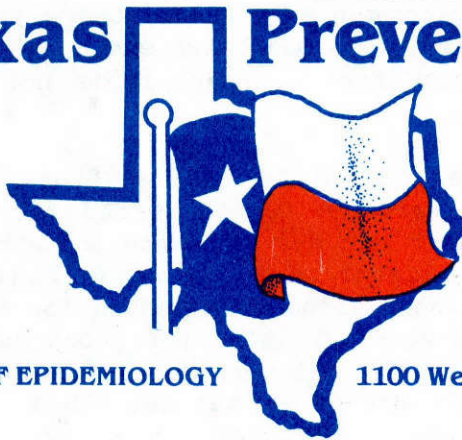


# Texas Preventable Disease NEWS



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Warning

BUREAU OF EPIDEMIOLOGY

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## VIRAL HEPATITIS PART III: NON-A, NON-B HEPATITIS

Health professionals have been increasingly aware that a third category of viral hepatitis exists, that which is currently designated as non-A, non-B hepatitis. It is defined as an acute viral hepatitis for which type A and type B etiologies are ruled out. Hence, the diagnosis of non-A, non-B hepatitis is one of exclusion until specific serological testing becomes routinely available. Non-A, non-B hepatitis was first described as a transfusion-transmitted hepatic syndrome, and today probably 80% to 90% of transfusion hepatitis is known to be due to non-A, non-B infection. It is estimated that non-A, non-B hepatitis also accounts for as much as 13% to 25% of all sporadic hepatitis, 20% of all hepatitis infections occurring in medical personnel, 5% of all hepatitis in homosexually active males, and 5% of hepatitis acquired while traveling abroad.

Laboratory investigations and experimental inoculation studies in primates have provided evidence for a minimum of three non-A, non-B agents. In this country at least two agents have been associated with blood and blood products. Evidence for the presence of two viruses has come from studies in which chimpanzees, after inoculation with serum from one non-A, non-B patient, were challenged with material from a second patient. The chimpanzees developed hepatitis, indicating that they had no protective immunity from the first exposure.

The epidemiology of these transfusion-transmitted agents is somewhat similar to that for hepatitis B, at least in the United States. The incubation period varies from 15-180 days with an average of approximately 60 days. The onset is insidious as is that for type B, and the course of the disease is prolonged. In general, these are somewhat milder infections than typical acute hepatitis B cases. Non-A, non-B hepatitis infections are more commonly anicteric than hepatitis B infections, and the level of SGOT and SGPT enzymes (AST and ALT respectively) may not be as high as with hepatitis B. However, as many as 10% to 40% of non-A, non-B hepatitis cases will go on to develop some form of chronic liver disease, and epidemiologic evidence suggests that a carrier state exists for those non-A, non-B viruses transmitted through transfusion and percutaneous inoculation.

A third non-A, non-B hepatitis agent has been described in epidemics in India. This virus more closely resembles hepatitis A in its epidemiology (fecal-oral transmission, epidemic presentation). It differs from hepatitis A, however, in that it is more prevalent in adults, and the severity of the disease, especially among pregnant women, is much greater than that for hepatitis A. This virus infection also differs from the transfusion-associated non-A, non-B infection in that there is a striking absence of chronic sequelae among patients of epidemic non-A, non-B hepatitis. As with the agents transmitted by parenteral means, much more work needs to be done to clarify the nature of this A-like virus so that a definitive serological test can be developed.

Since non-A, non-B hepatitis in this country commonly is associated with transfusion-transmitted hepatitis, it has been suggested that blood banks and hospitals routinely screen for these agents. Unfortunately, such test methodology is not available at present.

Recently, two major studies (Transfusion Transmitted Viruses Study and a National Institute of Health [NIH] study) provided evidence for an association between the transfusion of donor blood with elevated liver enzymes (ALT) and post-transfusion ALT elevations in recipients. These studies suggest that post-transfusion hepatitis might be reduced by as much as 30% if all donor blood were tested for ALT levels and those units with elevated ALT discarded. Presently, it is not practical for routine checks on enzyme levels to be performed, except in emergency situations when blood banks of hospitals may have to resort to the use of commercial blood donors. Other investigators recently examined the costs and benefits of a proposed nationwide ALT screening program for blood banks. The overall cost of such a program was estimated to be \$42.2 million, and the researchers concluded that a definitive policy statement could not be made at this time.

