

## Hepatitis B Vaccine for Diabetics

Extensive research demonstrates that there is an increased risk of hepatitis B virus in the adult population with diabetes. The Advisory Committee on Immunization Practice (ACIP) recently recommended the *hepatitis B vaccine series for all diabetic adults less than 60 years, and those 60 years and older with diabetes may have the hepatitis B series.*

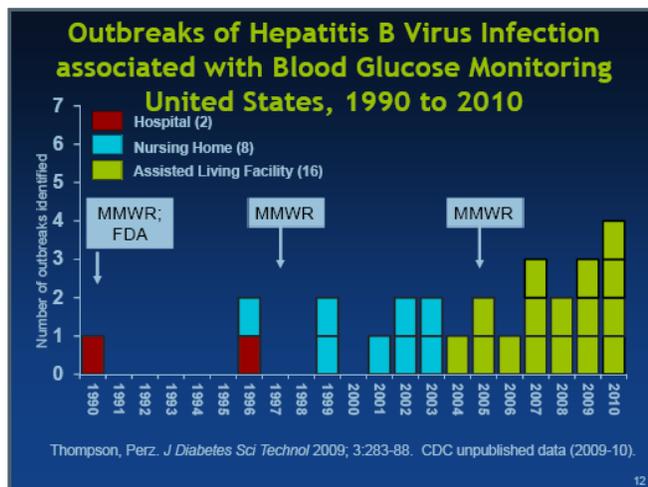
Please give us your feedback. Fill out this short questionnaire at <https://www.surveymonkey.com/s/IDBReaders>

The first recommendation for hepatitis B vaccination was made in 1982. Since that time, a comprehensive strategy to eliminate hepatitis B virus (HBV) transmission in the U.S. has evolved. A hallmark of this policy is the universal vaccination of infants to prevent early childhood HBV infection, and eventually protect adolescents and adults from infection.

Although hepatitis B vaccine is widely available and >90% effective in adults less than 40 years of age, rates of new hepatitis B infection and acute disease are highest among adults. Over 95% of all adults infected with HBV have acute infection. Data from the National Health and Examination Survey (NHANES), showed a higher prevalence of past HBV (anti-hepatitis B core antigen positive) infection among adults 18 years and older with diabetes than those without (8.2% vs. 5.1%). Data from the 2009-2010 Emerging Infections Program showed an increased risk for acute HBV infection among adults ≤ 60 years with diabetes.

Since 1990, 24 out of 28 outbreaks of HBV in long-term care facilities were associated with diabetic adults. Investigations into the cause of these outbreaks found that procedures used in assisted blood glucose monitoring were the major risk factor for HBV transmission (see figure 1). More than 80% of people with diabetes monitor their blood glucose at least once a month, and infection control practices alone have not been effective in preventing outbreaks of HBV among diabetics.

Figure 1.



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# Vermont – Selected Reportable Diseases – 2011

