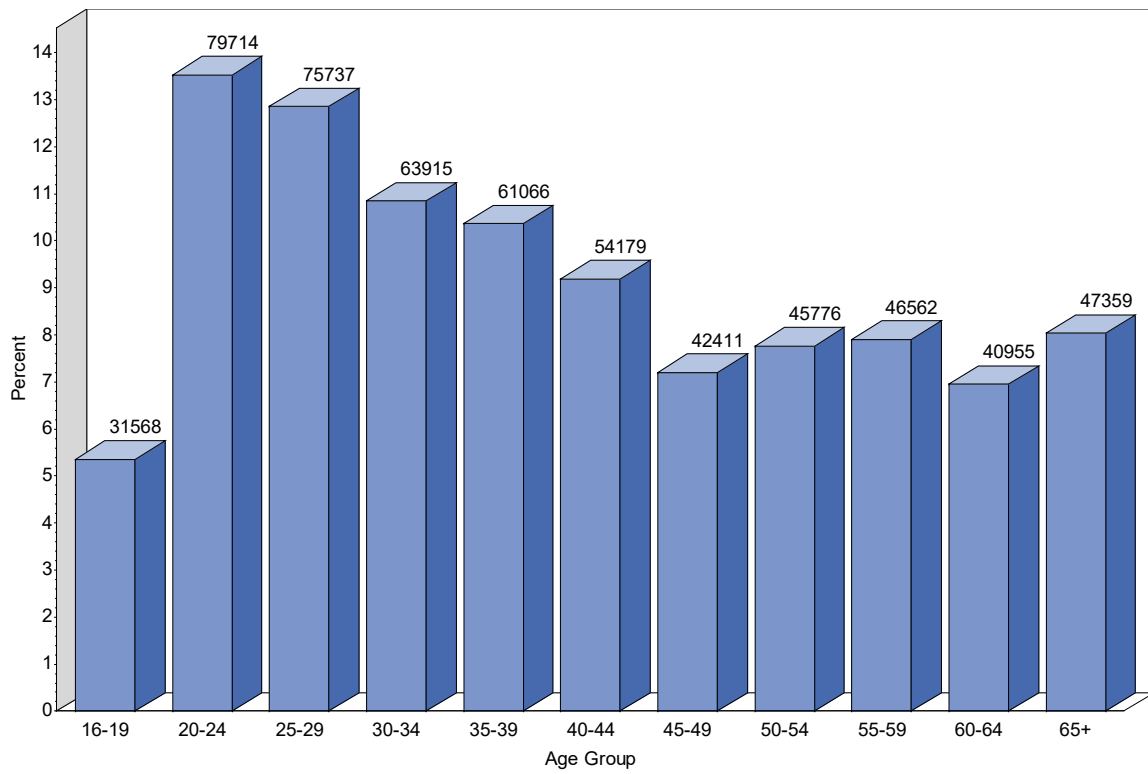


Figure 2. Age Group Distribution as of 12/31/2022 of All Active Airmen

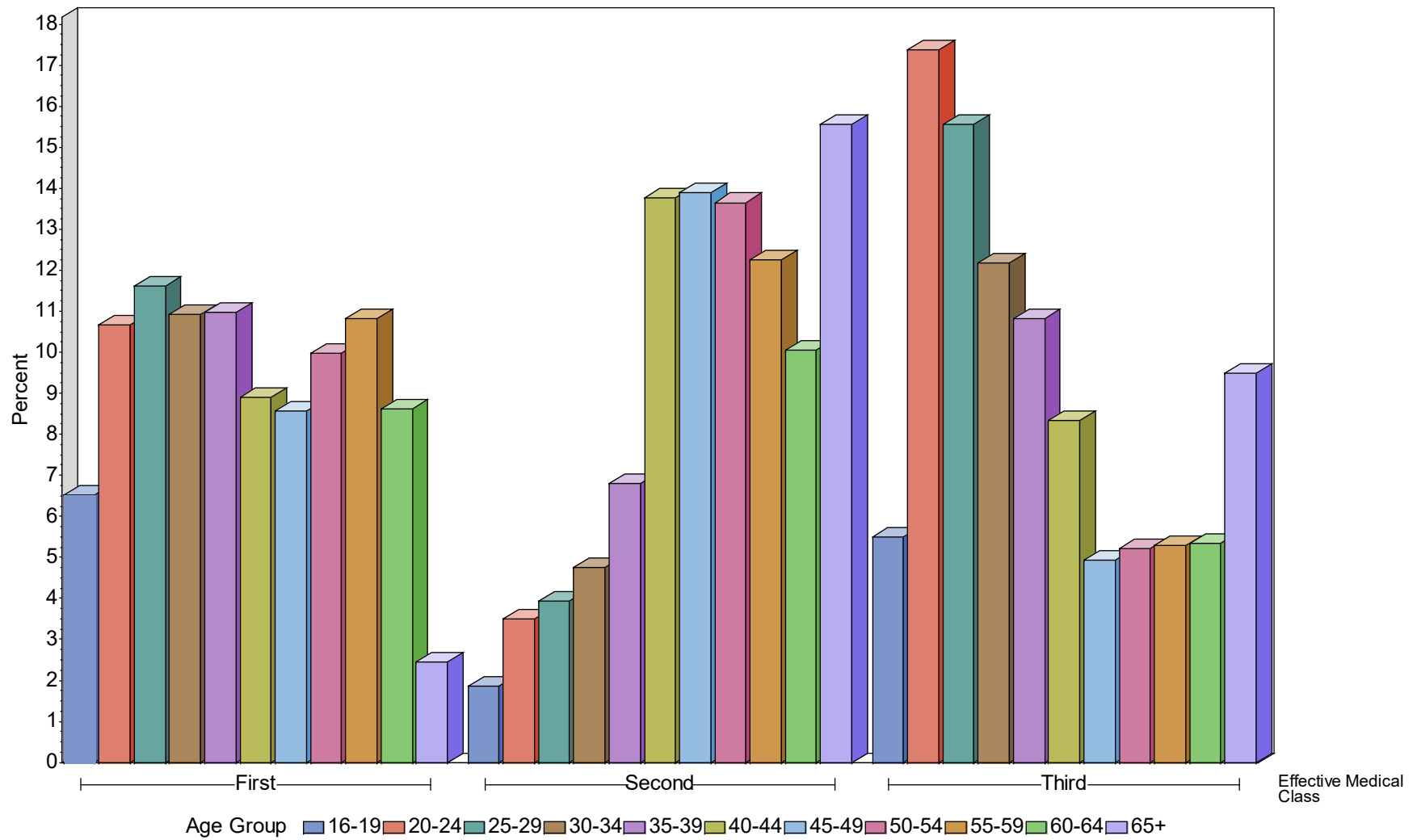


Figure 3. Age Group Distribution as of 12/31/2022 by Effective Medical Class for All Active Airmen

Table 6. Age at Exam Summary Statistics for Active Airmen by Issued Medical Class

Issued Medical Class	Number of Airmen	Mean Age	Median Age	Standard Deviation
First	294,920	36.9	33.9	14.8
Second	93,154	44.4	43.7	16.3
Third	201,168	41.2	38.1	17.4
All Classes	589,242	39.6	36.9	16.3

Table 7. Age Groups for All Active Airmen by Issued Medical Class

Age Group in Years at Time of Exam	Issued Medical Class Number (Percent)		
	First	Second	Third
16-19	38,975 (13.2)	5,832 (6.3)	21,189 (10.5)
20-24	44,498 (15.1)	7,920 (8.5)	25,843 (12.9)
25-29	38,523 (13.1)	7,848 (8.4)	20,673 (10.3)
30-34	32,101 (10.8)	8,450 (9.1)	20,379 (10.1)
35-39	27,052 (9.2)	10,746 (11.5)	21,342 (10.6)
40-44	21,155 (7.2)	8,018 (8.6)	11,559 (5.8)
45-49	20,981 (7.1)	8,064 (8.7)	13,112 (6.5)
50-54	22,799 (7.7)	8,649 (9.3)	14,522 (7.2)
55-59	23,479 (8.0)	8,396 (9.0)	14,793 (7.4)
60-64	19,187 (6.5)	7,478 (8.0)	14,376 (7.2)
65+	6,170 (2.1)	11,753 (12.6)	23,380 (11.6)
Total	294,920	93,154	201,168

