

# Tennessee Motorcycle Crash Statistics



Office of Research, Statistics, and Analysis  
Tennessee Department of Safety  
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## Introduction

For over a decade, motorcycle crashes in Tennessee have increased annually, and in recent years the rate of increase has grown. This report shows relevant statistics and trends based on factors identified by TDOS as important in motorcycle crashes.

Motorcycles in this report are defined as any 2- or 3-wheeled motored cycles including unknown motored cycle types, and excluding All Terrain Vehicles (ATVs). By focusing attention on this issue, it is hoped that the report might facilitate actions that will curb the increase in motorcycle crashes in upcoming years.





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**Table 1: Class M Licenses by County**

County Name	2004	2005	2006	2007	2008	Annual Average	% Change	Average Annual Change
Anderson	4,043	4,349	4,613	4,798	5,015	4,564	24.0%	5.5%
Bedford	1,992	2,084	2,179	2,279	2,405	2,188	20.7%	4.8%
Benton	871	909	946	975	1,015	943	16.5%	3.9%
Bledsoe	495	557	599	635	671	591	35.6%	7.9%
Blount	6,725	7,311	7,845	8,190	8,637	7,742	28.4%	6.5%
Bradley	4,955	5,167	5,411	5,718	6,053	5,461	22.2%	5.1%
Campbell	1,640	1,748	1,812	1,932	2,029	1,832	23.7%	5.5%
Cannon	578	641	671	731	758	676	31.1%	7.0%
Carroll	1,407	1,448	1,506	1,558	1,614	1,507	14.7%	3.5%
Carter	3,196	3,378	3,482	3,614	3,856	3,505	20.7%	4.8%
Cheatham	2,201	2,294	2,398	2,558	2,701	2,430	22.7%	5.3%
Chester	565	593	642	697	773	654	36.8%	8.2%
Claiborne	1,436	1,498	1,549	1,628	1,706	1,563	18.8%	4.4%
Clay	357	403	416	436	447	412	25.2%	5.8%
Cocke	1,566	1,655	1,737	1,851	1,979	1,758	26.4%	6.0%
Coffee	2,691	2,871	2,988	3,111	3,273	2,987	21.6%	5.0%
Crockett	469	484	507	540	572	514	22.0%	5.1%
Cumberland	2,352	2,688	2,992	3,292	3,561	2,977	51.4%	10.9%
Davidson	17,188	17,745	18,113	18,705	19,766	18,303	15.0%	3.6%
Decatur	466	507	529	580	614	539	31.8%	7.1%
De Kalb	793	842	906	958	1,004	901	26.6%	6.1%
Dickson	2,323	2,467	2,615	2,819	2,951	2,635	27.0%	6.2%
Dyer	1,302	1,389	1,468	1,536	1,641	1,467	26.0%	6.0%
Fayette	1,246	1,458	1,606	1,778	1,935	1,605	55.3%	11.6%
Fentress	570	634	710	781	867	712	52.1%	11.1%
Franklin	1,843	1,932	2,040	2,182	2,337	2,067	26.8%	6.1%
Gibson	1,967	2,113	2,241	2,386	2,558	2,253	30.0%	6.8%
Giles	1,530	1,675	1,740	1,811	1,872	1,726	22.4%	5.2%
Grainger	1,082	1,201	1,286	1,346	1,438	1,271	32.9%	7.4%
Greene	4,065	4,299	4,476	4,688	4,978	4,501	22.5%	5.2%
Grundy	468	503	542	574	618	541	32.1%	7.2%
Hamblen	2,759	3,014	3,176	3,298	3,464	3,142	25.6%	5.9%
Hamilton	12,590	13,152	13,766	14,396	15,225	13,826	20.9%	4.9%
Hancock	300	312	313	328	345	320	15.0%	3.6%
Hardeman	686	727	770	810	846	768	23.3%	5.4%
Hardin	1,017	1,086	1,152	1,214	1,279	1,150	25.8%	5.9%
Hawkins	3,460	3,713	3,867	4,099	4,264	3,881	23.2%	5.4%
Haywood	405	428	449	469	478	446	18.0%	4.2%
Henderson	1,047	1,126	1,190	1,300	1,395	1,212	33.2%	7.4%
Henry	1,725	1,818	1,879	1,987	2,176	1,917	26.1%	6.0%
Hickman	1,121	1,219	1,280	1,356	1,433	1,282	27.8%	6.3%
Houston	346	385	415	444	467	411	35.0%	7.8%
Humphreys	863	921	980	1,037	1,110	982	28.6%	6.5%
Jackson	571	601	627	663	705	633	23.5%	5.4%
Jefferson	2,292	2,504	2,733	2,919	3,118	2,713	36.0%	8.0%
Johnson	1,046	1,117	1,178	1,238	1,293	1,174	23.6%	5.4%
Knox	16,377	17,426	18,336	19,212	20,237	18,318	23.6%	5.4%
Lake	152	162	169	175	181	168	19.1%	4.5%

County Name	2004	2005	2006	2007	2008	Annual Average	% Change	Average Annual Change
Lauderdale	617	690	736	783	818	729	32.6%	7.3%
Lawrence	1,976	2,109	2,245	2,334	2,468	2,226	24.9%	5.7%
Lewis	713	743	777	830	868	786	21.7%	5.0%
Lincoln	1,447	1,582	1,665	1,731	1,815	1,648	25.4%	5.8%
Loudon	2,368	2,617	2,839	3,023	3,194	2,808	34.9%	7.8%
McMinn	2,447	2,619	2,839	3,023	3,201	2,826	30.8%	6.9%
McNairy	820	889	940	1,006	1,103	952	34.5%	7.7%
Macon	885	931	986	1,061	1,121	997	26.7%	6.1%
Madison	3,220	3,386	3,501	3,604	3,776	3,497	17.3%	4.1%
Marion	1,444	1,553	1,652	1,773	1,866	1,658	29.2%	6.6%
Marshall	1,434	1,527	1,616	1,723	1,851	1,630	29.1%	6.6%
Maurry	4,377	4,623	4,843	5,085	5,370	4,860	22.7%	5.2%
Meigs	540	599	659	697	742	647	37.4%	8.3%
Monroe	1,840	2,011	2,216	2,422	2,589	2,216	40.7%	8.9%
Montgomery	7,312	7,842	8,491	9,242	10,046	8,587	37.4%	8.3%
Moore	361	396	423	445	483	422	33.8%	7.5%
Morgan	823	880	918	998	1,084	941	31.7%	7.1%
Obion	1,492	1,539	1,624	1,711	1,843	1,642	23.5%	5.4%
Overton	873	938	1,004	1,078	1,169	1,012	33.9%	7.6%
Perry	431	453	467	480	496	465	15.1%	3.6%
Pickett	275	292	302	310	329	302	19.6%	4.6%
Polk	905	954	1,017	1,063	1,146	1,017	26.6%	6.1%
Putnam	3,342	3,541	3,711	3,935	4,213	3,748	26.1%	6.0%
Rhea	1,344	1,435	1,544	1,629	1,733	1,537	28.9%	6.6%
Roane	2,756	2,943	3,130	3,308	3,466	3,121	25.8%	5.9%
Robertson	3,054	3,203	3,372	3,681	3,933	3,449	28.8%	6.5%
Rutherford	9,538	10,393	11,136	11,859	12,725	11,130	33.4%	7.5%
Scott	597	642	682	727	768	683	28.6%	6.5%
Sequatchie	633	722	812	878	935	796	47.7%	10.2%
Sevier	4,739	5,114	5,479	5,823	6,160	5,463	30.0%	6.8%
Shelby	17,980	18,833	19,382	19,842	20,440	19,295	13.7%	3.3%
Smith	939	998	1,056	1,073	1,106	1,034	17.8%	4.2%
Stewart	661	701	746	807	920	767	39.2%	8.6%
Sullivan	9,923	10,312	10,647	11,055	11,533	10,694	16.2%	3.8%
Sumner	6,678	7,133	7,599	8,112	8,709	7,646	30.4%	6.9%
Tipton	2,112	2,309	2,523	2,719	2,918	2,516	38.2%	8.4%
Trousdale	313	331	370	405	436	371	39.3%	8.6%
Unicoi	1,036	1,096	1,142	1,204	1,248	1,145	20.5%	4.8%
Union	873	916	956	1,019	1,057	964	21.1%	4.9%
Van Buren	240	273	286	305	332	287	38.3%	8.5%
Warren	1,867	1,976	2,044	2,094	2,152	2,027	15.3%	3.6%
Washington	5,779	6,110	6,324	6,605	7,088	6,381	22.7%	5.2%
Wayne	727	754	796	844	870	798	19.7%	4.6%
Weakley	1,384	1,478	1,555	1,668	1,772	1,571	28.0%	6.4%
White	1,181	1,268	1,357	1,461	1,539	1,361	30.3%	6.8%
Williamson	6,443	7,016	7,421	7,900	8,436	7,443	30.9%	7.0%
Wilson	5,867	6,274	6,656	7,087	7,641	6,705	30.2%	6.8%
Unknown	405	260	135	44	10	171	-97.5%	-60.4%
<b>Total</b>	<b>246,150</b>	<b>261,758</b>	<b>275,466</b>	<b>290,138</b>	<b>307,178</b>	<b>276,138</b>	<b>24.8%</b>	<b>5.7%</b>

Source: TN Dept of Safety Year-End Driver License Reports



**Table 2: Motorcycle Crashes per Year**

Year	Crashes	% Change
2004	2,293	14.9%
2005	2,699	17.7%
2006	2,962	9.7%
2007	3,212	8.4%
2008	3,257	1.4%
<b>Total</b>	<b>14,423</b>	<b>42.0%</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Table 3: Fatal and Injury Motorcycle Crashes**

Year	Fatal	Injury
2004	95	1,749
2005	125	2,070
2006	136	2,259
2007	148	2,478
2008	143	2,530