There is, in general, a lack of solid information about the natural history (frequency and severity) and medical consequences of non-A, non-B hepatitis. Thus, solid estimates of costs involved in the treatment and management of cases cannot be provided at this time for comparison with the costs of screening. In addition, no randomized prospective study has shown that the exclusion of blood from donors with elevated ALT levels lowers the incidence of either symptomatic or asymptomatic post-transfusion hepatitis. If future studies do show a decrease in incidence of non-A, non-B hepatitis in transfusion recipients as a result of excluding units with elevated ALT levels, there may be a positive economic gain from screening. It is clear that further debate and additional clinical and economic studies on this issue need to continue.

There are, however, alternative solutions to this problem today. These include a more judicious use of blood and blood products, more effective inventory controls, better use of autotransfusion procedures, and, perhaps most importantly, an even stronger commitment to supporting all-volunteer blood donor programs in the community.

Health professionals are reminded that hepatitis is a reportable disease in Texas. The surveillance information gathered is employed routinely to help prevent further cases and may help to bring about an earlier understanding of this disease.

For epidemiologic or consultative assistance, contact the Bureau of Epidemiology, Texas Department of Health (TDH) at (512)458-7328 or STS 824-9328.

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This report was prepared by Lynne Schulster, Ph.D., Staff Epidemiologist, Bureau of Epidemiology, TDH.

We are indebted to Dr. James Shorey, Liver Unit, Dallas VA Medical Center, Dallas, Texas 75216 for current information on non-A, non-B hepatitis.

References for this article are available upon request from the Bureau of Epidemiology, Texas Department of Health, 1100 West 49th Street, Austin, Texas 78756.

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#### WARNING

Parents of very small children are cautioned not to hang glass Christmas tree ornaments on the lower branches of the tree within reach of these children. It is fairly easy for a child to remove an ornament, place the ornament in its mouth, and bite.

ASEPTIC MENINGO- MENIN- GITIS	COCCAL IN FEC	HEPATITIS:			IMMUNIZABLE:		RICKETTSIAL:		VENEREAL:		MISC.:		TUBER- CULOSIS
		A	B	UNSPEC	MEASLES	RUBELLA	ENDEM	RMSF	GC	P&S SYPH	FLU & FLU-LIKE		

CUMULATIVE FOR THE STATE      POPULATION = 15,345,761

CASES RPTD THIS WEEK	17	2 *	71	28	72 *	0	1 *	0	0 *	1,666	113 *	1,458	42
5-YR MEDIAN 1978-1982	6	2 *	67	22	49 *	1	2 *	1	0 *	1,924	99 *	2,025	48
CUMULATIVE 1983	946	162 *	2,754	1,100	2,204 *	37	107 *	29	100 *	74,854	6,020 *	85,072	1,730
CUM. SAME WEEK 1982	731	219 *	3,062	983	1,953 *	128	112 *	36	61 *	80,529	6,110 *	88,407	1,827

PUBLIC HEALTH REGION 1      CANYON, TX      PHONE: 806/655-7151      POPULATION = 385,411

COUNTIES

CASTRO	*	*	*	*	*	*	*	*	*	2	*	*	*
DALLAM	*	*	*	*	*	*	*	*	*	1	*	*	*
GRAY	*	*	*	*	*	*	*	*	*	1	*	*	*
PARMER	*	*	*	*	*	*	*	*	*	*	*	*	28
POTTER	*	*	*	*	*	*	*	*	*	50	2 *	*	102
WHEELER	*	*	*	*	*	*	*	*	*	*	*	*	12
CASES THIS WEEK	*	*	*	*	*	*	*	*	*	54	2 *	*	142
CUMULATIVE 1983	12	2 *	44	20	6 *	2 *	2 *	*	*	1,396	33 *	*	5,561

