



# An update on the dengue fever spreading and its situation in India

## Introduction

Dengue is called as dengue fever. This is the most common and important arthropod borne viral ie., arboviral illness in human beings. It is also named as breakbone fever. It is spread to human beings via bites of Aedes mosquitos. [1] It carrying one of four types of dengue virus (DENV). This is mostly found in tropical and subtropical regions, and in Central and South America also. [2] Aedes mosquitoes takes about seven to eight days to develop the virus in its body and transmit the disease. [3] In this editorial article, I have discussed about dengue, various habits of Aedes mosquitoes, various places of favourite breeding, discussion about the health education/awareness about dengue and its habits among sanitary workers ad school going children.

## Various habits of Aedes mosquitoes

### Habit of feeding of mosquitoes

The Aedes mosquitoes are day biter, it's main feeds on human beings in domestic and peri domestic situations ad it bites repeatedly and multi person feeder per blood meal.

### Habit of resting of mosquitoes

It rests in the domestic and peridomestic situations. It rests in the dark corners of the houses, on hanging objects like clothes, umbrella, etc. (or) under the furniture.

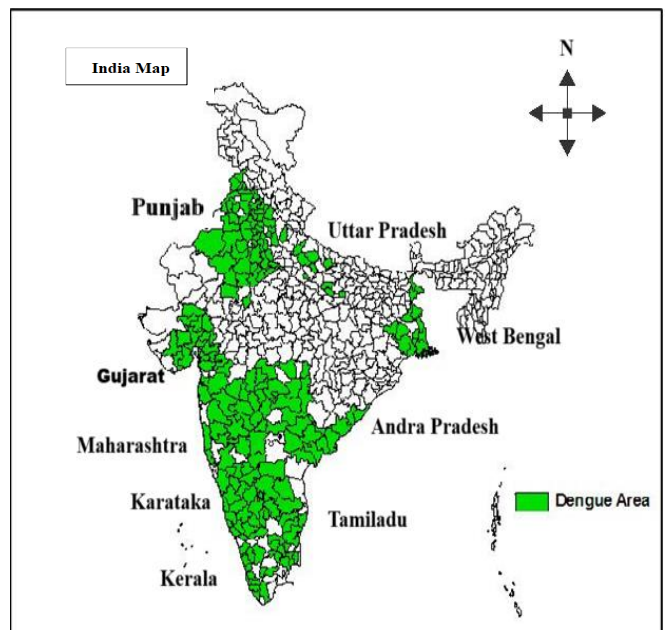
### Mosquitoes' habits of Breeding and places

Aedes mosquito breeds in any type of man-made containers or storage containers having even a small quantity of water. The eggs of Aedes can live without water for more than one year.

## Various places of Favourite Breeding of mosquitoes

The various favourite places of breeding are as follows: Desert coolers, Drums, Jars, Pots, Buckets, Flower vases, Plant saucers, Tanks, Cisterns, Bottles, Tins, Tyres, Roof gutters, Refrigerator drip pans, Cement blocks, Cemetery urns, Bamboo stumps, Coconut shells, Tree holes and many more places where rainwater collects or is stored.

Figure – 1 Distribution of dengue fever in states of India



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**Table–1 Distribution of dengue cases and deaths in various states and Union Territories of India from the year 2019 to 2024 [5, 6]**