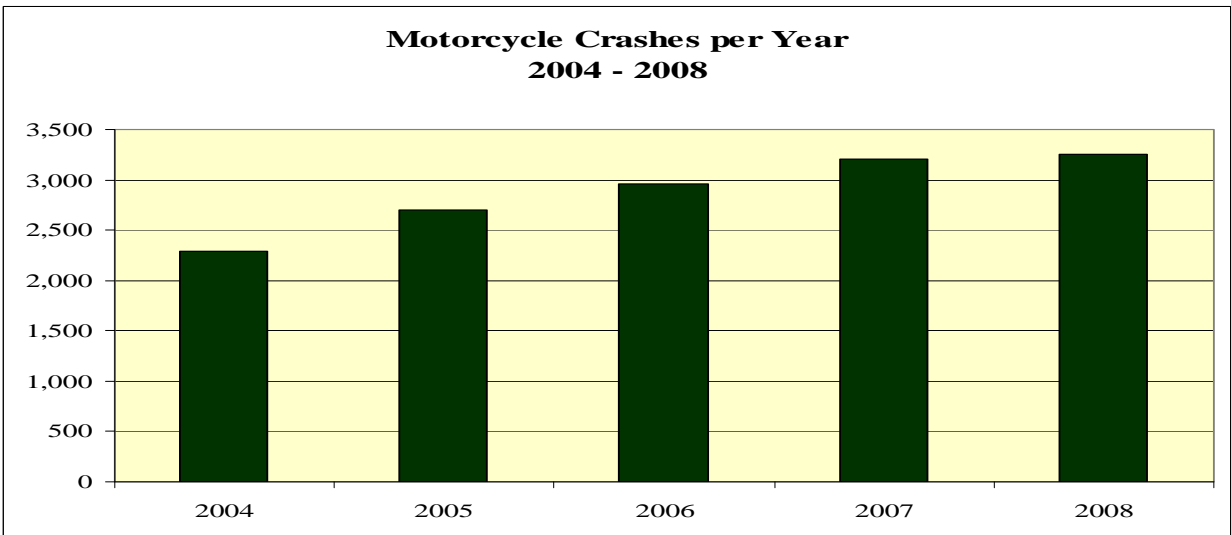
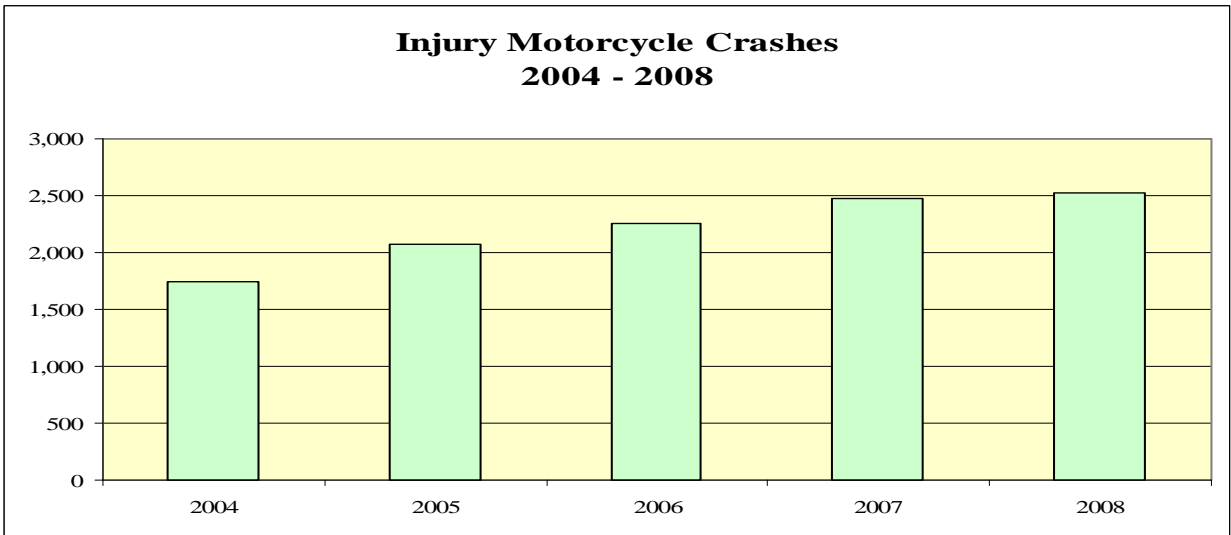
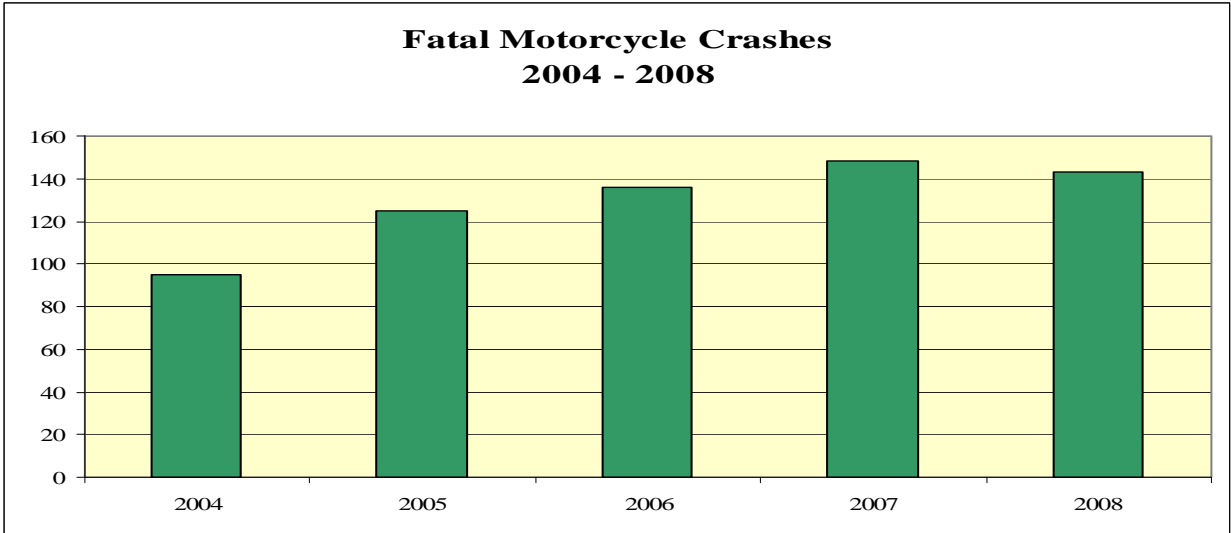
Sources: Fatal Crashes, NHTSA FARS Encyclopedia, <ftp://ftp.nhtsa.dot.gov/FARS>, accessed 07 Jul 2009.  
Injury Crashes, TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Table 4: Motorcycle Fatalities**

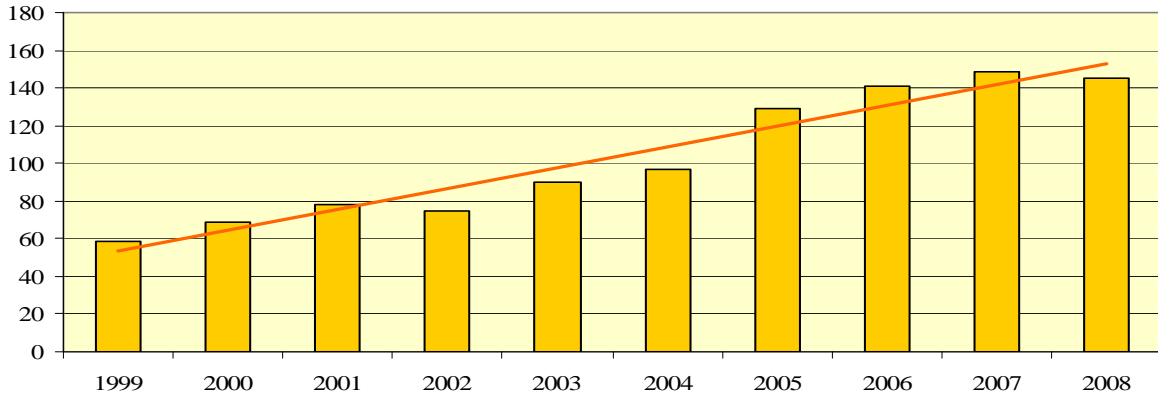
Year	Fatalities	Helmet-Yes	Helmet-No	Helmet-Improper	Helmet-Unknown	% Change
1999	59	47	12	0	0	40.5%
2000	69	49	13	6	1	16.9%
2001	78	70	5	2	1	13.0%
2002	75	60	8	5	2	-3.8%
2003	90	75	9	6	0	20.0%
2004	97	84	9	4	0	7.8%
2005	129	107	12	8	2	33.0%
2006	141	119	13	8	1	9.3%
2007	149	129	12	7	1	5.7%
2008	145	124	9	7	5	-2.7%
<b>Total</b>	1,032	864	102	53	13	145.8%
<b>Annual Avg</b>	103	86	10	5	1	10.5%

Source: NHTSA FARS Encyclopedia, <ftp://ftp.nhtsa.dot.gov/FARS>, accessed 07 Jul 2009.

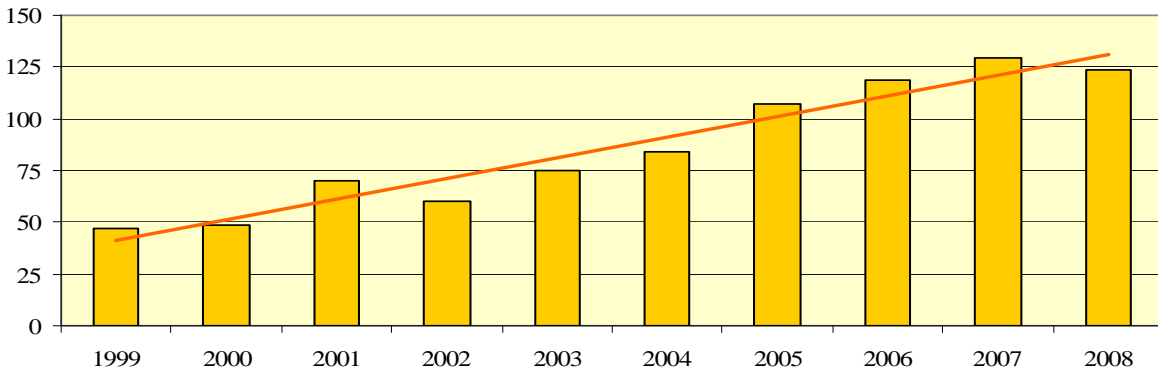
Between 2004 and 2008, motorcycle crashes in Tennessee rose by an annual average of 9.2%. Since 1999, motorcycle fatalities increased by 145.8%, an annual average change of 10.5%. Approximately 9.9% of the motorcyclists killed between 1999 and 2008 were not helmeted. The charts on the following page illustrate these trends.