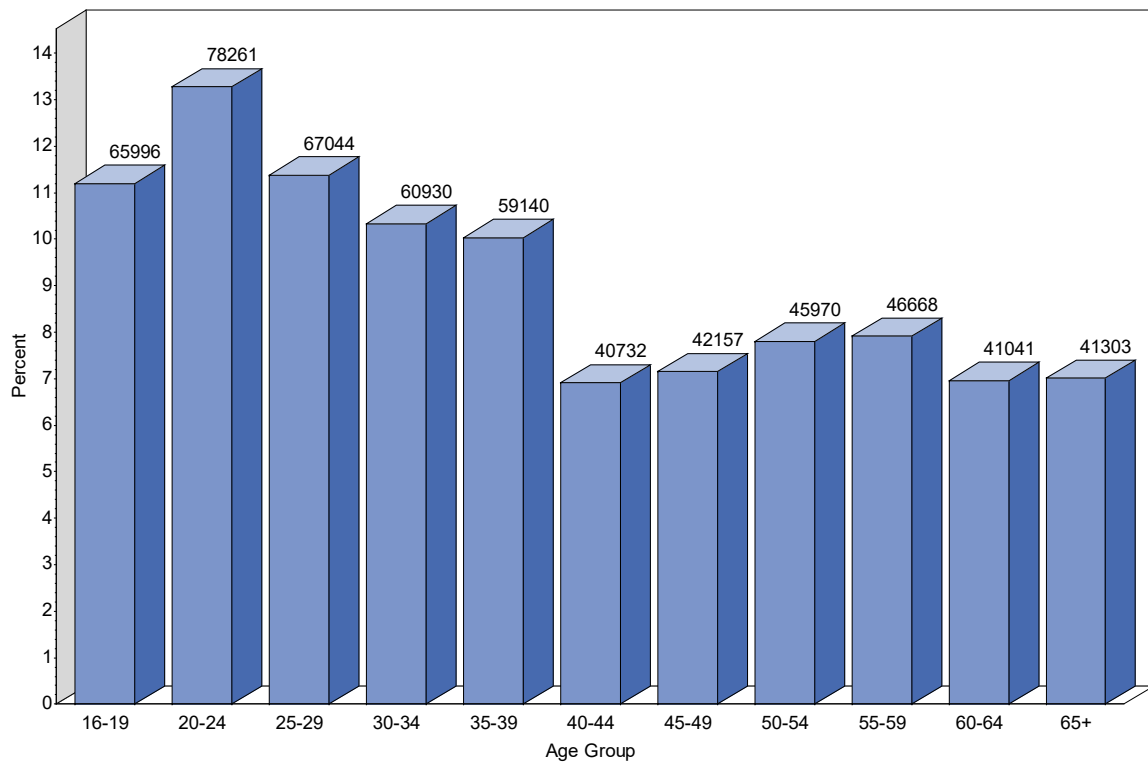


Figure 4. Age Group Distribution of All Active Airmen at Time of Exam

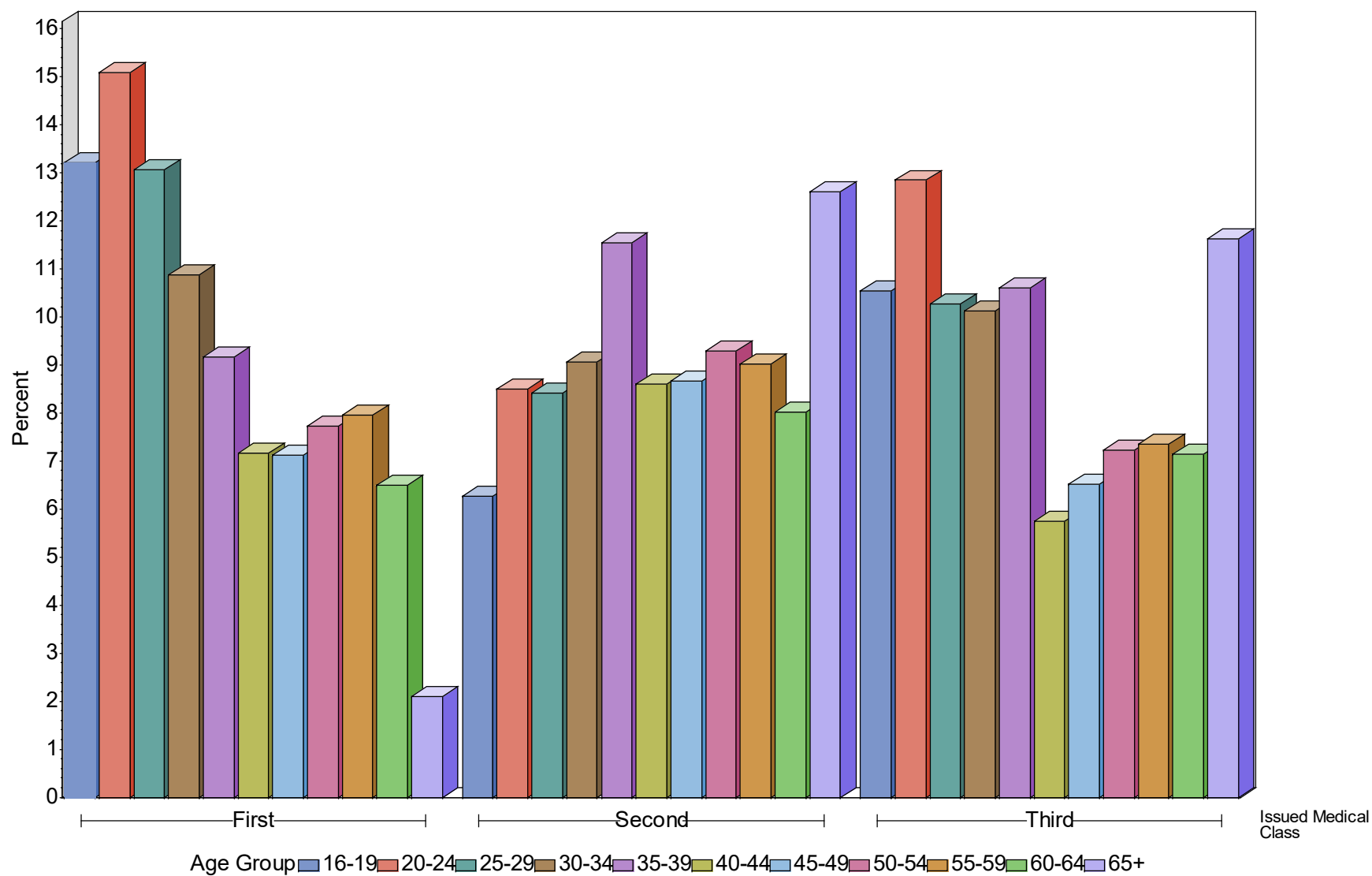


Figure 5. Age Group Distribution by Issued Medical Class for All Active Airmen at Time of Exam

Table 8. Age at Time of Exam by Issued Medical Class and Gender

Age Group in Years ^a	Issued Medical Class							
	First		Second		Third		Total Airmen	
	Female	Male	Female	Male	Female	Male	Female	Male
16-19	6,934	32,041	926	4,906	4,055	17,134	11,915	54,081
20-24	5,690	38,808	880	7,040	3,517	22,326	10,087	68,174
25-29	4,894	33,629	899	6,948	2,618	18,055	8,411	58,632
30-34	3,448	28,653	731	7,719	2,219	18,160	6,398	54,532
35-39	2,058	24,994	914	9,832	1,915	19,427	4,887	54,253
40-44	1,297	19,858	550	7,468	959	10,599	2,806	37,925
45-49	1,213	19,768	440	7,624	836	12,275	2,489	39,667
50-54	1,169	21,630	383	8,266	946	13,576	2,498	43,472
55-59	959	22,520	324	8,072	819	13,974	2,102	44,566
60-64	575	18,612	271	7,207	705	13,671	1,551	39,490
65+	90	6,080	288	11,465	902	22,478	1,280	40,023
Total	28,327	266,593	6,606	86,547	19,491	181,675	54,424	534,815

^a 3 airmen missing gender

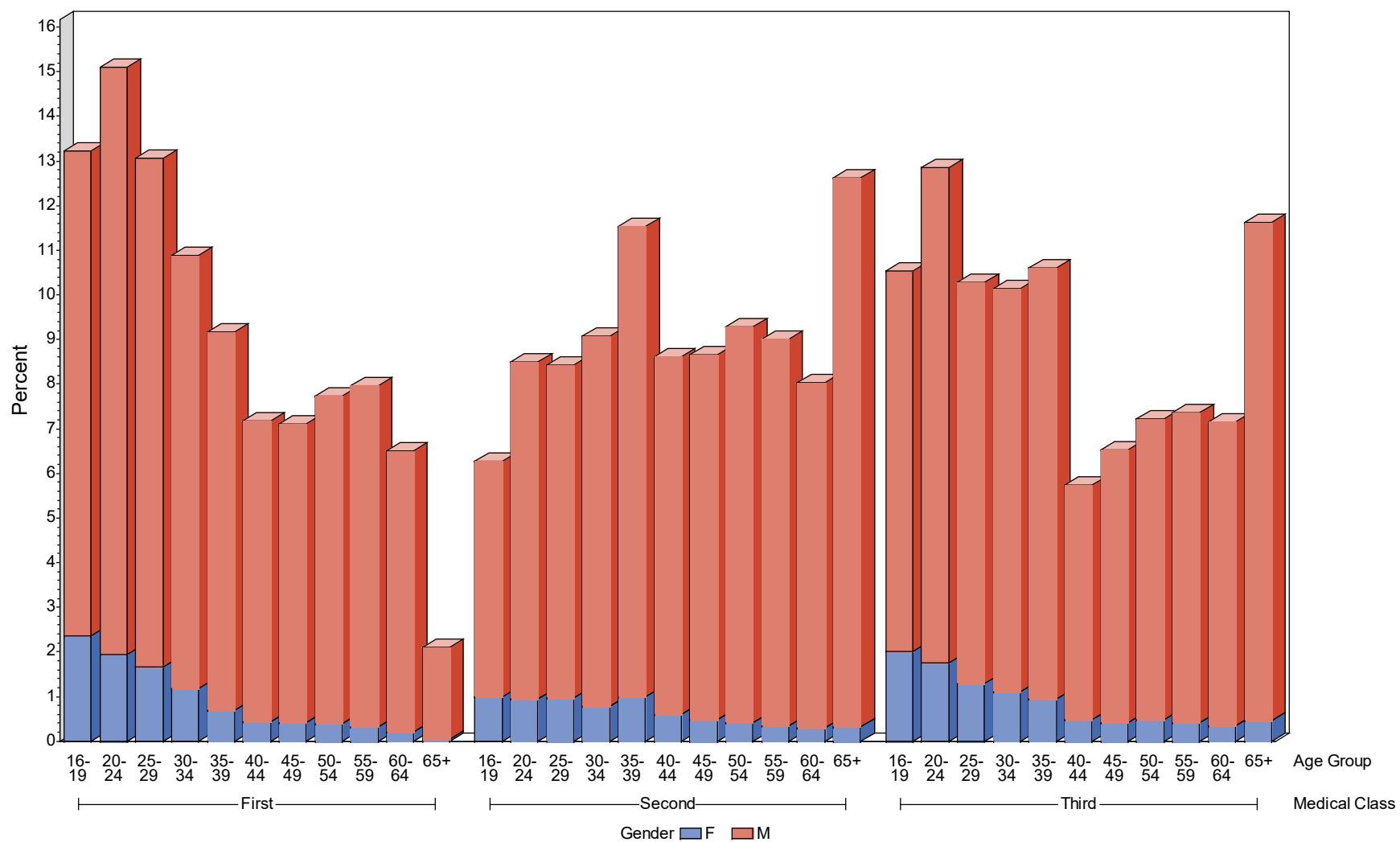


Figure 6. Age Group Distribution at Time of Exam by Gender and Issued Medical Class