Sl. No.	Affected States/UTs	2019		2020		2021		2022		2023		2024*	
		C	D	C	D	C	D	C	D	C	D	C	D
1	Andhra Pradesh	5286	0	925	0	4760	0	6391	0	6453	0	1836	0
2	Arunachal Pradesh	123	0	1	0	7	0	114	0	130	0	6	0
3	Assam	196	0	33	0	103	0	1826	2	8208	7	270	0
4	Bihar	6712	0	493	2	633	2	13972	32	20224	74	7	0
5	Chattisgarh	722	0	57	0	1086	0	2679	10	2412	0	160	0
6	Goa	992	0	376	0	649	0	443	1	512	3	177	0
7	Gujarat	18219	17	1564	2	10983	14	6682	7	7222	7	893	1
8	Haryana	1207	0	1377	0	11835	13	8996	18	8081	11	69	0
9	Himachal Pradesh	344	2	21	0	349	0	3326	1	1989	0	12	0
10	J & K	439	0	53	0	1709	4	8269	18	6403	10	4	0
11	Jharkhand	825	0	79	0	220	1	290	0	2578	4	76	0
12	Karnataka	16986	13	3823	0	7393	7	9889	9	19300	11	5976	5
13	Kerala	4652	16	4399	5	3251	27	4432	29	17426	153	8115	22
14	Lakshadweep	0	0	0	0	1	0	67	0	445	0	384	0
15	Madhya Pradesh	4189	2	806	0	15592	11	3318	2	6979	0	742	0
16	Meghalaya	82	0	4	0	129	0	26	0	114	0	37	0
17	Maharashtra	14907	29	3356	10	12720	42	8578	27	19034	55	3173	1
18	Manipur	359	0	37	0	203	0	503	4	2548	0	64	0
19	Mizoram	42	0	67	0	83	0	1868	5	2060	2	234	0
20	Nagaland	8	0	1	0	24	0	154	0	4943	2	4	0
21	Odisha	3758	4	496	0	7548	0	7063	0	12845	1	322	0
22	Punjab	10289	14	8435	22	23389	55	11030	41	13687	39	162	0
23	Rajasthan	13706	17	2023	7	20749	96	13491	10	13924	14	1018	0
24	Sikkim	444	0	11	0	243	1	264	0	311	0	59	0
25	Tamil Nadu	8527	5	2410	0	6039	8	6430	8	9121	12	4778	2
26	Tripura	114	0	24	0	349	0	56	0	1447	0	257	0
27	Telangana	13331	7	2173	0	7135	0	8972	0	8016	1	1078	0
28	Uttar Pradesh	10557	26	3715	6	29750	29	19821	33	35402	36	341	1
29	Uttarakhand	10622	8	76	1	738	2	2337	0	4320	17	0	0
30	West Bengal*	NR	NR	5166	0	8264	7	67271	30	30683	4	441	0
31	A & N Island	168	0	98	0	175	0	1014	3	846	0	37	0
32	Chandigarh	286	0	265	0	1596	3	910	1	454	0	0	0
33	Delhi	5077	0	1269	0	13089	23	10183	9	16866	19	381	0
34	D&N Haveli	1491	2	248	0	547	0	685	0	1178	0	88	0
35	Daman & Diu	625	2	71	0	279	0	228	0	284	1	16	0
36	Puduchery	2030	2	633	1	1625	1	1673	3	2790	2	874	0
	<b>Total</b>	<b>157315</b>	<b>166</b>	<b>44585</b>	<b>56</b>	<b>193245</b>	<b>346</b>	<b>233251</b>	<b>303</b>	<b>289235</b>	<b>485</b>	<b>32091</b>	<b>32</b>

Source from: National Center for Vector Borne Diseases

\*Provisional till 30<sup>th</sup> June 2024; C=Cases | D=Deaths | NR=Not Reported

2023: WB reported data till 13.9.2023; 2024: WB reported data till 21.2.2024

In the year 2024, the number of deaths due to dengue fever was none in Pondicherry and the remaining states of status and particularly the 22 deaths were happened in Kerala was shown in **Table-1**. Dengue fever has spread in various states in India as shown in **Figure-1**.

Jency et al [7] has mentioned by health education among sanitary workers by improving their knowledge and practices on dengue control. Whereas, in a study was conducted by Sureshbabu et al [8] the dengue awareness had to be initiated from the school level itself. The number of dengue cases 2,89,235 and deaths due that was 485 in the year 2023. Whereas the number of dengue cases was 32,091 and the deaths due to that was 32 only in the year 2024 as show in **Table-1**. Dengue cases resurged after the COVID-19 pandemic in worldwide. As per the record, in Americas region 4.6 million cases and 4000 deaths were happened in the year of 2023. Whereas in the year 2024, 2 times higher dengue cases have been reported in the Americas. [9] In another one report, 11 million cases were reported in 2024. [10]

## Conclusion

From this, I have concluded that the knowledge about Aedes mosquito breeding, habits and its various places of favourite breeding of mosquitoes to the community, sanitary workers and in the school going children also. So, school-based health awareness study would be conducted by the nearby medical colleges ad to create about the awareness of Dengue virus. This type of mosquito related knowledge to the medical college under graduates and post graduate also. The only they will create an awareness in the early rural or urban community and to make the community free from Dengue.

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