**Motorcycle Fatalities in TN, 1999 - 2008**



**Motorcycle Fatalities with Helmet in TN, 1999 - 2008**



**Motorcycle Fatalities without Helmet in TN, 1999 - 2008**

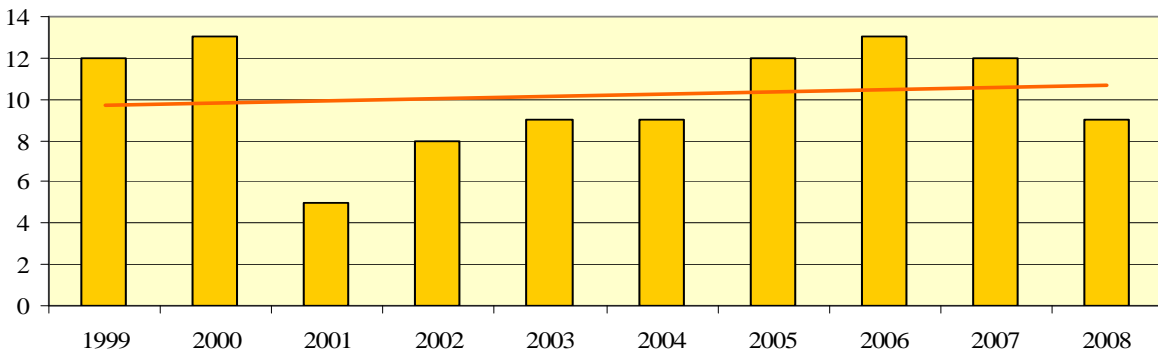


Table 5 below shows motorcycle crashes and crash rates per county for the years 2004 through 2008. The table shows that 29 counties had an average motorcycle crash rate greater than the statewide motorcycle crash rate.

**Table 5: Crashes and Crash Rates (per 1000 Class M Endorsements) by County**

County Name	2004		2005		2006		2007		2008		Total		
	Crashes	Rate	Crashes	Rate	Crashes	Rate	Crashes	Rate	Crashes	Rate	Crashes	Rate	Rank
Anderson	39	9.65	52	11.96	35	7.59	54	11.25	65	14.24	245	10.74	29
Bedford	15	7.53	18	8.64	20	9.18	16	7.02	20	9.14	89	8.14	52
Benton	5	5.74	7	7.70	5	5.29	9	9.23	6	6.36	32	6.79	73
Bledsoe	8	16.16	5	8.98	2	3.34	9	14.17	3	5.07	27	9.13	39
Blount	151	22.45	175	23.94	203	25.88	203	24.79	181	23.38	913	23.59	2
Bradley	25	5.05	37	7.16	47	8.69	45	7.87	57	10.44	211	7.73	58
Campbell	10	6.10	13	7.44	10	5.52	20	10.35	19	10.37	72	7.86	55
Cannon	1	1.73	10	15.60	4	5.96	9	12.31	4	5.92	28	8.29	48
Carroll	4	2.84	12	8.29	11	7.30	12	7.70	7	4.65	46	6.11	82
Carter	22	6.88	19	5.62	17	4.88	19	5.26	21	5.99	98	5.59	88
Cheatham	20	9.09	19	8.28	21	8.76	15	5.86	17	6.99	92	7.57	63
Chester	8	14.16	5	8.43	4	6.23	5	7.17	7	10.70	29	8.87	41
Claiborne	6	4.18	7	4.67	10	6.46	8	4.91	6	3.84	37	4.73	94
Clay	5	14.01	2	4.96	6	14.42	7	16.06	3	7.29	23	11.17	26
Cocke	16	10.22	26	15.71	27	15.54	29	15.67	24	13.65	122	13.88	13
Coffee	25	9.29	21	7.31	13	4.35	23	7.39	16	5.36	98	6.56	77
Crockett	2	4.26	8	16.53	0	0.00	4	7.41	6	11.66	20	7.78	57
Cumberland	20	8.50	31	11.53	27	9.02	26	7.90	38	12.76	142	9.54	36
Davidson	189	11.00	218	12.29	264	14.58	317	16.95	316	17.26	1,304	14.25	12
Decatur	4	8.58	6	11.83	2	3.78	6	10.34	5	9.27	23	8.53	45
De Kalb	14	17.65	8	9.50	12	13.25	8	8.35	8	8.88	50	11.10	27
Dickson	14	6.03	20	8.11	23	8.80	29	10.29	27	10.25	113	8.58	44
Dyer	14	10.75	13	9.36	15	10.22	14	9.11	19	12.95	75	10.22	31
Fayette	8	6.42	12	8.23	3	1.87	7	3.94	11	6.86	41	5.11	91
Fentress	5	8.77	4	6.31	5	7.04	1	1.28	3	4.21	18	5.05	92
Franklin	19	10.31	11	5.69	11	5.39	15	6.87	16	7.74	72	6.97	69
Gibson	10	5.08	15	7.10	19	8.48	18	7.54	21	9.32	83	7.37	67
Giles	7	4.58	10	5.97	16	9.20	9	4.97	11	6.37	53	6.14	81
Grainger	8	7.39	10	8.33	9	7.00	8	5.94	8	6.30	43	6.77	74
Greene	21	5.17	35	8.14	38	8.49	34	7.25	49	10.89	177	7.86	54
Grundy	9	19.23	14	27.83	2	3.69	10	17.42	18	33.27	53	19.59	5
Hamblen	20	7.25	18	5.97	26	8.19	35	10.61	44	14.00	143	9.10	40
Hamilton	136	10.80	156	11.86	178	12.93	164	11.39	184	13.31	818	11.83	19
Hancock	4	13.33	2	6.41	2	6.39	1	3.05	2	6.26	11	6.88	71
Hardeman	4	5.83	5	6.88	15	19.48	5	6.17	10	13.02	39	10.16	32
Hardin	11	10.82	8	7.37	11	9.55	17	14.00	18	15.66	65	11.31	24
Hawkins	19	5.49	31	8.35	21	5.43	43	10.49	30	7.73	144	7.42	66
Haywood	2	4.94	3	7.01	3	6.68	2	4.26	5	11.22	15	6.73	75
Henderson	14	13.37	11	9.77	11	9.24	19	14.62	13	10.73	68	11.22	25
Henry	12	6.96	15	8.25	17	9.05	17	8.56	17	8.87	78	8.14	51
Hickman	8	7.14	7	5.74	6	4.69	15	11.06	12	9.36	48	7.49	65
Houston	3	8.67	5	12.99	4	9.64	0	0.00	5	12.15	17	8.26	49
Humphreys	4	4.63	5	5.43	7	7.14	6	5.79	6	6.11	28	5.70	87
Jackson	8	14.01	9	14.98	11	17.54	8	12.07	11	17.37	47	14.84	10
Jefferson	17	7.42	35	13.98	19	6.95	28	9.59	25	9.21	124	9.14	38
Johnson	23	21.99	18	16.11	17	14.43	25	20.19	18	15.33	101	17.20	6
Knox	142	8.67	205	11.76	176	9.60	198	10.31	197	10.75	918	10.02	34
Lake	0	0.00	0	0.00	2	11.83	2	11.43	1	5.96	5	5.96	83
Lauderdale	3	4.86	5	7.25	9	12.23	5	6.39	6	8.23	28	7.68	59

County Name	2004		2005		2006		2007		2008		Total		
	Crashes	Rate	Crashes	Rate	Crashes	Rate	Crashes	Rate	Crashes	Rate	Crashes	Rate	Rank
Lawrence	11	5.57	16	7.59	16	7.13	21	9.00	21	9.43	85	7.64	60
Lewis	3	4.21	3	4.04	4	5.15	9	10.84	6	7.63	25	6.36	78
Lincoln	18	12.44	13	8.22	25	15.02	23	13.29	17	10.32	96	11.65	23
Loudon	18	7.60	22	8.41	33	11.62	26	8.60	36	12.82	135	9.61	35
McMinn	29	11.85	15	5.73	50	17.61	33	10.92	28	9.91	155	10.97	28
McNairy	4	4.88	10	11.25	9	9.57	9	8.95	7	7.36	39	8.20	50
Macon	8	9.04	7	7.52	15	15.21	4	3.77	8	8.03	42	8.43	47
Madison	35	10.87	43	12.70	41	11.71	54	14.98	47	13.44	220	12.58	14
Marion	11	7.62	15	9.66	21	12.71	24	13.54	26	15.69	97	11.70	22
Marshall	8	5.58	10	6.55	13	8.04	17	9.87	24	14.72	72	8.83	42
Mauzy	27	6.17	34	7.35	29	5.99	44	8.65	41	8.44	175	7.20	68
Meigs	4	7.41	3	5.01	2	3.03	7	10.04	6	9.27	22	6.80	72
Monroe	28	15.22	33	16.41	53	23.92	54	22.30	52	23.47	220	19.86	4
Montgomery	100	13.68	87	11.09	110	12.95	120	12.98	102	11.88	519	12.09	18
Moore	3	8.31	5	12.63	8	18.91	6	13.48	10	23.72	32	15.18	9
Morgan	8	9.72	9	10.23	12	13.07	16	16.03	13	13.82	58	12.33	17
Obion	13	8.71	21	13.65	22	13.55	18	10.52	23	14.01	97	11.82	20
Overton	9	10.31	5	5.33	9	8.96	11	10.20	17	16.79	51	10.08	33
Perry	6	13.92	2	4.42	7	14.99	6	12.50	8	17.19	29	12.46	15
Pickett	1	3.64	1	3.42	4	13.25	1	3.23	1	3.32	8	5.31	90
Polk	12	13.26	15	15.72	14	13.77	26	24.46	20	19.67	87	17.11	7
Putnam	15	4.49	28	7.91	39	10.51	39	9.91	44	11.74	165	8.80	43
Rhea	7	5.21	8	5.57	8	5.18	1	0.61	3	1.95	27	3.51	95
Roane	11	3.99	32	10.87	18	5.75	27	8.16	31	9.93	119	7.63	61
Robertson	19	6.22	18	5.62	21	6.23	16	4.35	27	7.83	101	5.86	85
Rutherford	80	8.39	114	10.97	121	10.87	126	10.62	134	12.04	575	10.33	30
Scott	7	11.73	2	3.12	5	7.33	7	9.63	0	0.00	21	6.15	80
Sequatchie	11	17.38	3	4.16	7	8.62	1	1.14	10	12.56	32	8.04	53
Sevier	58	12.24	64	12.51	91	16.61	97	16.66	84	15.38	394	14.42	11
Shelby	273	15.18	311	16.51	329	16.97	350	17.64	335	17.36	1,598	16.56	8
Smith	7	7.45	7	7.01	10	9.47	6	5.59	9	8.70	39	7.54	64
Stewart	15	22.69	15	21.40	13	17.43	13	16.11	23	29.99	79	20.60	3
Sullivan	66	6.65	71	6.89	88	8.27	98	8.86	82	7.67	405	7.57	62
Sumner	40	5.99	64	8.97	38	5.00	57	7.03	67	8.76	266	6.96	70
Tipton	10	4.73	15	6.50	31	12.29	23	8.46	19	7.55	98	7.79	56
Trousdale	1	3.19	4	12.08	4	10.81	3	7.41	11	29.65	23	12.40	16
Unicoi	7	6.76	6	5.47	12	10.51	6	4.98	7	6.11	38	6.64	76
Union	3	3.44	8	8.73	6	6.28	6	5.89	5	5.19	28	5.81	86
Van Buren	5	20.83	7	25.64	4	13.99	13	42.62	9	31.34	38	26.46	1
Warren	7	3.75	9	4.55	11	5.38	8	3.82	14	6.91	49	4.84	93
Washington	53	9.17	60	9.82	60	9.49	70	10.60	53	8.31	296	9.28	37
Wayne	13	17.88	6	7.96	11	13.82	8	9.48	9	11.28	47	11.78	21
Weakley	3	2.17	10	6.77	10	6.43	11	6.59	15	9.55	49	6.24	79
White	7	5.93	3	2.37	9	6.63	8	5.48	10	7.35	37	5.44	89
Williamson	36	5.59	37	5.27	45	6.06	50	6.33	51	6.85	219	5.88	84
Wilson	42	7.16	47	7.49	58	8.71	60	8.47	76	11.33	283	8.44	46
Unknown	7	17.28	0	0.00	0	0.00	0	0.00	0	0.00	7	8.20	N/A
<b>Total</b>	<b>2,293</b>	<b>9.32</b>	<b>2,699</b>	<b>10.31</b>	<b>2,962</b>	<b>10.75</b>	<b>3,212</b>	<b>11.07</b>	<b>3,257</b>	<b>11.79</b>	<b>14,423</b>	<b>10.45</b>	<b>N/A</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