Table 9. Height of All Active Airmen by Gender and Issued Medical Class

Issued Medical Class ^a		Number of Airmen	Mean Height in Inches	Median Height in Inches	Standard Deviation in Inches
First	Females	28,325	65.2	65.0	2.7
	Males	266,589	70.6	71.0	2.7
Second	Females	6,606	65.2	65.0	2.7
	Males	86,547	70.6	71.0	2.7
Third	Females	19,490	65.2	65.0	2.7
	Males	181,672	70.5	71.0	2.8
All Classes	Females	54,421	65.2	65.0	2.7
	Males	534,808	70.6	71.0	2.8

^a 10 airmen missing height, 3 airmen missing gender

Table 10. Height by Issued Medical Class and Gender

Height in Inches ^a	Issued Medical Class						Total Airmen	
	First		Second		Third			
	Female	Male	Female	Male	Female	Male	Female	Male
<59	122	132	44	62	124	139	290	333
59	170	66	45	18	138	85	353	169
60	627	135	149	73	436	169	1,212	377
61	1,023	130	246	49	745	155	2,014	334
62	2,203	271	497	87	1,626	256	4,326	614
63	3,153	714	706	207	2,100	514	5,959	1,435
64	4,083	1,968	979	611	2,773	1,476	7,835	4,055
65	4,103	4,433	930	1,301	2,814	3,117	7,847	8,851
66	4,013	9,841	960	3,052	2,710	6,912	7,683	19,805
67	3,433	16,945	791	5,291	2,314	11,477	6,538	33,713
68	2,275	24,681	530	8,111	1,620	16,745	4,425	49,537
69	1,506	32,330	361	10,562	1,020	21,274	2,887	64,166
70	893	39,709	215	13,273	563	27,300	1,671	80,282
71	418	35,491	80	11,674	288	24,743	786	71,908
72	203	38,319	49	12,849	137	26,393	389	77,561
73	53	23,414	9	7,408	47	15,626	109	46,448
74	28	18,610	9	5,873	19	12,358	56	36,841
75	8	10,177	2	3,078	8	6,516	18	19,771
76	6	5,738	1	1,815	5	3,843	12	11,396
77	2	2,162	0	668	1	1,444	3	4,274
78+	3	1,323	3	485	2	1,130	8	2,938
Total	28,325	266,589	6,606	86,547	19,490	181,672	54,421	534,808