OTHER COUNTIES:      NO COMMUNICABLE DISEASES: 2      OTHER DISEASES ONLY: 1      NOT REPORTING: 16

PUBLIC HEALTH REGION 2      LUBBOCK, TX      PHONE: 806/797-4331      POPULATION = 379,488

COUNTIES

GARZA	*	*	*	*	*	*	*	*	*	*	*	*	10
HALE	*	*	*	*	*	*	*	*	*	9	*	*	*
LUBBOCK	*	*	1	1 *	*	*	*	*	*	*	2 *	*	*
TERRY	*	*	*	*	*	*	*	*	*	3	*	*	*
CASES THIS WEEK	*	*	1	1 *	*	*	*	*	*	12	2 *	*	10
CUMULATIVE 1983	14	2 *	199	12	48 *	3 *	3 *	*	*	1,136	55 *	*	4,848

OTHER COUNTIES:      NO COMMUNICABLE DISEASES: 1      OTHER DISEASES ONLY: 2      NOT REPORTING: 8

PUBLIC HEALTH REGION 3      EL PASO, TX      PHONE: 915/779-3531      POPULATION = 553,858

COUNTIES

EL PASO	1	*	4	2	*	*	*	*	*	46	3 *	*	*
CASES THIS WEEK	1	*	4	2	*	*	*	*	*	46	3 *	*	*
CUMULATIVE 1983	15	4 *	96	41	71 *	1	4 *	*	*	2,687	179 *	*	34

OTHER COUNTIES:      NO COMMUNICABLE DISEASES: 1      OTHER DISEASES ONLY: 0      NOT REPORTING: 4



ASEPTIC MENINGO- MENIN- COCCAL GITIS INFECTION	HEPATITIS:			IMMUNIZABLE:		RICKETTSIAL:		VENEREAL:		MISC.:		TUBER- CULOSIS
	A	B	UNSPEC	MEASLES	RUBELLA	ENDEM	TYPH	GC	P&S SYPH	FLU & FLU-LIKE		

PUBLIC HEALTH REGION 6 TEMPLE, TX PHONE: 817/778-6744 POPULATION = 1,451,983 (CONTINUED FROM PRIOR PAGE)

MCLENNAN	*	2	*	*	*	*	*	*	1	*	*					
MILAM	*		*	*	*	*	*	*	1	*	*	14				
TRAVIS	1	*	3	2	1	*	*	*	123	3	*	6				
WILLIAMSON	*		*		*	*	*	*		3	*					
CASES THIS WEEK	1	1	*	9	2	3	*	*	133	8	*	93				
CUMULATIVE 1983	123	14	*	135	77	113	*	10	1	11	*	5,580	604	*	12,343	85

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 2 OTHER DISEASES ONLY: 1 NOT REPORTING: 15

PUBLIC HEALTH REGION 7 TYLER, TX PHONE: 214/595-3585 POPULATION = 866,604

COUNTIES																
ANDERSON	*		*	*	*	*	*	*	4	*	*					
BOWIE	*		*	*	*	*	*	*	10	*	*					
CAMP	*		*	*	*	*	*	*	2	*	*					
CASS	*		*	*	*	*	*	*	1	*	*					
CHEROKEE	*	10	*	4	*	*	*	*	6		1	*				
DELTA	*		*	1	*	*	*	*		*	*					
GREGG	*		1	*	*	*	*	*	1	*	*					
HENDERSON	*		*	*	*	*	*	*	1	*	*	11				
HOPKINS	*		*	*	*	*	*	*	1	*	*					
LAMAR	*		*	*	*	*	*	*	8	*	*					
MORRIS	*		*	*	*	*	*	*	1	*	*	32				
RUSK	*		*	*	*	*	*	*	4		1	*				
SMITH	*		1	*	*	*	*	*	13		1	*	49			
UPSHUR	*		*	*	*	*	*	*	1	*	*					
VAN ZANDT	*		*	*	*	*	*	*	2	*	*	5				
WOOD	*		*	*	*	*	*	*	2		1	*				
CASES THIS WEEK			*	10	1	6	*	*	57		4	*	97			
CUMULATIVE 1983	27	3	*	47	27	86	*	13	*	12	*	2,897	236	*	4,667	76