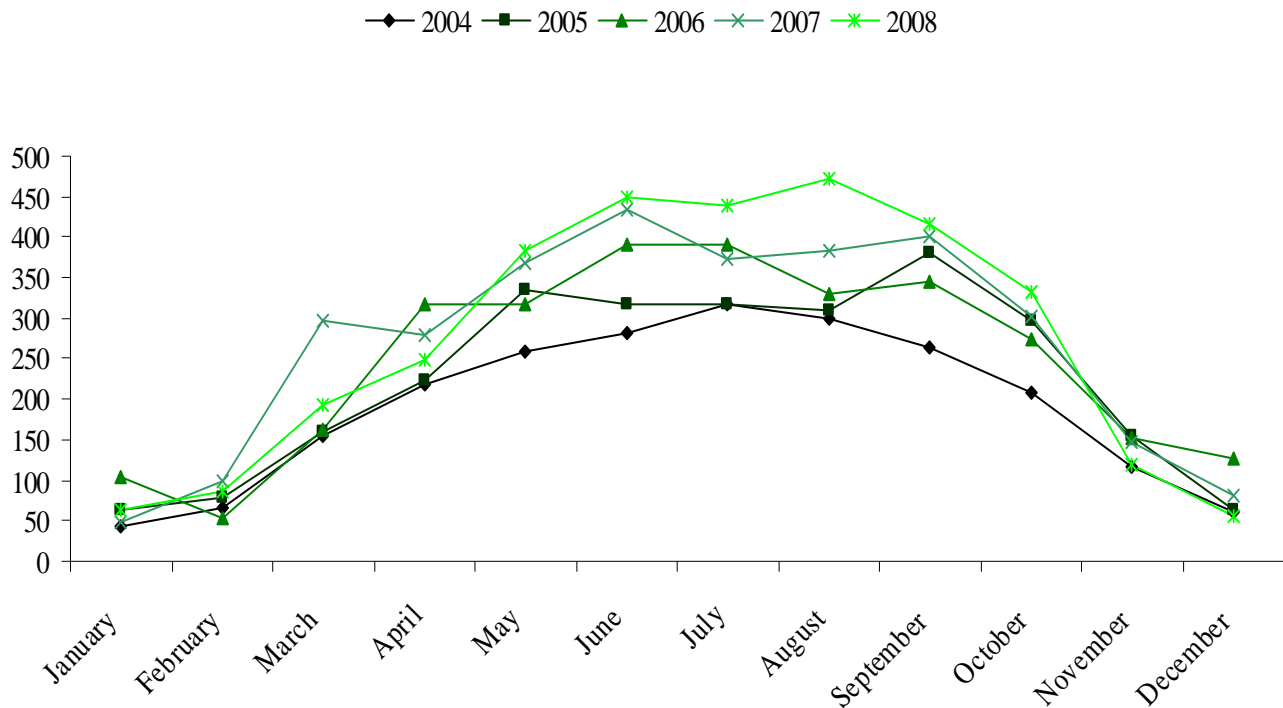
Between 2004 and 2008 about 81% of motorcycle crashes occurred from April to October. Only 8% of motorcycle crashes occurred between December and February. Tables 6 and 7 and the accompanying charts show the yearly pattern in motorcycle crashes.

**Table 6: Motorcycle Crashes by Month**

Month	2004	2005	2006	2007	2008	Total
January	44	63	104	48	63	322
February	66	78	54	98	87	383
March	156	159	162	297	194	968
April	219	223	316	280	248	1,286
May	259	335	316	368	382	1,660
June	281	317	391	433	448	1,870
July	316	318	392	374	438	1,838
August	299	309	330	383	472	1,793
September	265	381	345	401	415	1,807
October	208	298	273	302	333	1,414
November	118	154	152	147	120	691
December	62	64	127	81	57	391
<b>Total</b>	<b>2,293</b>	<b>2,699</b>	<b>2,962</b>	<b>3,212</b>	<b>3,257</b>	<b>14,423</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Motorcycle Crashes by Month, 2004 - 2008**

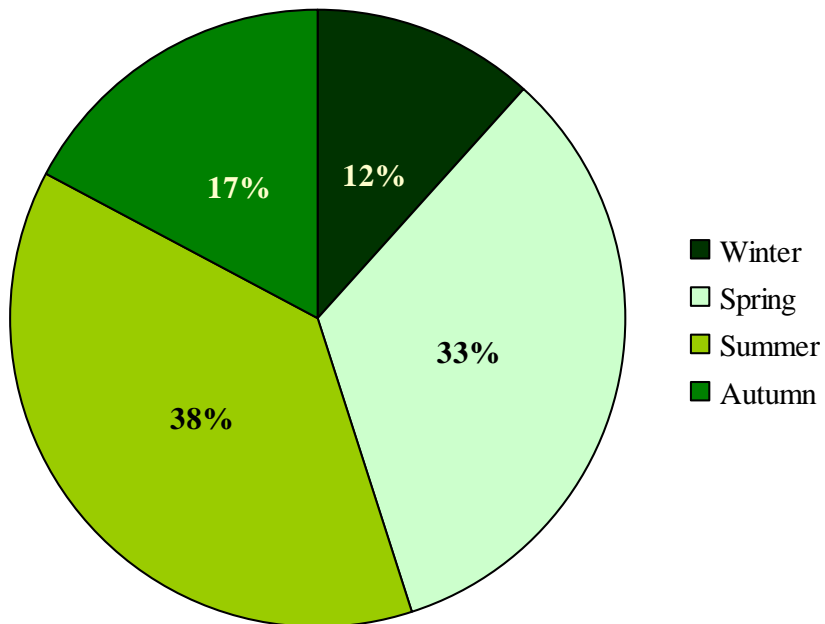


**Table 7: Percentage of Motorcycle Crashes Occurring per Month**

Month	2004	2005	2006	2007	2008	Total	By Season
January	2%	2%	4%	1%	2%	2%	Winter
February	3%	3%	2%	3%	3%	3%	
March	7%	6%	5%	9%	6%	7%	Spring
April	10%	8%	11%	9%	8%	9%	
May	11%	12%	11%	11%	12%	12%	Summer
June	12%	12%	13%	13%	14%	13%	
July	14%	12%	13%	12%	13%	13%	Autumn
August	13%	11%	11%	12%	14%	12%	
September	12%	14%	12%	12%	13%	13%	Winter
October	9%	11%	9%	9%	10%	10%	
November	5%	6%	5%	5%	4%	5%	Spring
December	3%	2%	4%	3%	2%	3%	

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Motorcycle Crashes by Season, 2004 - 2008**



Motorcycle crashes from 2004 – 2008 exhibited a regular weekly cycle. The number of motorcycle crashes grows at an increasing rate Monday through Saturday, falls from Saturday to Sunday, and again from Sunday to Monday. Over half of all motorcycle crashes in Tennessee between 2004 and 2008 occurred from Friday to Sunday, with over one-fifth occurring on Saturday. Tables 8 and 9 and the accompanying charts illustrate these tendencies.