^a 10 airmen missing height, 3 airmen missing gender

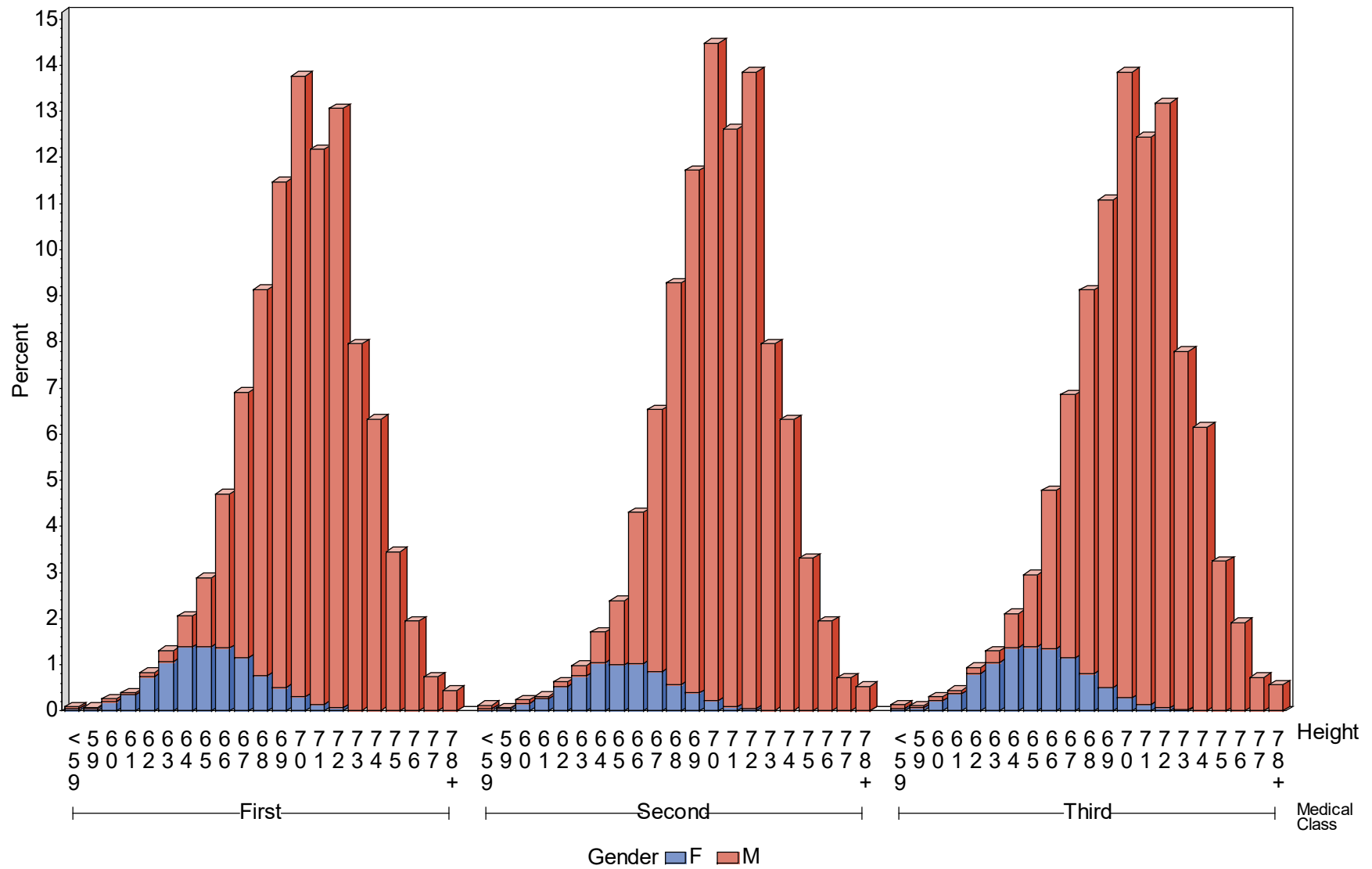


Figure 7. Height (Inches) by Gender and Issued Medical Class

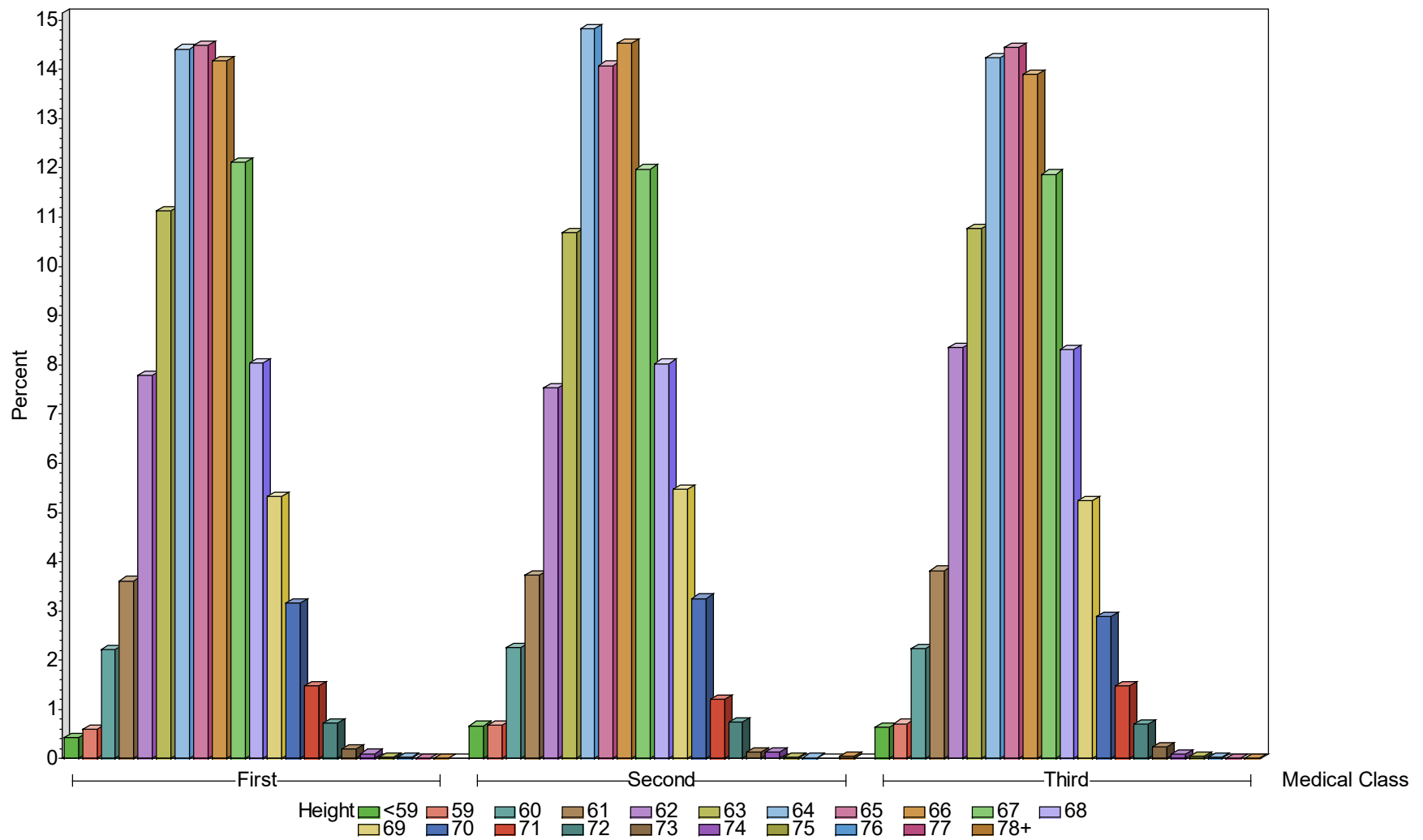


Figure 8. Height (Inches) by Issued Medical Class – Female Airmen Only

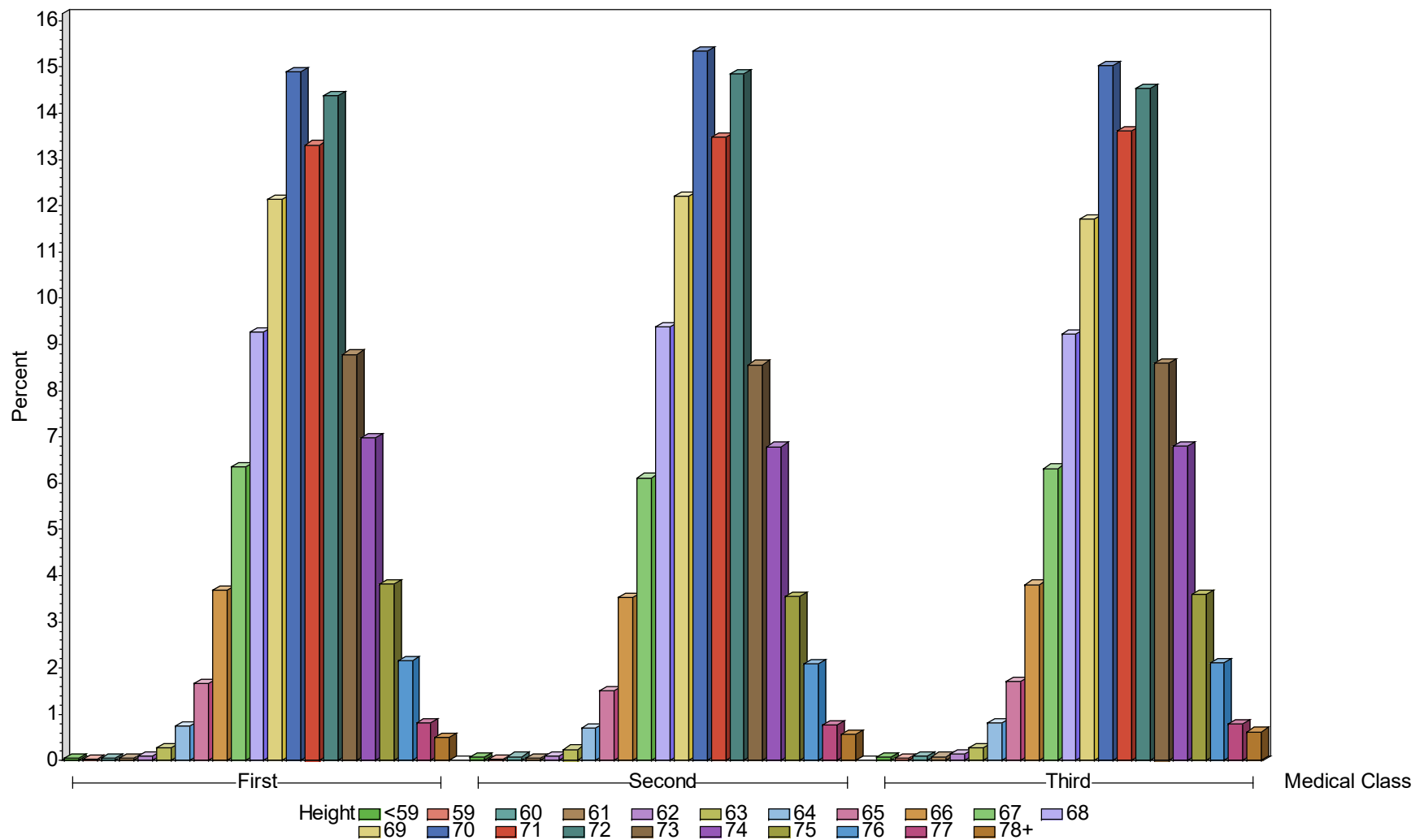


Figure 9. Height (Inches) by Issued Medical Class – Male Airmen Only

Table 11. Weight of All Active Airmen by Gender and Issued Medical Class

Issued Medical Class ^a		Number of Airmen	Mean Weight in Pounds	Median Weight in Pounds	Standard Deviation in Pounds
First	Females	28,319	146.9	140.0	30.9
	Males	266,552	189.9	186.0	35.5
Second	Females	6,606	151.1	145.0	32.5
	Males	86,529	196.9	193.0	35.5
Third	Females	19,487	146.3	140.0	30.4
	Males	181,633	192.4	189.0	36.4
All Classes	Females	54,412	147.2	141.0	30.9
	Males	534,714	191.9	188.0	35.9

^a 113 missing weight, 3 airmen missing gender

Table 12. Weight by Issued Medical Class and Gender

Weight in Pounds ^a	Issued Medical Class						Total Airmen	
	First		Second		Third			
	Female	Male	Female	Male	Female	Male	Female	Male
<100	340	99	42	30	209	81	591	210
100-109	1,201	411	223	63	788	282	2,212	756
110-119	2,736	1,535	560	246	2,000	901	5,296	2,682
120-129	4,233	3,976	838	723	2,914	2,372	7,985	7,071
130-139	4,802	8,171	1,079	1,677	3,392	4,906	9,273	14,754
140-149	4,093	13,838	978	3,013	2,794	8,586	7,865	25,437
150-159	3,296	20,818	758	4,961	2,269	13,118	6,323	38,897
160-169	2,171	27,424	575	7,440	1,521	17,721	4,267	52,585
170-179	1,604	31,699	446	9,615	1,145	21,328	3,195	62,642
180-189	1,145	33,709	323	10,887	758	22,789	2,226	67,385
190-199	800	29,790	222	10,417	506	20,321	1,528	60,528
200-209	566	25,141	170	9,187	353	17,523	1,089	51,851
210-219	413	19,784	109	7,667	238	13,925	760	41,376
220-229	307	15,350	97	6,203	202	11,024	606	32,577
230-239	195	11,101	61	4,472	123	8,144	379	23,717
240-249	147	7,771	42	3,194	86	5,700	275	16,665
250-259	96	5,278	23	2,226	67	4,076	186	11,580
260-269	54	3,615	15	1,434	44	2,824	113	7,873
270-279	45	2,341	18	1,012	29	2,026	92	5,379
280+	75	4,701	27	2,062	49	3,986	151	10,749
Total	28,319	266,552	6,606	86,529	19,487	181,633	54,412	534,714