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 7

PUBLIC HEALTH REGION 8 HARLINGEN, TX PHONE: 512/423-0130 POPULATION = 1,413,993

COUNTIES												
BEE	1	*	*	*	*	*	*	*	*	*	*	*
BROOKS	*		2	*	*	*	*	*	*	*	*	*
CALHOUN	*		*	*	*	*	*	*	*	*	*	13
CAMERON	*		3	*	1	*	*	*	*	*	*	156
GONZALES	*		*	*	*	*	*	*	*	1	*	*
HIDALGO	*		7	*	*	*	*	*	*	*	*	25
JACKSON	*		*	*	*	*	*	*	*	1	*	*
LAVACA	*		*	*	*	*	*	*	*	*	*	1
MUECES	*	4	3	*	*	*	*	*	20	1	*	105

ASEPTIC MENINGITIS	MENINGOCOCCAL INFECTION	HEPATITIS:			IMMUNIZABLE:		RICKETTSIAL:		VENEREAL:		MISC.:	
		A	B	UNSPEC	MEASLES	RUBELLA	ENDEM	TYPH	GC	P&S SYPH	FLU & FLU-LIKE	TUBERCULOSIS

PUBLIC HEALTH REGION 8 HARLINGEN, TX PHONE: 512/423-0130 POPULATION = 1,413,993 (CONTINUED FROM PRIOR PAGE)

SAN PATRICIO	*			*				*			1	*		1
STARR	*			*				*			1	*		
VICTORIA	*	1		*				*			4	*	26	
WEBB	*	1	2	2	*			*				*	18	
WILLACY	*			1	*			*				*		
CASES THIS WEEK	1	*	6	7	13	*	1	*	20	9	*	344		2
CUMULATIVE 1983	61	10	222	117	581	*	1	27	23	1	2,266	216	20,615	202

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 4 OTHER DISEASES ONLY: 0 NOT REPORTING: 8

PUBLIC HEALTH REGION 9 UVALDE, TX PHONE: 512/278-7173 POPULATION = 1,443,279

COUNTIES

ATASCOSA	*			2	*			*				*	12	
BANDERA	*				*			*	1			*		
BEXAR	1	*	6		*			*	79	6	*	426		1
COMAL	1	*			*			*			*	18		1
DIMMIT	*				*			*			*	21		
FRIO	*				*			*	3		*	14		1
GUADALUPE	*				*			*			*			1
KARNES	*				*			*			*	5		
KENDALL	*	2			*			*			*			
MAVERICK	*				*			*			*			1
UVALDE	*				*			*	1		*			
CASES THIS WEEK	2	*	8	2	*			*	84	6	*	496		5
CUMULATIVE 1983	180	7	315	47	71	*	2	*	3,770	313	*	6,461		173

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 10

PUBLIC HEALTH REGION 10 TYLER, TX PHONE: 214/595-3585 POPULATION = 683,950

COUNTIES

ANGELINA	*				*			*		4	1	*		
HARDIN	1	*			*			*			*			
HOUSTON	*				*			*	3	1	*			
JASPER	*				*			*	2		*			
JEFFERSON	*				*			*	37	3	*			
NACOGDOCHES	*				*			*	10		*			
ORANGE	*				*			*		1	*			
POLK	*				*			*	3		*			
SAN JACINTO	*				*			*			*		15	
SHELBY	*	1			*			*		1	*	20		
TRINITY	*				*			*	1		*			
TYLER	*				*			*	2		*			

ASEPTIC MENINGO- MENIN- COCCAL GITIS INFECTION	HEPATITIS:			IMMUNIZABLE:		RICKETTSIAL:		VENEREAL:		MISC.:	
	A	B	UNSPEC	MEASLES	RUBELLA	ENDEM TYPH	RMSF	GC	P&S SYPH	FLU & FLU-LIKE	TUBER- CULOSIS