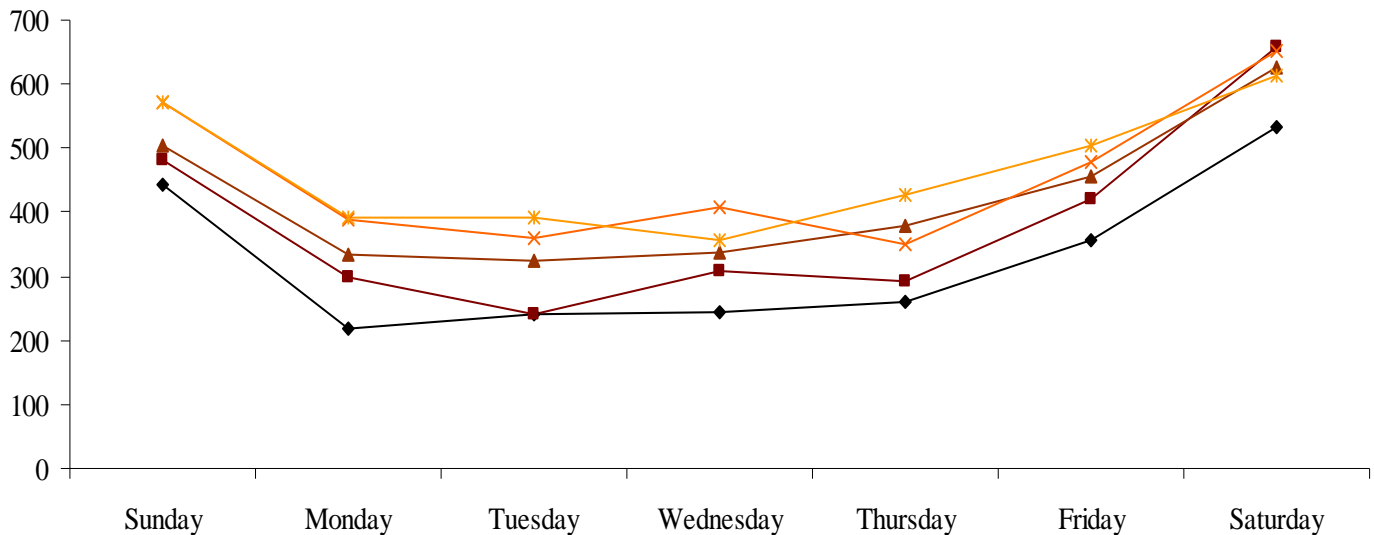
**Table 8: Motorcycle Crashes by Day of Week**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2004	443	217	240	245	259	355	534
2005	482	298	241	307	291	421	659
2006	504	334	324	338	379	457	626
2007	571	389	360	409	350	480	653
2008	572	393	391	357	426	504	614
Total	<b>2,572</b>	<b>1,631</b>	<b>1,556</b>	<b>1,656</b>	<b>1,705</b>	<b>2,217</b>	<b>3,086</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Motorcycle Crashes by Day of Week, 2004 - 2008**

◆ 2004 ■ 2005 ▲ 2006 ✕ 2007 \* 2008



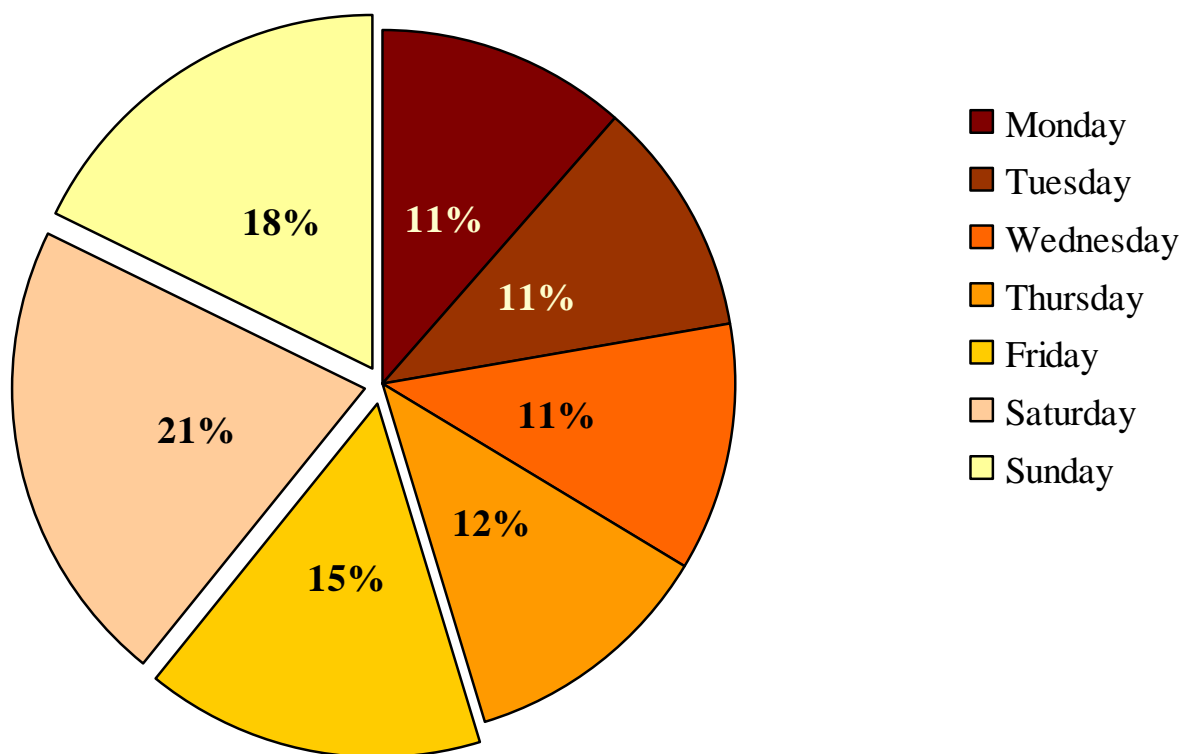


**Table 9: Percentage of Motorcycle Crashes Occurring per Day of Week**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2004	19%	9%	10%	11%	11%	15%	23%
2005	18%	11%	9%	11%	11%	16%	24%
2006	17%	11%	11%	11%	13%	15%	21%
2007	18%	12%	11%	13%	11%	15%	20%
2008	18%	12%	12%	11%	13%	15%	19%
<b>Totals</b>	<b>18%</b>	<b>11%</b>	<b>11%</b>	<b>11%</b>	<b>12%</b>	<b>15%</b>	<b>21%</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Motorcycle Crashes by Day of Week, 2004 - 2008**



Motorcycle crashes in Tennessee from 2004 – 2008 also reveal a daily pattern. Crashes increase quickly beginning about 9 AM, reaching a peak around 4 PM, then decrease more slowly throughout the night. Over eighty percent of the crashes happened between 10 AM and 10 PM, with over two-thirds of those crashes occurring from 1 – 8 PM.

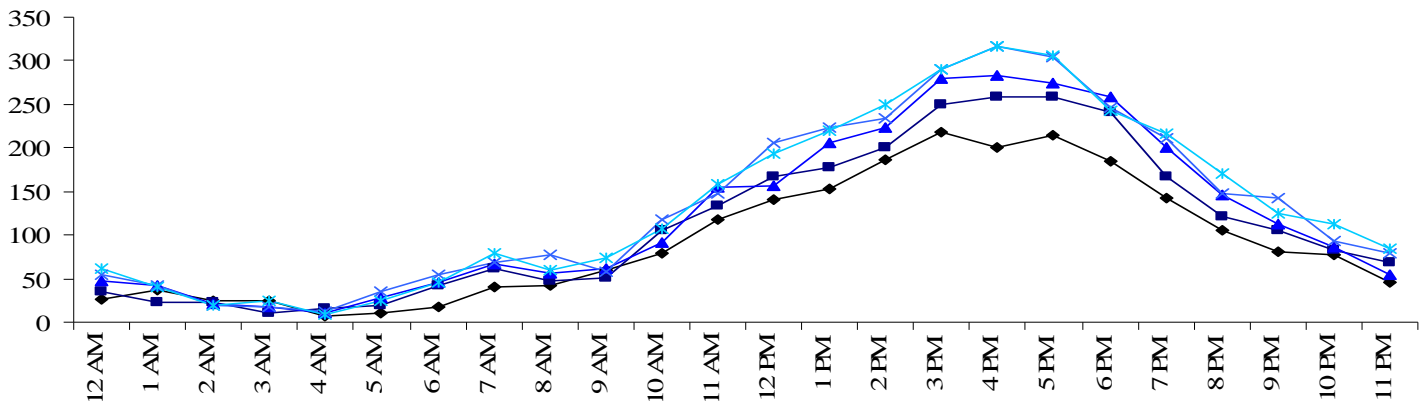
**Table 10: Motorcycle Crashes Occurring by Hour**

Hour	2004	2005	2006	2007	2008	Total
12 AM	27	36	48	55	62	228
1 AM	37	23	43	42	41	186
2 AM	24	23	21	19	20	107
3 AM	25	10	18	17	24	94
4 AM	7	15	11	12	9	54
5 AM	10	19	28	35	25	117
6 AM	18	43	45	54	46	206
7 AM	41	62	67	69	79	318
8 AM	43	48	56	77	60	284
9 AM	59	51	62	58	74	304
10 AM	80	105	92	117	107	501
11 AM	117	133	154	148	159	711
12 PM	140	167	157	206	193	863
1 PM	153	178	205	223	219	978
2 PM	187	201	224	234	250	1,096
3 PM	218	250	279	291	291	1,329
4 PM	201	259	284	316	317	1,377
5 PM	214	259	275	305	306	1,359
6 PM	184	241	259	247	243	1,174
7 PM	142	167	201	211	217	938
8 PM	106	121	146	147	171	691
9 PM	81	105	113	142	125	566
10 PM	77	82	86	94	112	451
11 PM	46	68	55	80	85	334
Unknown	56	33	33	13	22	157
<b>Total</b>	<b>2,293</b>	<b>2,699</b>	<b>2,962</b>	<b>3,212</b>	<b>3,257</b>	<b>14,423</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Motorcycle Crashes by Hour, 2004 - 2008**

◆ 2004 ■ 2005 ▲ 2006 × 2007 \* 2008



Light conditions at the time of motorcycle crashes reflect the times that motorcyclists are on the roads. Over 73% of motorcycle crashes occurred in daylight. Another 22% of motorcycle crashes occurred in the dark, equally distributed among lighted and unlighted areas. About 3.6 times as many motorcycle crashes occurred at dusk than at dawn.