^a 113 airmen missing weight, 3 airmen missing gender

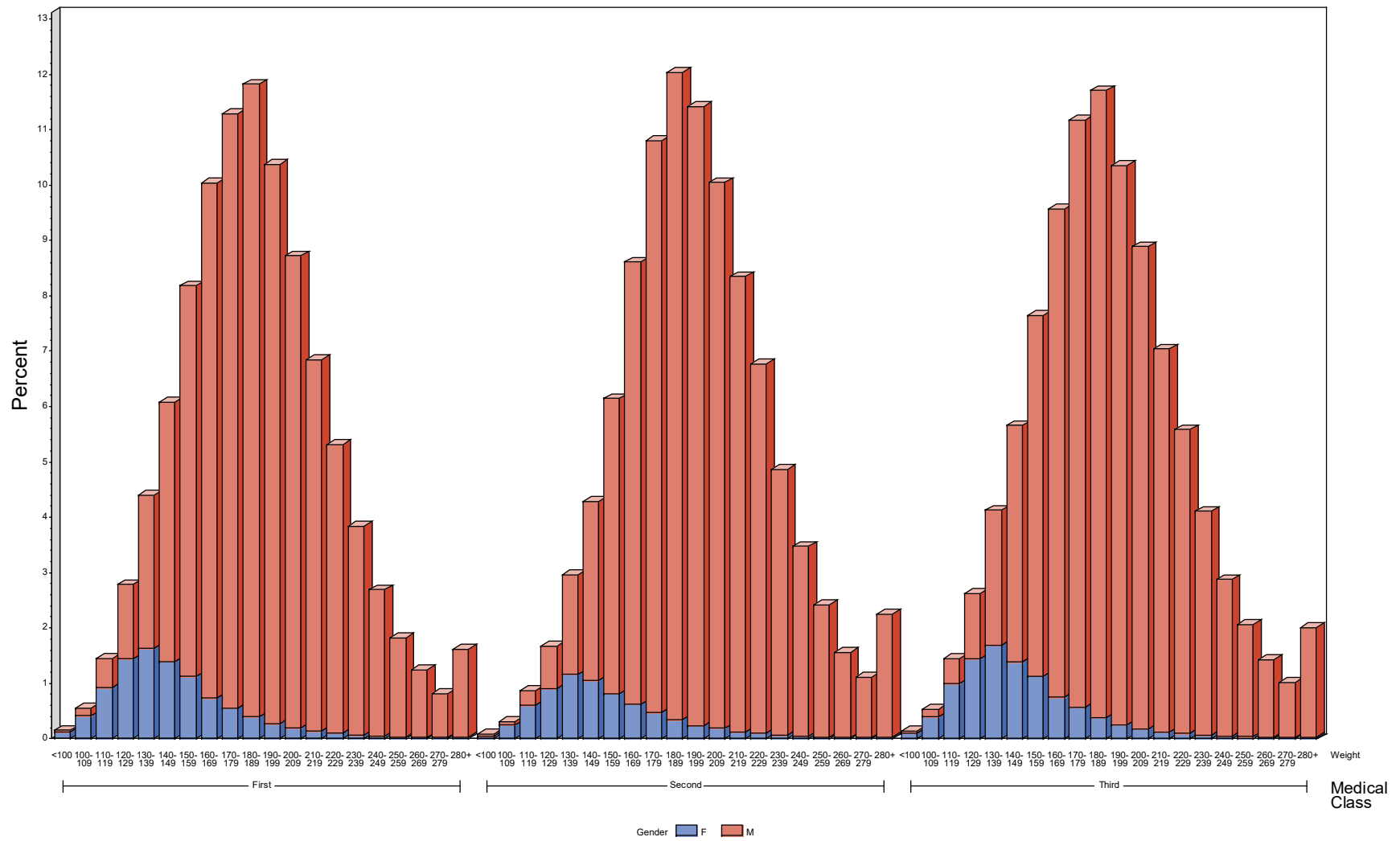


Figure 10. Weight (Pounds) by Gender and Issued Medical Class

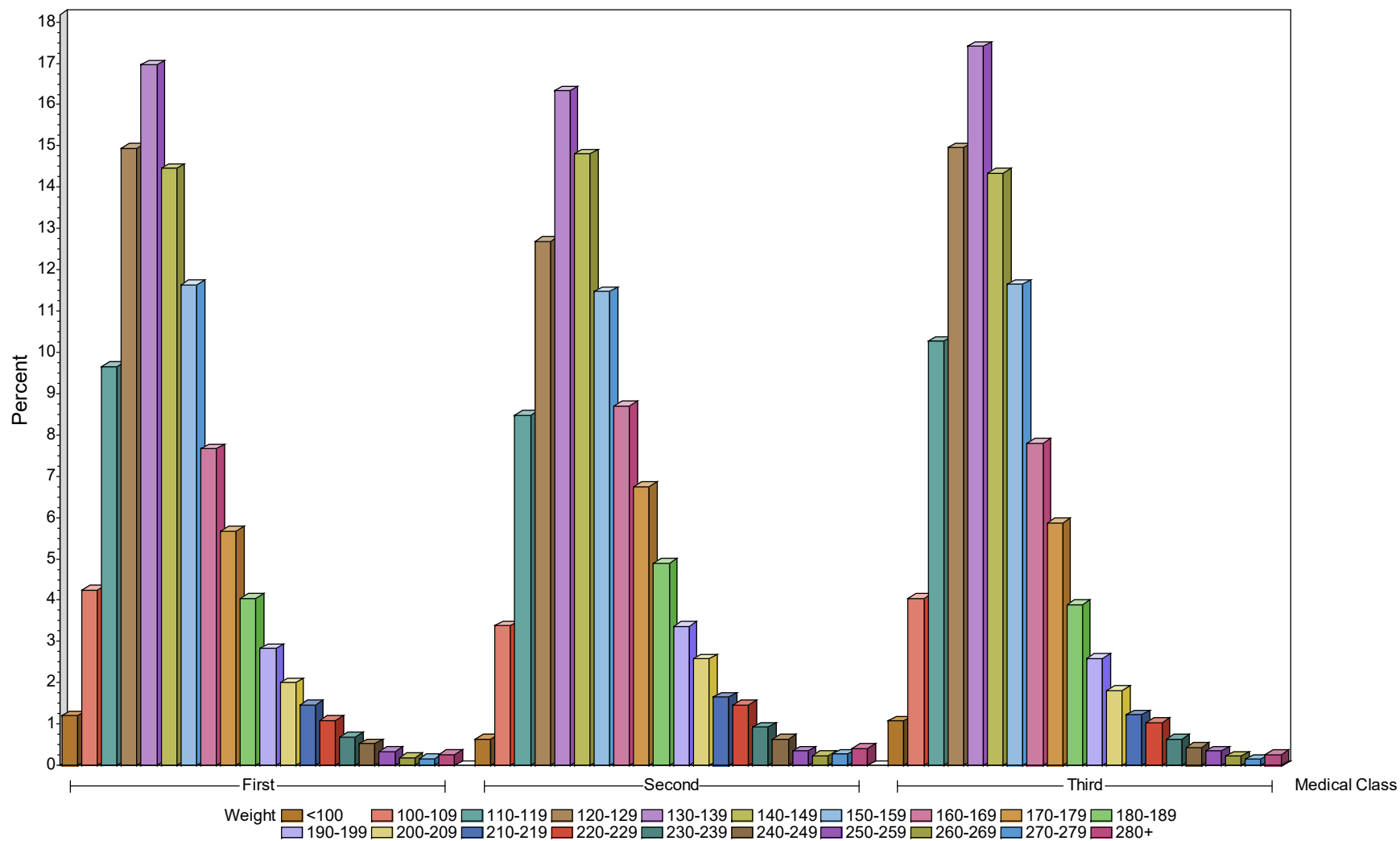


Figure 11. Weight (Pounds) by Issued Medical Class – Female Airmen Only

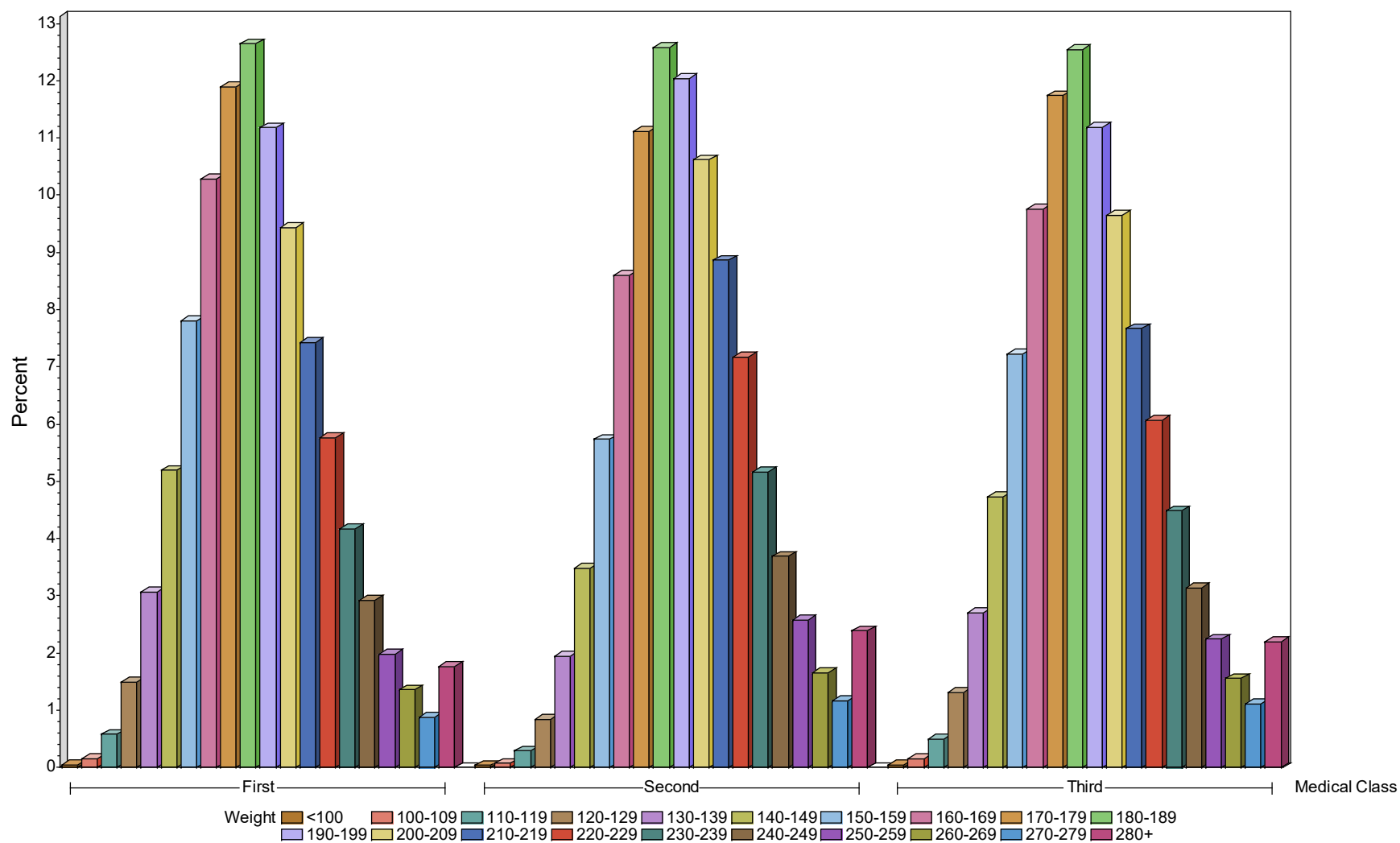


Figure 12. Weight (Pounds) by Issued Medical Class – Male Airmen Only

Table 13. BMI of all Active Airmen by Gender and Issued Medical Class

Issued Medical Class ^a		Number of Airmen	Mean BMI in kg/m ²	Median BMI in kg/m ²	Standard Deviation in kg/m ²
First	Females	28,319	24.2	23.2	4.8
	Males	266,548	26.8	26.3	4.5
Second	Females	6,606	25.0	23.8	5.1
	Males	86,529	27.8	27.3	4.6
Third	Females	19,486	24.2	23.2	4.7
	Males	181,630	27.2	26.6	4.7
All Classes	Females	54,411	24.3	23.3	4.8
	Males	534,707	27.1	26.6	4.6

Note. BMI = body mass index.

^a 121 airmen missing BMI, 3 airmen missing gender

Table 14. BMI Category by Issued Medical Class and Gender

BMI Category ^a	Issued Medical Class							
	First		Second		Third		Total Airmen	
	Female	Male	Female	Male	Female	Male	Female	Male
Underweight	1,370	4,056	213	719	915	2,449	2,498	7,224
Normal	17,341	93,451	3,781	23,077	12,036	58,987	33,158	175,515
Overweight	6,314	114,037	1,632	39,170	4,434	77,844	12,380	231,051
Obese	3,294	55,004	980	23,563	2,101	42,350	6,375	120,917
Total	28,319	266,548	6,606	86,529	19,486	181,630	54,411	534,707

Note. BMI = body mass index.