PUBLIC HEALTH REGION 10 TYLER, TX PHONE: 214/595-3585 POPULATION = 683,950 (CONTINUED FROM PRIOR PAGE)

CASES THIS WEEK	1 *	1 *				*	*	62	7 *	35		
CUMULATIVE 1983	20	14 *	65	39	37 *	13 *	1	1 *	2,763	200 *	2,131	58

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 0 OTHER DISEASES ONLY: 0 NOT REPORTING: 3

PUBLIC HEALTH REGION 11 ROSENBERG, TX PHONE: 713/342-8685 POPULATION = 3,642,976

COUNTIES

COLORADO	*					*				2 *		
FORT BEND	*	1	1			*		1				11
GALVESTON	*					*		1				
HARRIS	2	*	1		8 *	*		631	33	*		35
MATAGORDA	*					*			1	*		
CASES THIS WEEK	2	*	2	1	8 *	*		633	36	*		46
CUMULATIVE 1983	195	44 *	234	255	369 *	33	2 *	1	5 *	25,685	2,201 *	2,699

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 1 OTHER DISEASES ONLY: 1 NOT REPORTING: 6

PUBLIC HEALTH REGION 12 LUBBOCK, TX PHONE: 806/797-4331 POPULATION = 364,329

COUNTIES

ANDREWS	*	1				*						17
ECTOR	*				3 *	*				2 *		11
HOWARD	*	1				*						2
MIDLAND	*					*						33
CASES THIS WEEK	*	2			3 *	*				2 *		63
CUMULATIVE 1983	8	1 *	59	17	88 *	7 *	1			814	107 *	2,874

OTHER COUNTIES: NO COMMUNICABLE DISEASES: 2 OTHER DISEASES ONLY: 2 NOT REPORTING: 9

OTHER REPORTING SOURCES

ARMED FORCES	*		3			*			8			
V.A. HOSPITALS	*					*						
CASES THIS WEEK	*		3			*			8			
CUMULATIVE 1983	6	2 *	23	29	25 *	1 *			2,436	124 *		6,310

MISCELLANEOUS

OTHER REPORTABLE DISEASES	REPORTED THIS WEEK		CUMULATIVE	
	1982	1983	1982	1983
ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)		3		66
AMEBIASIS	7	4	455	360
ANTHRAX	0	0	0	0
BOTULISM	0	0	0	2
BRUCELLOSIS	0	0	27	71
CHICKENPOX	224	57	10491	14299
CHOLERA	0	0	0	0
DIPHTHERIA	0	0	1	0
ENCEPHALITIS, ST. LOUIS	0	1	18	2
ENCEPHALITIS, WESTERN EQUINE	0	0	4	1
ENCEPHALITIS, VENEZUELAN EQUINE	0	0	0	0
ENCEPHALITIS, ALL OTHER	5	2	150	105
LEPROSY (HANSENS DISEASE)	0	0	27	32
LEPTOSPIROSIS	1	0	14	0
MALARIA	0	0	0	0
MALARIA ACQUIRED OUTSIDE USA	2	0	52	44
MUMPS	27	6	243	211
PERTUSSIS	0	0	72	87
PLAGUE	0	0	1	0
POLIOMYELITIS, PARALYTIC	0	0	0	0
PSITTACOSIS	1	0	8	5
Q FEVER	0	0	1	0
RABIES IN MAN	0	0	0	0
RELAPSING FEVER	0	0	4	0
RHEUMATIC FEVER	1	0	12	12
RUBELLA CONGENITAL SYNDROME	0	0	0	0
SALMONELLOSIS	21	51	2320	2281
SHIGELLOSIS	13	55	2066	1833
STREP THROAT & SCARLET FEVER	1102	716	44682	35147
REYE SYNDROME		0		18
TETANUS	0	0	6	6
TRICHINOSIS	0	0	2	1
TULAREMIA	1	1	11	10
TYPHOID FEVER	2	0	34	48
TYPHUS, EPIDEMIC	0	0	0	0
YELLOW FEVER	0	0	0	0
RABIES IN ANIMALS	15	3	759	688