(Data through MMWR Week 52 – 12/31/2011) – Provisional

|                            | Campylobacter | Cryptosporidium | E. coli*  | Giardia    | Group A Strep Inv | Hepatitis A | Hepatitis B - Acute | Hepatitis B - Chronic | Hepatitis C - Acute | Hepatitis C - Chronic | Legionellosis** | Listeriosis | Lyme §     | Meningococcal Inf. | Pertussis** | Salmonella | Shigella | Tuberculosis** | Varicella § |  |
|----------------------------|---------------|-----------------|-----------|------------|-------------------|-------------|---------------------|-----------------------|---------------------|-----------------------|-----------------|-------------|------------|--------------------|-------------|------------|----------|----------------|-------------|--|
| <b>Age</b>                 |               |                 |           |            |                   |             |                     |                       |                     |                       |                 |             |            |                    |             |            |          |                |             |  |
| <5                         | 21            | 9               | 7         | 18         | 0                 | 1           | 0                   | 0                     | 0                   | 3                     | 0               | 0           | 20         | 1                  | 10          | 8          | 0        | 0              | 45          |  |
| 5-14                       | 20            | 8               | 2         | 30         | 2                 | 0           | 0                   | 0                     | 0                   | 2                     | 0               | 0           | 84         | 0                  | 63          | 9          | 1        | 1              | 63          |  |
| 15-24                      | 43            | 13              | 2         | 26         | 1                 | 3           | 0                   | 5                     | 5                   | 57                    | 0               | 0           | 41         | 1                  | 5           | 16         | 1        | 1              | 6           |  |
| 25-39                      | 43            | 9               | 2         | 34         | 2                 | 0           | 0                   | 12                    | 1                   | 191                   | 0               | 0           | 69         | 2                  | 2           | 12         | 2        | 1              | 2           |  |
| 40-64                      | 79            | 11              | 2         | 90         | 6                 | 2           | 0                   | 16                    | 0                   | 353                   | 6               | 0           | 292        | 1                  | 9           | 31         | 1        | 3              | 1           |  |
| 65+                        | 27            | 0               | 1         | 22         | 9                 | 0           | 0                   | 3                     | 0                   | 16                    | 6               | 0           | 109        | 0                  | 2           | 9          | 1        | 2              | 0           |  |
| Unknown                    | 0             | 0               | 0         | 0          | 0                 | 0           | 0                   | 0                     | 0                   | 0                     | 0               | 0           | 0          | 0                  | 0           | 0          | 0        | 0              | 0           |  |
| <b>Total (YTD)</b>         | <b>233</b>    | <b>50</b>       | <b>16</b> | <b>220</b> | <b>20</b>         | <b>6</b>    | <b>0</b>            | <b>36</b>             | <b>6</b>            | <b>622</b>            | <b>12</b>       | <b>0</b>    | <b>615</b> | <b>5</b>           | <b>91</b>   | <b>85</b>  | <b>6</b> | <b>8</b>       | <b>117</b>  |  |
| <b>5-yr Median (YTD)</b>   | <b>158</b>    | <b>64</b>       | <b>22</b> | <b>206</b> | <b>19</b>         | <b>2</b>    | <b>2</b>            | †                     | <b>2</b>            | †                     | <b>9</b>        | <b>1</b>    | †          | <b>5</b>           | <b>18</b>   | <b>83</b>  | <b>5</b> | <b>5</b>       | <b>130</b>  |  |
| <b>County of Residence</b> |               |                 |           |            |                   |             |                     |                       |                     |                       |                 |             |            |                    |             |            |          |                |             |  |
| Addison                    | 35            | 16              | 0         | 12         | 1                 | 0           | 0                   | 0                     | 1                   | 20                    |                 | 0           | 45         | 1                  | 3           | 6          | 1        |                | 5           |  |
| Bennington                 | 8             | 0               | 0         | 14         | 2                 | 1           | 0                   | 4                     | 0                   | 16                    |                 | 0           | 168        | 0                  | 1           | 4          | 0        |                | 6           |  |
| Caledonia                  | 9             | 2               | 0         | 10         | 0                 | 0           | 0                   | 0                     | 0                   | 43                    |                 | 0           | 3          | 0                  | 0           | 2          | 0        |                | 11          |  |
| Chittenden                 | 47            | 5               | 3         | 74         | 3                 | 2           | 0                   | 22                    | 2                   | 235                   |                 | 0           | 54         | 3                  | 62          | 30         | 2        |                | 30          |  |
| Essex                      | 2             | 0               | 0         | 3          | 0                 | 0           | 0                   | 0                     | 0                   | 4                     |                 | 0           | 0          | 0                  | 0           | 0          | 0        |                | 0           |  |
| Franklin                   | 24            | 1               | 1         | 3          | 1                 | 0           | 0                   | 0                     | 0                   | 24                    |                 | 0           | 8          | 0                  | 4           | 12         | 0        |                | 4           |  |
| Grand Isle                 | 2             | 0               | 0         | 0          | 0                 | 0           | 0                   | 0                     | 0                   | 3                     |                 | 0           | 5          | 0                  | 3           | 1          | 0        |                | 0           |  |
| Lamoille                   | 13            | 4               | 0         | 6          | 2                 | 1           | 0                   | 4                     | 0                   | 16                    |                 | 0           | 5          | 0                  | 1           | 1          | 0        |                | 7           |  |
| Orange                     | 13            | 1               | 4         | 8          | 1                 | 0           | 0                   | 0                     | 0                   | 21                    |                 | 0           | 17         | 0                  | 2           | 4          | 0        |                | 1           |  |
| Orleans                    | 9             | 6               | 1         | 6          | 0                 | 0           | 0                   | 2                     | 0                   | 28                    |                 | 0           | 2          | 0                  | 0           | 4          | 0        |                | 3           |  |
| Rutland                    | 13            | 1               | 2         | 11         | 2                 | 0           | 0                   | 1                     | 0                   | 45                    |                 | 0           | 115        | 0                  | 2           | 3          | 0        |                | 10          |  |
| Washington                 | 27            | 10              | 2         | 39         | 4                 | 1           | 0                   | 3                     | 1                   | 51                    |                 | 0           | 15         | 1                  | 5           | 7          | 1        |                | 5           |  |
| Windham                    | 14            | 1               | 0         | 19         | 1                 | 1           | 0                   | 0                     | 1                   | 58                    |                 | 0           | 85         | 0                  | 1           | 7          | 2        |                | 30          |  |
| Windsor                    | 17            | 3               | 3         | 15         | 3                 | 0           | 0                   | 0                     | 1                   | 58                    |                 | 0           | 93         | 0                  | 7           | 4          | 0        |                | 5           |  |
| Unknown                    | 0             | 0               | 0         | 0          | 0                 | 0           | 0                   | 0                     | 0                   | 0                     |                 | 0           | 0          | 0                  | 0           | 0          | 0        |                | 0           |  |
| <b>Total (YTD)</b>         | <b>233</b>    | <b>50</b>       | <b>16</b> | <b>220</b> | <b>20</b>         | <b>6</b>    | <b>0</b>            | <b>36</b>             | <b>6</b>            | <b>622</b>            | <b>12</b>       | <b>0</b>    | <b>615</b> | <b>5</b>           | <b>91</b>   | <b>85</b>  | <b>6</b> | <b>8</b>       | <b>117</b>  |  |

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\*Shiga toxin-producing Escherichia coli (STEC)

\*\*This column partially obscured to protect patient confidentiality

§ Includes both confirmed & probable cases

†Data captured differently in previous years; no 5-year median available

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In Vermont, adult hepatitis B vaccine is supplied by the state to all providers enrolled in the Vaccines for Adults program. Contact the Immunization Program at (802) 863-7638 for additional information. Diabetic patients' vaccination status may soon be available for adult patients in the Immunization Registry, which can be found on the Vermont Health Department website at [healthvermont.gov/hc/IMR/index.aspx](http://healthvermont.gov/hc/IMR/index.aspx).