^a 121 airmen missing BMI, 3 airmen missing gender

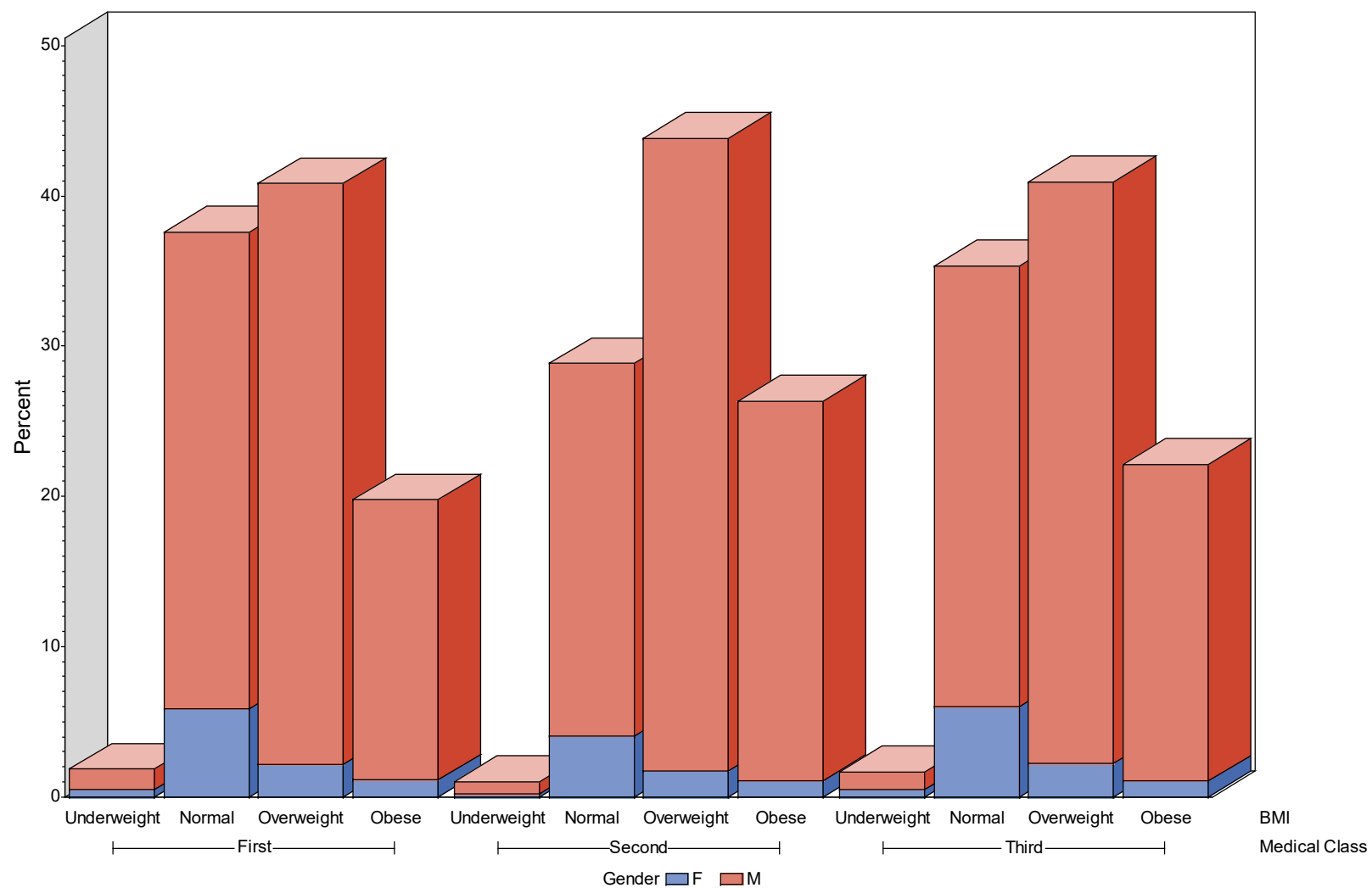


Figure 13. BMI Category by Gender and Issued Medical Class

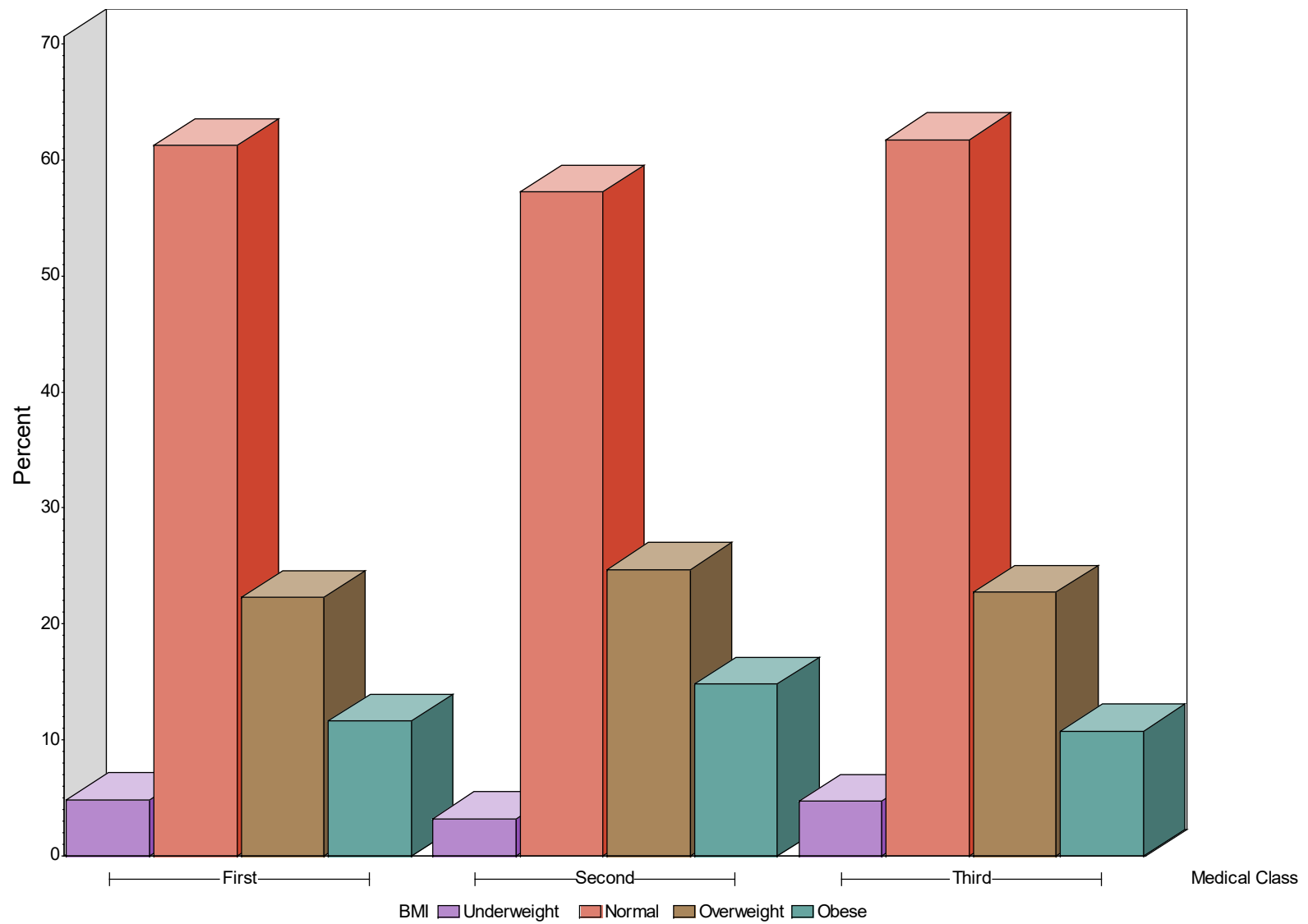


Figure 14. BMI Category by Issued Medical Class – Female Airmen Only

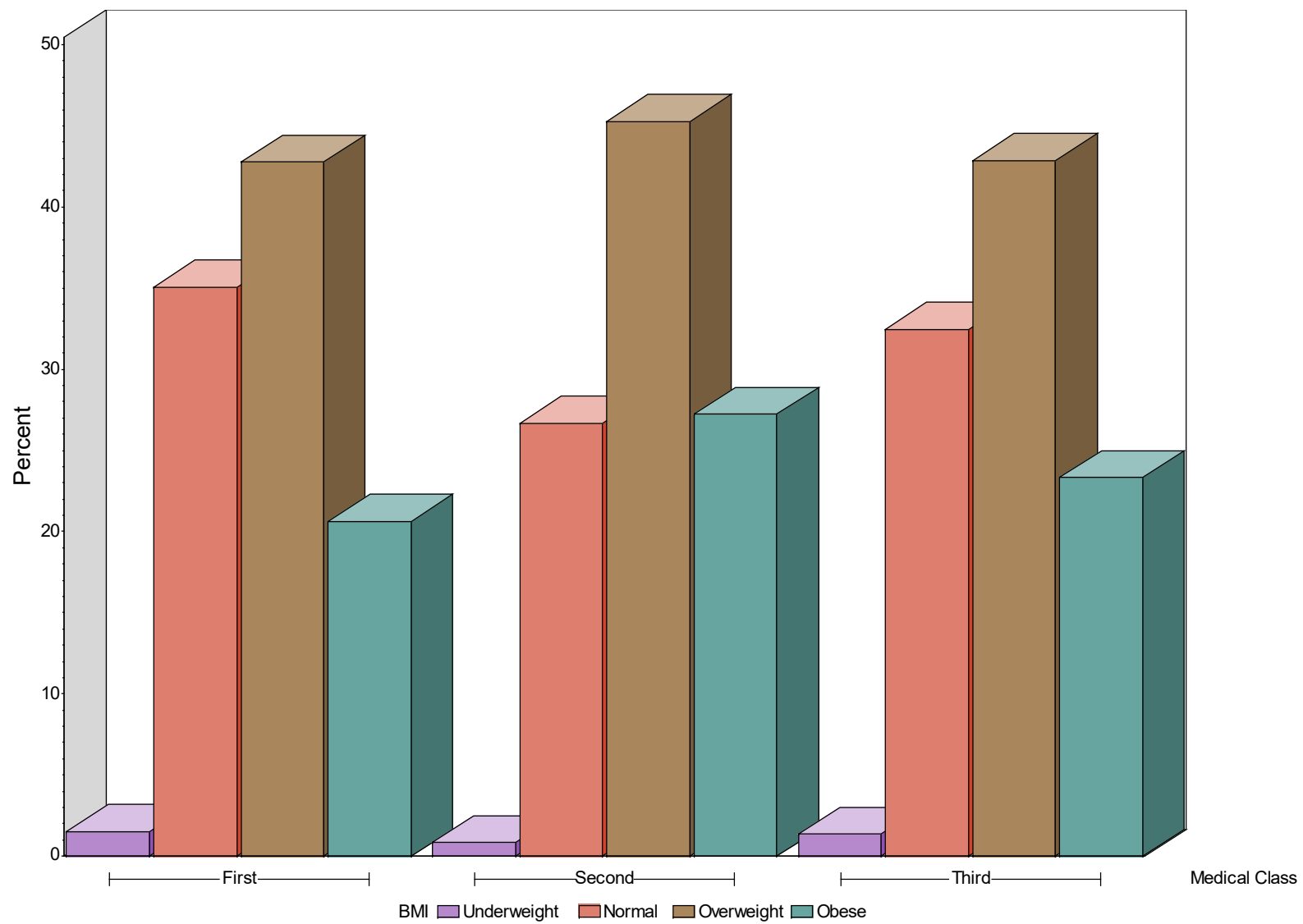


Figure 15. BMI Category by Issued Medical Class – Male Airmen Only

Table 15. Special Issuance by Issued Medical Class, Gender, Age, and BMI

		Special Issuance	
		Yes (Percent)	No (Percent)
Class Issued	First	16,777 (5.7)	278,143 (94.3)
	Second	6,436 (6.9)	86,718 (93.1)
	Third	11,434 (5.7)	189,734 (94.3)
Gender ^a	Female	1,436 (2.6)	52,988 (97.4)
	Male	33,211 (6.2)	501,604 (93.8)
Age at Exam (years)	16-19	877 (1.3)	65,119 (98.7)
	20-24	1,095 (1.4)	77,166 (98.6)
	25-29	1,119 (1.7)	65,925 (98.3)
	30-34	1,381 (2.3)	59,549 (97.7)
	35-39	1,945 (3.3)	57,195 (96.7)
	40-44	2,567 (6.3)	38,165 (93.7)
	45-49	3,127 (7.4)	39,030 (92.6)
	50-54	4,441 (9.7)	41,529 (90.3)
	55-59	5,676 (12.2)	40,992 (87.8)
	60-64	5,709 (13.9)	35,332 (86.1)
	65+	6,710 (16.3)	34,593 (83.8)
BMI (kg/m ²) ^b	Underweight	188 (1.9)	9,534 (98.1)
	Normal	6,897 (3.3)	201,777 (96.7)
	Overweight	14,574 (6.0)	228,858 (94.0)
	Obese	12,979 (10.2)	114,314 (89.9)
Total		34,647 (5.9)	554,595 (94.1)

Note. BMI = body mass index.