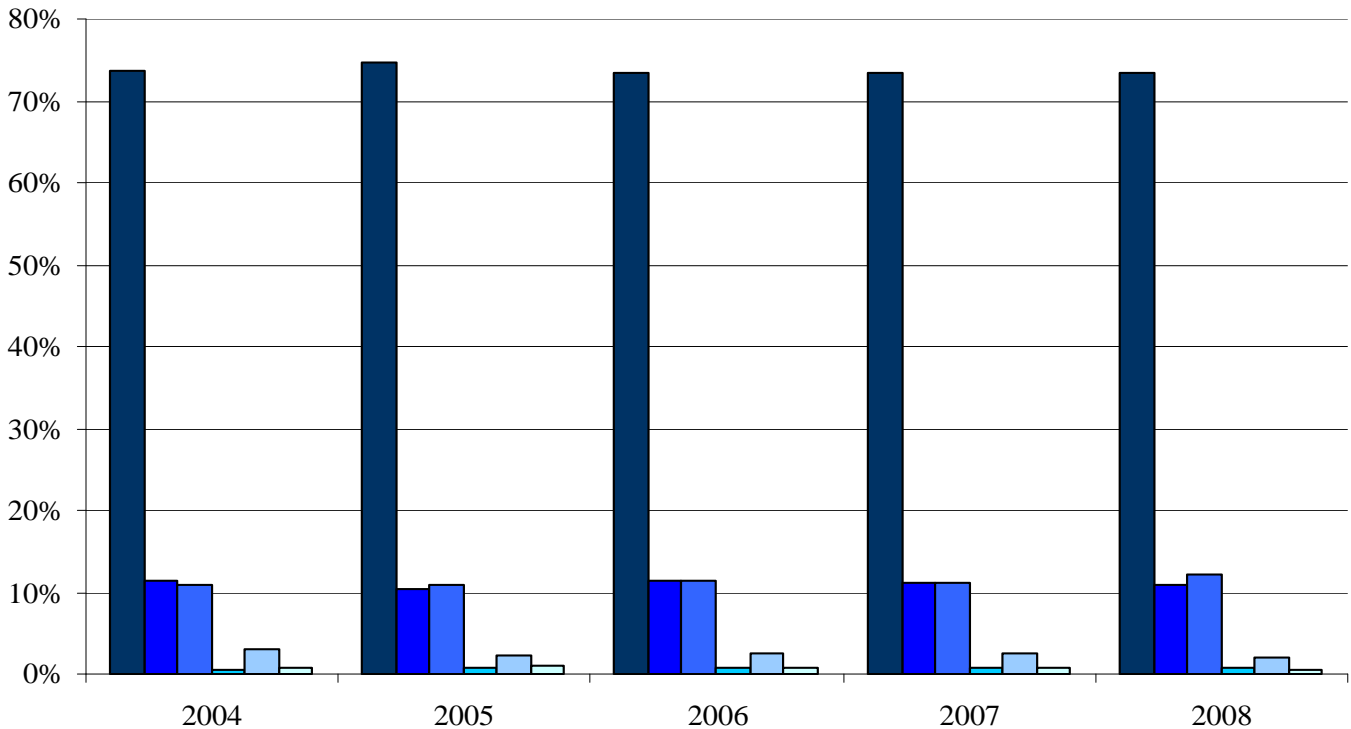
**Table 11: Motorcycle Crashes by Light Condition**

Year	Light Condition					
	Daylight	Dark-Not Lighted	Dark-Lighted	Dawn	Dusk	Unk
2004	1,689	259	249	9	67	20
2005	2,018	278	294	21	63	25
2006	2,175	337	334	19	75	22
2007	2,362	358	356	27	85	24
2008	2,394	358	399	22	66	18
<b>Total</b>	<b>10,638</b>	<b>1,590</b>	<b>1,632</b>	<b>98</b>	<b>356</b>	<b>109</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 30 Sep 2009.

**Motorcycle Crashes by Light Conditions**

■ Daylight ■ Dark-Not Lighted ■ Dark-Lighted ■ Dawn ■ Dusk ■ Unk



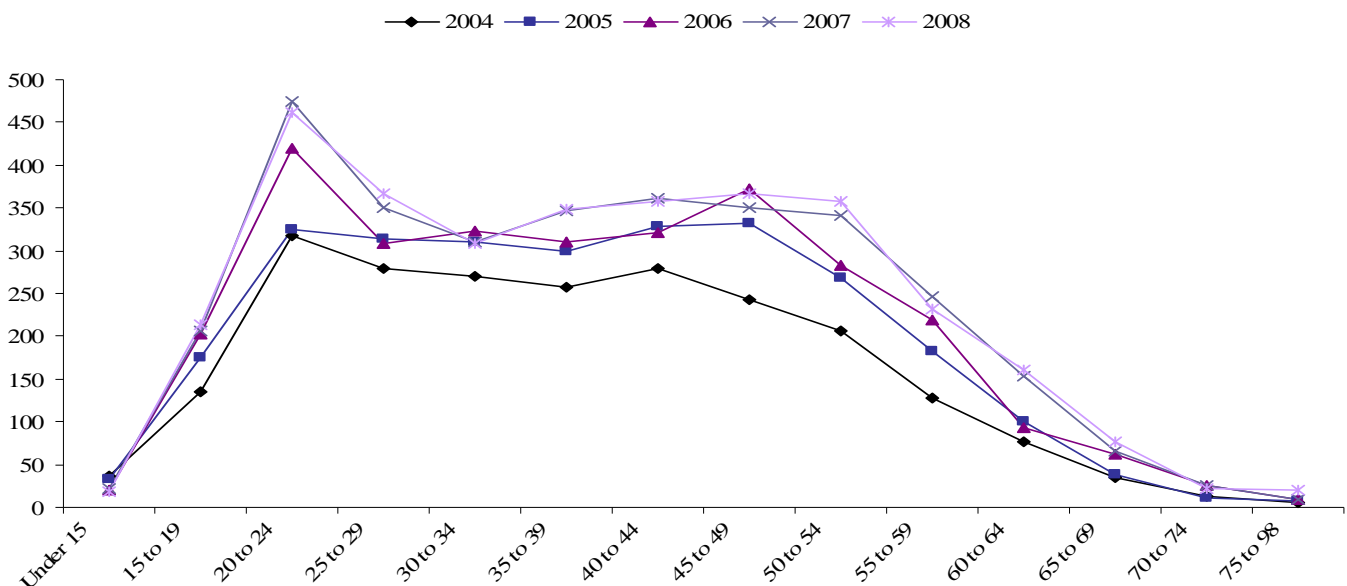
Over 90% of motorcycle drivers in crashes from 2004 to 2008 were between the ages of 15 and 59. The number of motorcycle drivers in crashes has increased in every age group over 14 years old since 2004. As a percentage of all motorcycle drivers in crashes, drivers from ages 15 to 24 and 45 to 69 increased, while drivers between the ages of 25 and 44 decreased.

**Table 12: Motorcycle Drivers in Crashes by Age**

	2004	2005	2006	2007	2008	Total
<b>Under 15</b>	37	33	20	21	19	<b>130</b>
<b>15 to 19</b>	135	175	203	206	213	<b>932</b>
<b>20 to 24</b>	317	325	420	474	462	<b>1,998</b>
<b>25 to 29</b>	279	313	309	350	367	<b>1,618</b>
<b>30 to 34</b>	270	310	323	310	308	<b>1,521</b>
<b>35 to 39</b>	257	300	311	347	349	<b>1,564</b>
<b>40 to 44</b>	279	329	321	361	358	<b>1,648</b>
<b>45 to 49</b>	242	332	373	351	366	<b>1,664</b>
<b>50 to 54</b>	206	268	282	342	357	<b>1,455</b>
<b>55 to 59</b>	127	182	219	246	231	<b>1,005</b>
<b>60 to 64</b>	76	101	93	154	160	<b>584</b>
<b>65 to 69</b>	35	39	62	66	76	<b>278</b>
<b>70 to 74</b>	12	11	25	25	21	<b>94</b>
<b>75 to 98</b>	6	7	9	10	20	<b>52</b>
<b>Unknown</b>	53	38	46	50	22	<b>209</b>
<b>Total</b>	<b>2,331</b>	<b>2,763</b>	<b>3,016</b>	<b>3,313</b>	<b>3,329</b>	<b>14,752</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Motorcycle Drivers in Crashes by Age**



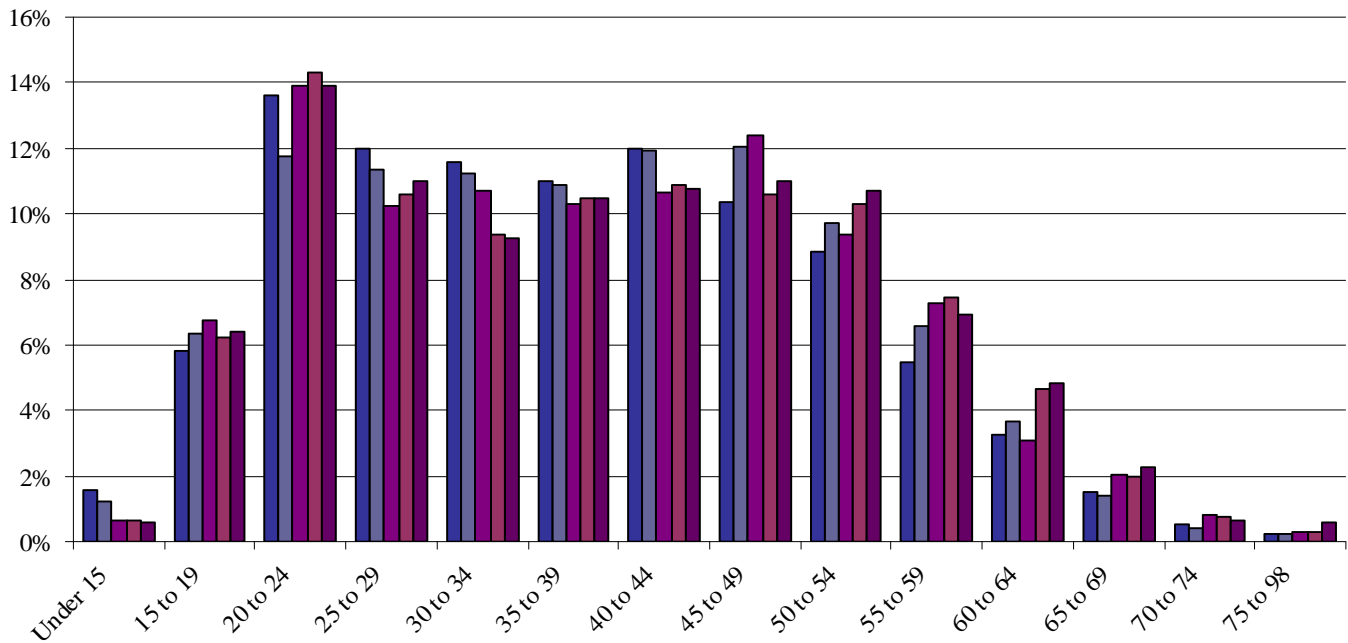
**Table 13: Percentage of Motorcycle Drivers in Crashes by Age**