^a 3 airmen missing gender

^b 121 airmen missing BMI

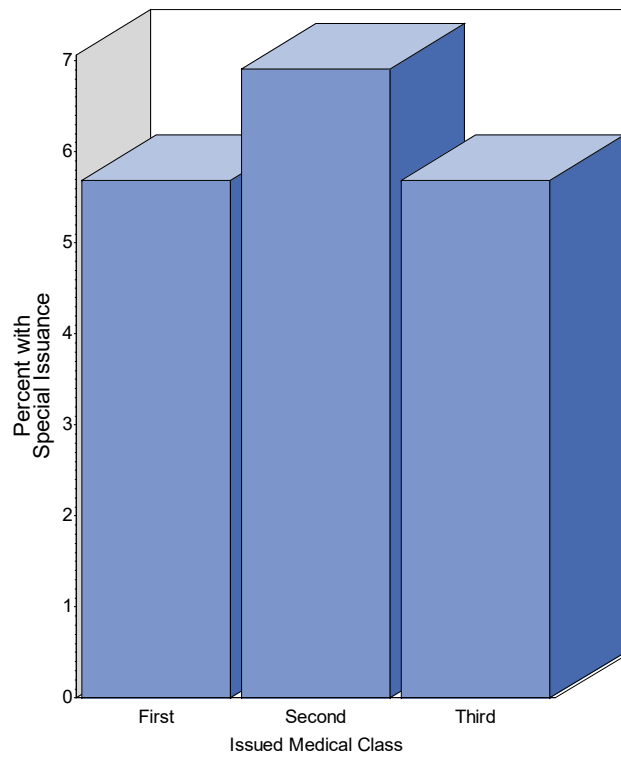


Figure 16. Special Issuance by Issued Medical Class

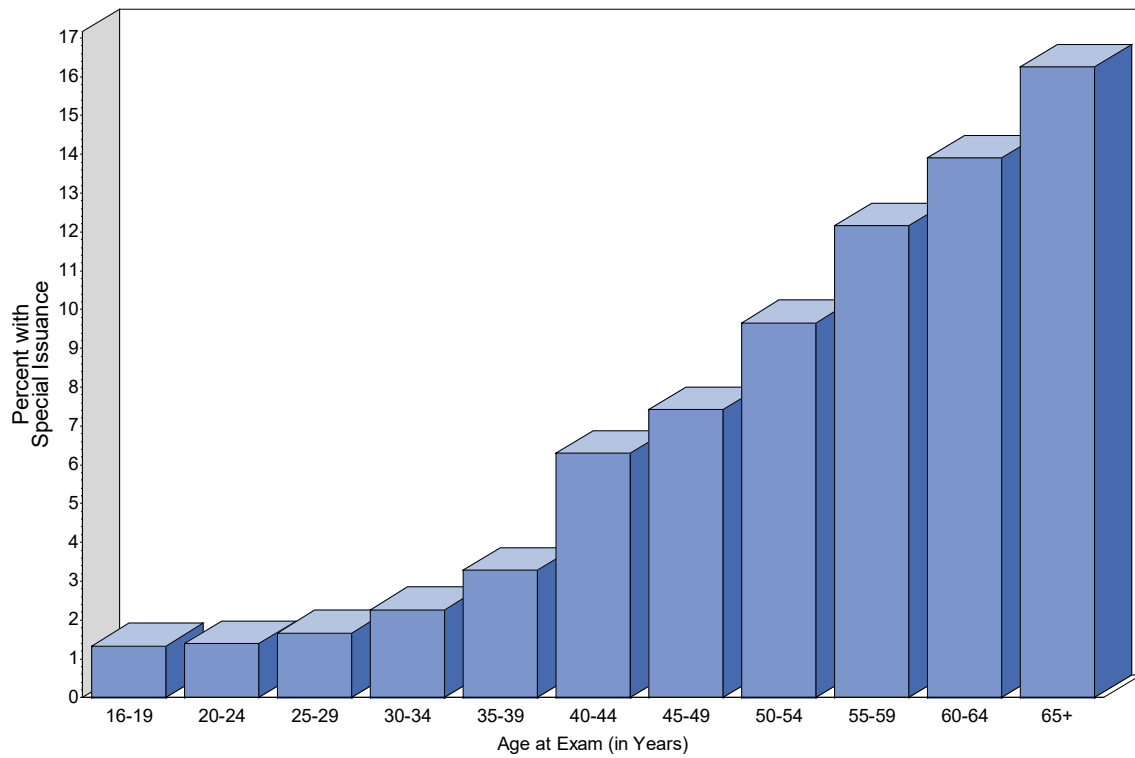


Figure 17. Special Issuance by Age Group at Time of Exam

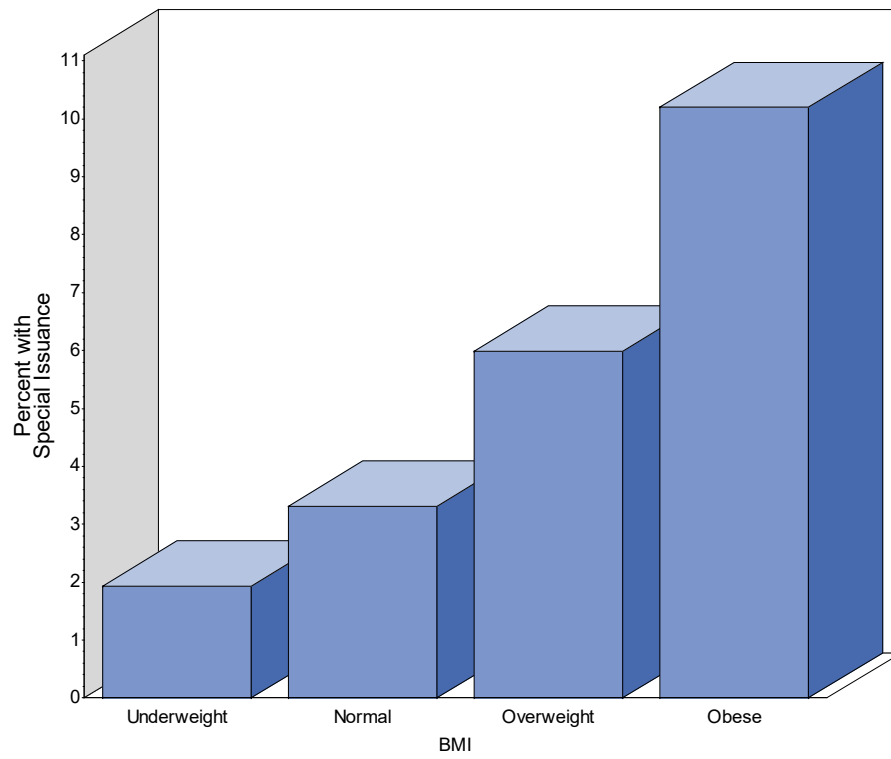


Figure 18. Special Issuance by BMI Category

Table 16. Top 15 Reported Medical Conditions

Pathology Description	Number	Percent
Hypertension with medication	36,944	6.3
Other miscellaneous allergic conditions ^a	29,125	4.9
Hernias – inguinal, femoral, umbilical, hiatal	17,891	3.0
Other lower extremities conditions – operations, fractures, dislocation, knee replacement, knee reconstruction, ACL reconstruction ^b	16,007	2.7
Other esophagus, stomach, and duodenal conditions – severe gastritis, esophageal reflux, achalasia, GERD, gastropasty, dysphagia, dyspepsia, thrombus abdomen aorta ^c	14,807	2.5
Urolithiasis – stones or calculus of kidney, ureter, bladder	14,799	2.5
Sleep apnea, restless leg syndrome	12,618	2.1
Male genital system – prostatic, varicocele, hydrocele, TURP, spermatocele, BPH	11,491	2.0
Asthma	11,231	1.9
Other skin conditions – includes acne, abnormal pigmentation, vitiligo, psoriasis, keratosis, neurofibroma (basal cell carcinoma), adenoma, ganglioneuroma, fibroma, fibroadenoma, neuroma, Morton's neuroma, hemangioma ^d	11,103	1.9
Ruptured intervertebral disk, nucleus pulposus, spinal fusion, laminectomy and spinal stenosis, compression disc, other back surgeries	9,361	1.6
Other general heart pathology (abnormal ECG, open-heart surgery, etc.). Wolff-Parkinson-White syndrome, ablation, AV block, right bundle branch block, left bundle branch block ^e	9,325	1.6
Other shoulder conditions – operations, trauma, recurrent dislocations, frozen shoulder, rotator cuff surgery, etc.	9,311	1.6
Hayfever	9,135	1.6
Other intestinal conditions – diverticulitis, polyposis, appendicitis, appendectomy, colon cancer, rectal cancer, appendix cancer, colon resection, Celiac Disease, gastroenteritis, colectomy, Sprue Disease	8,966	1.5

Note. AV = atrioventricular; BPH = benign prostatic hypertrophy; ECG = electrocardiogram; GERD = gastroesophageal reflux disease; TURP = transurethral resection of the prostate.

^a Excludes hayfever and asthma.

^b Excludes deformity of toes, foot, or leg, diseases (synovitis, arthritis, bursitis, osteomyelitis, neoplasms, polymyalgia rheumatica, etc.), rheumatoid arthritis, unstable knee (locked knee, herniated meniscus, no patella)

^c Excludes ulcers, gastrectomy, lap-band staple bypass, gastric bypass, hernias, esophageal varices

^d Excludes dermatitis, pilonidal cyst, significant scarring, melanoma, squamous cell carcinoma

^e Excludes cardiomyopathy, pacemaker, cardiac stents, cardiac angioplasty

Table 17. Medical Conditions by Issued Medical Class

		Issued Medical Class (Percent)			Total
		First	Second	Third	
Vision	Color vision deficiency ^a	1,747 (0.59)	647 (0.69)	886 (0.44)	3,280 (0.56)
	Monocular vision	247 (0.08)	244 (0.26)	454 (0.23)	945 (0.16)
Transplants	Lung transplant	1 (0.00)	1 (0.00)	1 (0.00)	3 (0.00)
	Heart transplant	0 (0.00)	0 (0.00)	4 (0.00)	4 (0.00)
	Liver transplant	13 (0.00)	9 (0.01)	14 (0.01)	36 (0.01)
	Kidney transplant	52 (0.02)	23 (0.02)	40 (0.02)	115 (0.02)
Cardiac	Myocardial infarction	717 (0.24)	293 (0.31)	652 (0.32)	1,662 (0.28)
	Coronary angioplasty with a stent	1038 (0.35)	419 (0.45)	1,036 (0.51)	2,493 (0.42)
	Coronary angioplasty procedure	469 (0.16)	212 (0.23)	570 (0.28)	1,251 (0.21)
	Coronary artery bypass surgery	305 (0.10)	127 (0.14)	378 (0.19)	810 (0.14)
	Implanted pacemaker	129 (0.04)	53 (0.06)	127 (0.06)	309 (0.05)
	Aortic valve conditions ^b	853 (0.29)	270 (0.29)	517 (0.26)	1,640 (0.28)
	Mitral valve conditions ^c	791 (0.27)	316 (0.34)	491 (0.24)	1,598 (0.27)
	Hypertension with medication	15,326 (5.2)	8,357 (9.0)	13,261 (6.6)	36,944 (6.27)

Table 17. (Cont.) Medical Conditions by Issued Medical Class

		Medical Class Issued (Percent)			Total
		First	Second	Third	
Alcohol and Drugs	Alcohol abuse/dependence	3,165 (1.07)	956 (1.03)	1,043 (0.52)	5,164 (0.88)
	Drug abuse/dependence	1,730 (0.59)	501 (0.54)	589 (0.29)	2,820 (0.48)
	Alcohol/Drug case monitored	2,366 (0.80)	321 (0.34)	329 (0.16)	3,016 (0.51)
	Alcohol-related offense ^d	12,529 (4.25)	5,522 (5.93)	8,595 (4.27)	26,646 (4.52)
	Drug-related offense/misuse ^e	1,107 (0.38)	475 (0.51)	672 (0.33)	2,254 (0.38)
Other conditions of interest	Sleep apnea ^f	6,072 (2.06)	2,989 (3.21)	3,911 (1.94)	12,972 (2.20)
	SSRI ^g	510 (0.17)	104 (0.11)	414 (0.21)	1,028 (0.17)
	SSRI special issuance	336 (0.11)	40 (0.04)	187 (0.09)	563 (0.10)