	2004	2005	2006	2007	2008	Avg
<b>Under 15</b>	1.6%	1.2%	0.7%	0.6%	0.6%	<b>0.9%</b>
<b>15 to 19</b>	5.8%	6.3%	6.7%	6.2%	6.4%	<b>6.3%</b>
<b>20 to 24</b>	13.6%	11.8%	13.9%	14.3%	13.9%	<b>13.5%</b>
<b>25 to 29</b>	12.0%	11.3%	10.2%	10.6%	11.0%	<b>11.0%</b>
<b>30 to 34</b>	11.6%	11.2%	10.7%	9.4%	9.3%	<b>10.3%</b>
<b>35 to 39</b>	11.0%	10.9%	10.3%	10.5%	10.5%	<b>10.6%</b>
<b>40 to 44</b>	12.0%	11.9%	10.6%	10.9%	10.8%	<b>11.2%</b>
<b>45 to 49</b>	10.4%	12.0%	12.4%	10.6%	11.0%	<b>11.3%</b>
<b>50 to 54</b>	8.8%	9.7%	9.4%	10.3%	10.7%	<b>9.9%</b>
<b>55 to 59</b>	5.4%	6.6%	7.3%	7.4%	6.9%	<b>6.8%</b>
<b>60 to 64</b>	3.3%	3.7%	3.1%	4.6%	4.8%	<b>4.0%</b>
<b>65 to 69</b>	1.5%	1.4%	2.1%	2.0%	2.3%	<b>1.9%</b>
<b>70 to 74</b>	0.5%	0.4%	0.8%	0.8%	0.6%	<b>0.6%</b>
<b>75 to 98</b>	0.3%	0.3%	0.3%	0.3%	0.6%	<b>0.4%</b>
<b>Unknown</b>	2.3%	1.4%	1.5%	1.5%	0.7%	<b>1.4%</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Percentage of Motorcycle Drivers in Crashes by Age**

■ 2004 ■ 2005 ■ 2006 ■ 2007 ■ 2008

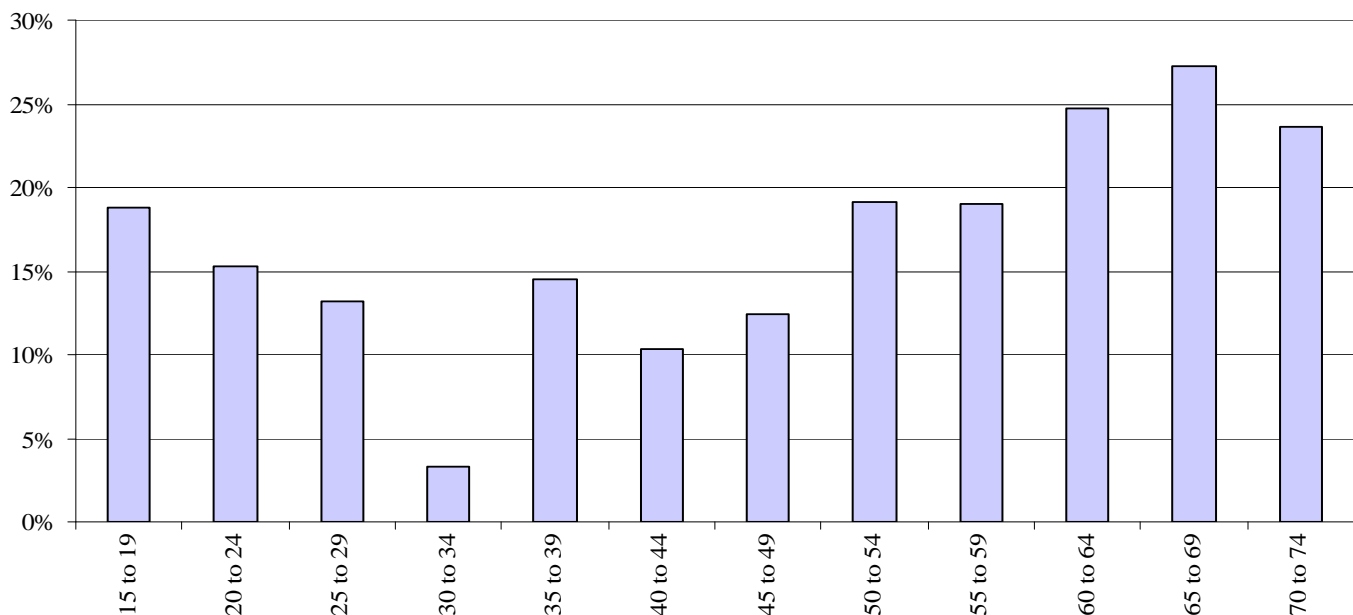


**Table 14: Percent Change Annually of Motorcycle Drivers in Crashes by Age**

	2004	2005	2006	2007	2008	Avg
<b>Under 15</b>	94.7%	-10.8%	-39.4%	5.0%	-9.5%	0.0%
<b>15 to 19</b>	26.2%	29.6%	16.0%	1.5%	3.4%	18.8%
<b>20 to 24</b>	21.0%	2.5%	29.2%	12.9%	-2.5%	15.2%
<b>25 to 29</b>	24.6%	12.2%	-1.3%	13.3%	4.9%	13.1%
<b>30 to 34</b>	-0.4%	14.8%	4.2%	-4.0%	-0.6%	3.3%
<b>35 to 39</b>	26.6%	16.7%	3.7%	11.6%	0.6%	14.5%
<b>40 to 44</b>	15.3%	17.9%	-2.4%	12.5%	-0.8%	10.3%
<b>45 to 49</b>	5.7%	37.2%	12.3%	-5.9%	4.3%	12.4%
<b>50 to 54</b>	16.4%	30.1%	5.2%	21.3%	4.4%	19.2%
<b>55 to 59</b>	10.4%	43.3%	20.3%	12.3%	-6.1%	19.0%
<b>60 to 64</b>	15.2%	32.9%	-7.9%	65.6%	3.9%	24.8%
<b>65 to 69</b>	20.7%	11.4%	59.0%	6.5%	15.2%	27.2%
<b>70 to 74</b>	33.3%	-8.3%	127.3%	0.0%	-16.0%	23.6%
<b>75 to 98</b>	200.0%	16.7%	28.6%	11.1%	100.0%	77.8%
<b>Unknown</b>	-33.8%	-28.3%	21.1%	8.7%	-56.0%	-27.6%
<b>Total</b>	14.5%	18.5%	9.2%	9.8%	0.5%	13.1%

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Average Annual Change in Motorcycle Drivers Ages 15 to 74 in Crashes, 2004 - 2008**



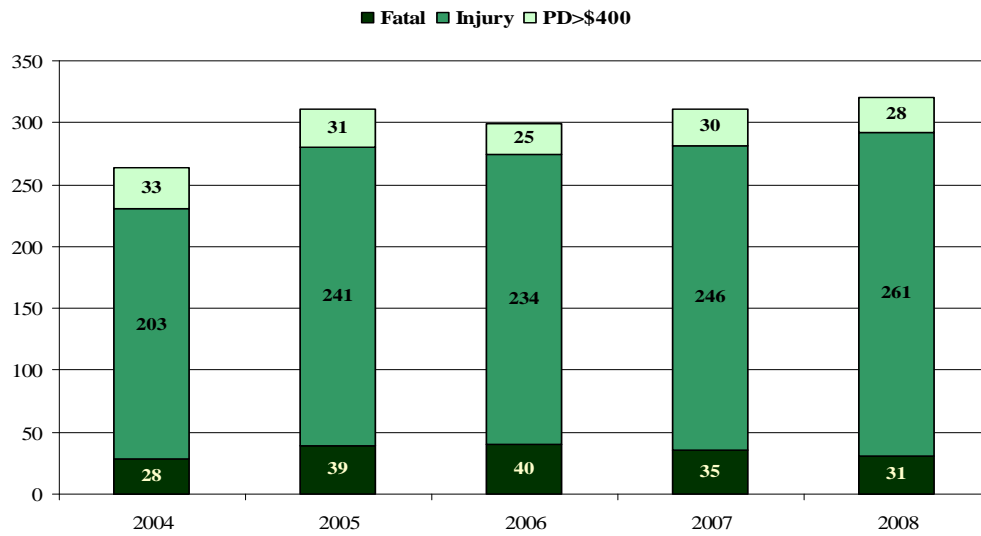
Between 2004 and 2008, approximately 10% of motorcycle crashes in Tennessee were known to be speed related.

**Table 15: Crashes Where a Motorcycle Was Speeding**

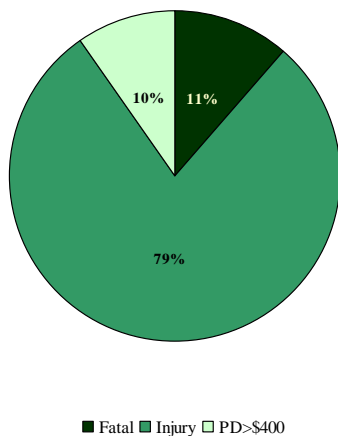
Year	2004	2005	2006	2007	2008	Total
Fatal	28	39	40	35	31	173
Injury	203	241	234	246	261	1,185
PD>\$400	33	31	25	30	28	147
Total	264	311	299	311	320	1,505

Sources: Fatal Crashes, NHTSA FARS Encyclopedia, <ftp://ftp.nhtsa.dot.gov/FARS>, accessed 07 Jul 2009.  
Other Crashes, TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Crashes Where a Motorcycle Was Speeding by Type of Crash, 2004 - 2008**



**Crash Severity When a Motorcycle Was Speeding  
2004 - 2008**



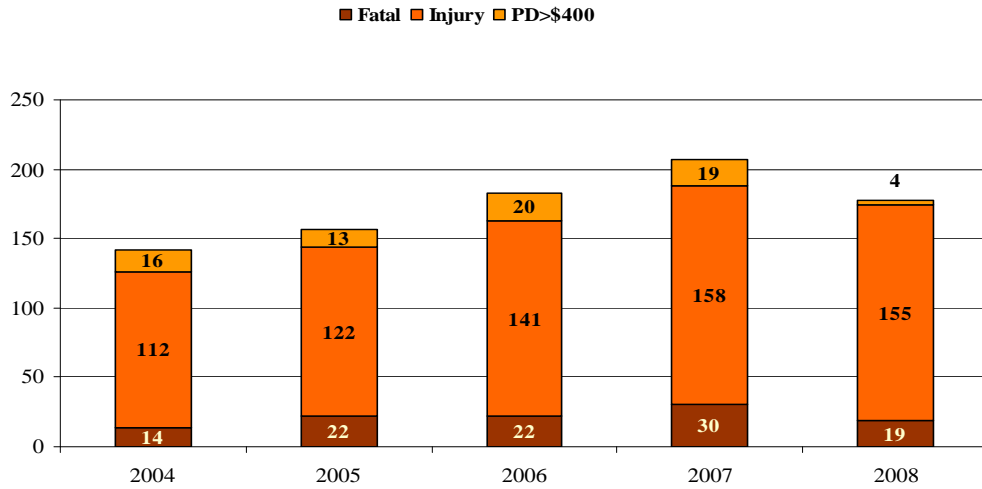
Between 2004 and 2008, approximately 6% of motorcycle crashes in Tennessee were known to be alcohol related.