	Diabetes ^h	2,352 (0.80)	1,261 (1.35)	2,731 (1.36)	6,344 (1.08)

Note. DUI = driving under the influence; DWI = driving while intoxicated; SSRI = selective serotonin reuptake inhibitor.

^a Color vision deficiency at initial screening test

^b Includes aortic valvular disease, aortic stenosis, aortic regurgitation, aortic insufficiency, bicuspid aortic valve (also replacement), ruptured or lacerated aorta, aortic bruit. Does not include valve replacement.

^c Includes mitral valve disease, mitral stenosis, mitral regurgitation, mitral insufficiency, mitral valve repair. Does not include valve replacement.

^d Includes DUI, DWI, public intoxication, wet/reckless, .04–.09 blood alcohol level.

^e Includes drug offenses and positive drug tests other than Drug Industry Program (Failed Drug Testing)

^f Includes restless leg syndrome

^g Includes SSRI for major depressive disorder (single or recurrent episode), adjustment disorder with depressed mood, dysthymic disorder.

^h Controlled by hypoglycemic drugs or insulin

Section II. Seven-Year Trends in the Active Airman Population

The demographics of the active airmen have changed drastically in the last seven years, specifically within the first- and third-class airmen populations. In 2020, in response to the pandemic, the validity period of the certificate was extended for airmen, potentially leading to a lower reported count for that year within this handbook compared to the actual number of active airmen. However, the reported figures for all other years are expected to be precise. Consequently, trends reported for 2020 may exhibit an understated representation.

Mean age has generally decreased across all classes from 2016 to 2022, indicating a potential shift towards younger airmen. There is a significant increase in the overall number of first-class active airmen with a noteworthy decrease in the mean age within this group. The composition of the overall airmen population is also changing with more first-class airmen and less third-class airmen. Overall, the percent of females also increased by nearly 3% over this seven-year time period.

Since the inception of BasicMed in May 2017, there has been a significant reduction in the number of third-class airmen, especially those with SIs. While airmen come and go from the certificated population routinely, this section demonstrates the largely decreasing trends in active third-class airmen over the last seven years. In fact, the decrease in population is seen almost immediately after the BasicMed inception. The number of first-class airmen becomes the largest group after 2016, overtaking third-class in numbers beginning in 2017.

Table 18 demonstrates that within this timeframe, the first-class airmen population increased by at least 5% each year (with the exception of 2020), with a 10% increase in 2022, while the mean age decreased by 3.6 years. However, the percent of airmen that possess an SI initially increased even with this younger population but has remained steady the last few years. The second-class airmen population is declining while the percent requiring an SI is increasing. And lastly, the third-class airmen population has declined by 17% while the average age continues to decrease, and the number of special issues is holding steady after an initial decline in 2017.

Table 18. Summary Statistics of Active Airmen by Class and Year

			2016	2017	2018	2019	2020	2021	2022
Class Issued	First Class	Number of Active Airmen	206,024 (36.8%)	216,307 (39.7%)	231,934 (42.9%)	247,908 (45.2%)	254,740 (46.6%)	266,742 (47.6%)	294,920 (50.1%)
		Mean Age (Years)	40.5	40.3	39.7	39.1	38.5	37.9	36.9
		% Male	94.1	93.8	93.3	92.6	92.0	91.3	90.4
		% Special Issuance	5.0	5.3	5.4	5.7	5.5	5.7	5.7
	Second Class	Number of Active Airmen	110,728 (19.8%)	106,682 (19.6%)	103,677 (19.2%)	100,973 (18.4%)	98,061 (17.9%)	95,898 (17.1%)	93,154 (15.8%)
		Mean Age (Years)	43.8	43.8	43.9	44.0	44.1	44.3	44.4
		% Male	94.0	93.9	93.8	93.6	93.5	93.2	93.0
		% Special Issuance	5.7	5.8	6.0	6.4	6.4	6.9	6.9
	Third Class	Number of Active Airmen	243,400 (43.5%)	222,499 (40.8%)	205,144 (37.9%)	199,569 (36.4%)	193,702 (35.4%)	197,462 (35.3%)	201,168 (34.1%)
		Mean Age (Years)	44.7	43.7	42.4	41.9	41.5	41.5	41.2
		% Male	92.6	92.2	91.8	91.5	91.2	90.9	90.3
		% Special Issuance	7.7	6.2	5.8	5.9	5.8	6.0	5.7
	All Classes	Number of Active Airmen	560,152	545,488	540,725	548,450	546,503	560,102	589,242
		Mean Age (Years)	43.0	42.4	41.5	41.0	40.6	40.2	39.6
		% Male	93.4	93.2	92.8	92.4	92.0	91.5	90.8
		% Special Issuance	6.3	5.8	5.7	5.9	5.8	6.0	5.9