**Table 16: Crashes Where Alcohol Use is Indicated for a Motorcycle Driver**

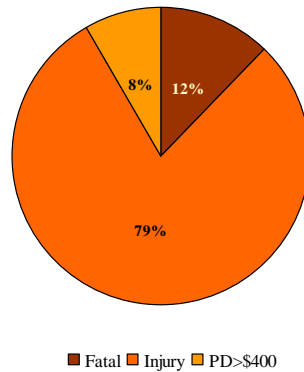
Year	2004	2005	2006	2007	2008	Total
Fatal	14	22	22	30	19	107
Injury	112	122	141	158	155	688
PD>\$400	16	13	20	19	4	72
Total	142	157	183	207	178	867

Sources: Fatal Crashes, NHTSA FARS Encyclopedia, <ftp://ftp.nhtsa.dot.gov/FARS>, accessed 07 Jul 2009.  
Other Crashes, TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Crashes Where Alcohol Use is Indicated for a Motorcycle Driver, 2004 - 2008**



**Crash Severity When Alcohol Use is Indicated for a Motorcycle Driver, 2004 - 2008**





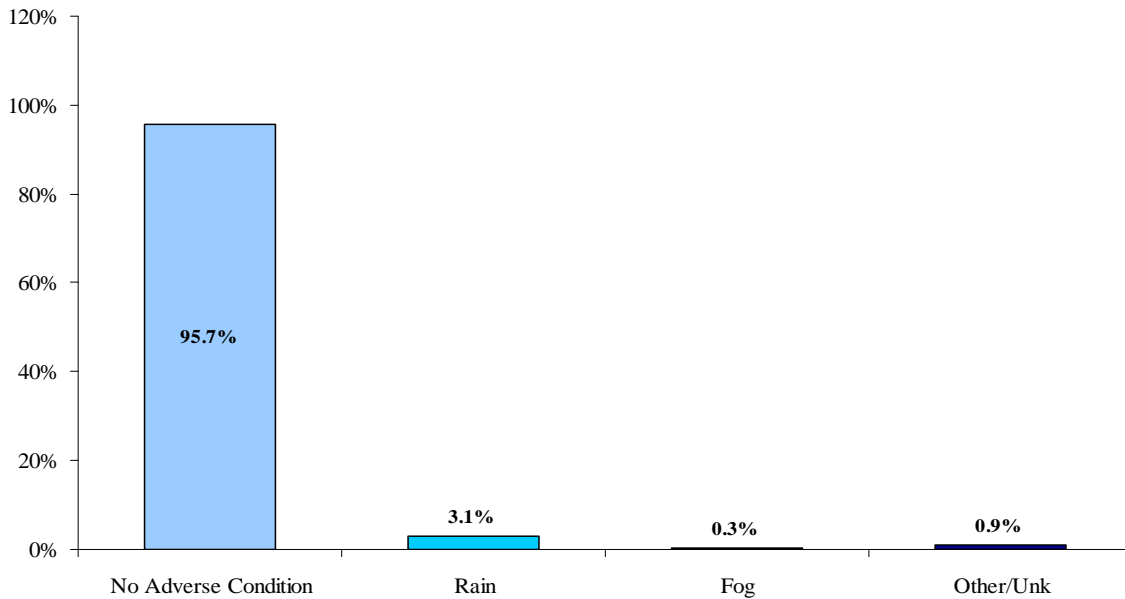
Motorcyclists tend to avoid adverse weather conditions, so over 95% of motorcycle crashes from 2004 – 2008 occurred with no adverse weather conditions. The vast majority of the remaining crashes occurred in the rain, and a small number (less than one half of one percent) occurred in fog.

**Table 17: Motorcycle Crashes by Weather Conditions**

Weather Condition	2004	2005	2006	2007	2008
No Adverse Condition	2,179	2,599	2,805	3,091	3,131
Rain	91	68	106	86	98
Sleet, Hail	0	0	0	1	0
Snow	0	0	1	0	2
Fog	9	11	9	5	5
Smog, Smoke	0	0	0	0	0
Blowing, Sand, Soil, Dirt, or Snow	0	1	0	1	0
Severe Crosswind	0	1	0	0	2
Other	2	3	4	9	5
Unknown	15	17	39	20	14

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Motorcycle Crashes by Weather Conditions  
2004 - 2008**



**Table 18**  
**Multiple Vehicle Crashes**

Year	Crashes	%
2004	1,155	50.4%
2005	1,298	48.1%
2006	1,477	49.9%
2007	1,639	51.0%
2008	1,419	43.6%
<b>Total</b>	<b>6,988</b>	<b>48.5%</b>

**Table 19**  
**Intersection Related Crashes\***

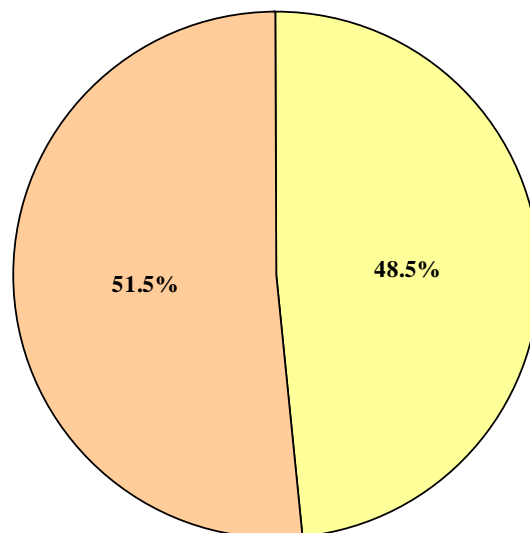
Year	Crashes	%
2004	611	26.6%
2005	699	25.9%
2006	835	28.2%
2007	951	29.6%
2008	950	29.2%
<b>Total</b>	<b>4,046</b>	<b>28.1%</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

\*The crash occurred at the intersection or the reporting officer indicated that the crash was intersection related.

Slightly more than one quarter of the motorcycle crashes occurring between 2004 and 2008 were intersection related. About half of all motorcycle crashes during the same period were single vehicle crashes.

**Multiple Vehicle vs Single Vehicle Motorcycle Crashes**  
**2004 - 2008**



□ Multiple Vehicle Crashes □ Single Vehicle Crashes

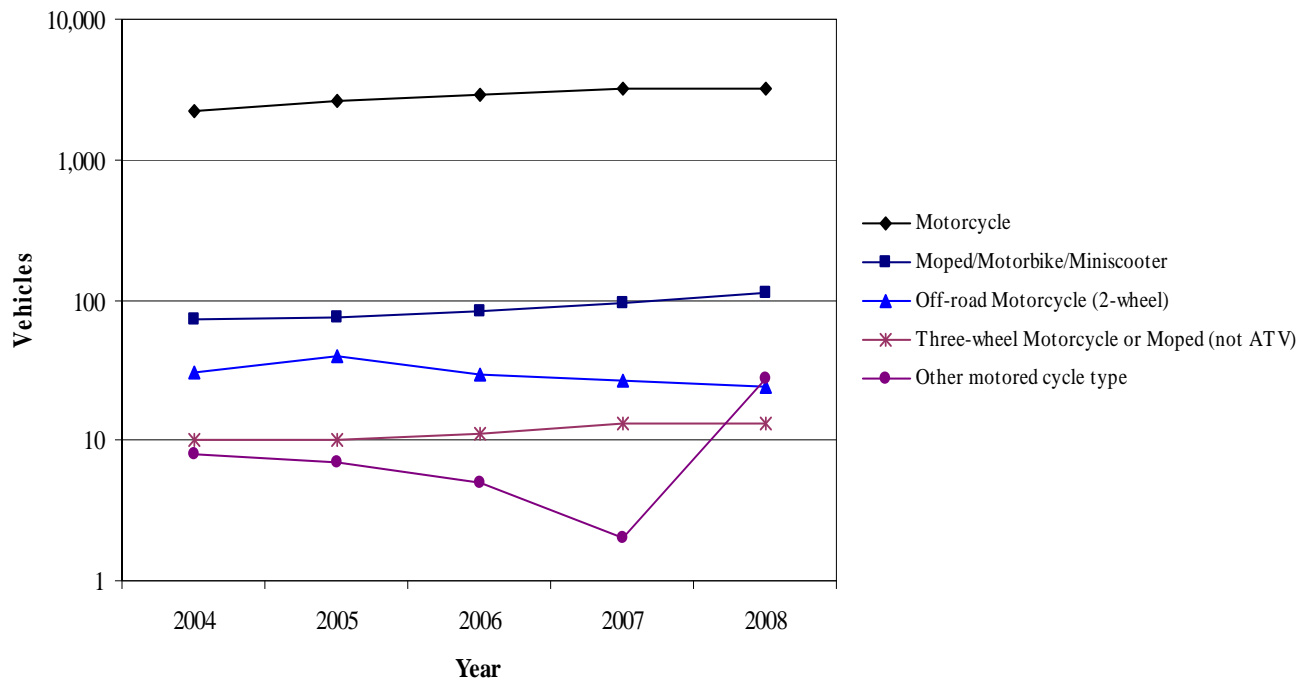
Standard motorcycles accounted for over 95% of motorcycles in crashes in Tennessee from 2003 to 2007. Mopeds, motor scooters, and minibikes were next, comprising 3% of motorcycles in crashes. The number of standard motorcycles in crashes increased by an annual rate of 8.8% during the five year period while the number of mopeds, motor scooters, and minibikes increased by 11.8% per year.

**Table 20: Motorcycles in Crashes by Vehicle Type**

Vehicle Type	2004	2005	2006	2007	2008	Total
Motorcycle	2,238	2,652	2,912	3,191	3,158	<b>14,151</b>
Moped/Motorbike/Miniscooter	73	75	84	95	114	<b>441</b>
Off-road Motorcycle (2-wheel)	30	40	29	27	24	<b>150</b>
Three-wheel Motorcycle or Moped (not ATV)	10	10	11	13	13	<b>57</b>
Other motored cycle type	8	7	5	2	28	<b>50</b>
Unknown motored cycle type	4	3	2	0	13	<b>22</b>

Source: TN Dept of Safety, Office of Research, Statistics, and Analysis, 09 Oct 2009.

**Motorcycles In Crashes by Vehicle Type**



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