When the US passes a bill or sets up a financial obligation, we have to pay for it. If Congress decides to spend another $10 billion/year on [poor people/Medicare/a war/aircraft carriers/fancy hats] then we have to pay for that. If Congress decides to cut taxes or other forms of Federal income then we have to account for having fewer funds to work with. The debt ceiling has nothing to do with either of these things (income or spending), it is merely an arbitrary cap on how much debt we can have, without providing any recourse other than default, or increase. It's an ineffective law whose sole purpose was replaced by a better law in 1974.

The debt ceiling allows us to increase it, or default (although, defaulting is actually unconstitutional). When we increase the ceiling we effectively allow the government to take out additional bonds to cover expenses we've already incurred. The GAO (Government Accountability Office) says, "The debt limit does not control or limit the ability of the federal government to run deficits or incur obligations. Rather, it is a limit on the ability to pay obligations already incurred. While debates surrounding the debt limit may raise awareness about the federal government's current debt...the ability to have an immediate effect on debt levels is limited. This is because the debt reflects previously enacted tax and spending policies. Delays in raising the debt limit create debt and cash management challenges for the Treasury."

But how bad is a default caused by not raising the debt ceiling to pay for debts we already have? When we don't pay or delay payment on debt, our debt becomes less trustworthy. Currently the US pays 1.7% interest on its debt, i.e. the Federal Gov sells a bond for $1 million, and after a set amount of time (usually a year+) it has to pay the bond holder back $1.017 million. Our interest rates are among the lowest of any country, because the US has historically been absolute in its obligations. Section 4 of the 14th Amendment says "The validity of the public debt of the United States…shall not be questioned."

In 1979 we had a brief delay (accidental, short-term default) on some bond payments because of some congressional idiocy and a computer glitch. Our interest rates jumped up about 0.6%, and cost taxpayers an estimated $12 billion annually. This is the closest event in the history of the US that shows us the effects of a default, even a minor one. Without getting too political, any person who says that the US defaulting on its debt will have little effect (or even somehow a positive effect) does not understand economics, history, or how debt works; possibly all three.

For more perspective, let's look at the history of the debt ceiling. The "debt ceiling" as it exists today is based off the Second Liberty Bond Act of 1917. The government needed to pay for a War (perhaps you've heard of WWI?) and we were gonna need to borrow to do it. As James Galbraith (Ph.D Economics) puts it, "The debt ceiling was first enacted in 1917. Why?...we were about to enter the Great War. To fund that effort, the Wilson government needed to issue Liberty Bonds. This was controversial, and the debt ceiling was cover, passed to reassure the rubes that Congress would be "responsible" even while the country went to war. It was, from the beginning, an exercise in bad faith and has remained so every single second to the present day."

The original ceiling was $14.2 trillion in 1917 ($255 trillion if this number was inflation adjusted to 20132). The "debt ceiling" was a loose, ineffective tool for looking at our federal budget. To put it in simpler terms, instead of looking at spending and income and having a way to adjust individual items, it simply put a cap on debt.

In 1974 Congress passed the Congressional Budget Act of 1974, which set up procedures for Congress to pass and negotiate budget issues. The "debt ceiling" no longer serves a purpose,

as a more efficient and focused tool (Budget Act of 1974) now exists. The only remaining purpose of the "debt ceiling" is to set up fantastic opportunities for political shenanigans: "...Having this additional, superfluous “debt limit” accomplishes nothing except to give Congresscritters an opportunity for consequence-free political grandstanding. And why wouldn’t they grandstand? There’s no disincentive. The public at large...fails to demand either spending cuts (except in the abstract) or tax hikes, yet always opposes “raising the debt limit,” even though raising the debt limit is not a policy decision, it’s a math problem — one whose parameters are 100% determined by taxing and spending decisions that are already long made by the time the debt limit “issue” comes up for a vote..."
http://www.brendanloy.com/lrt/2011/05/what-obama-should-demand-eliminate-the-debt-limit/

Links

Text of the original Debt Ceiling Law (1917)
http://www.law.cornell.edu/uscode/text/31/3101
James Galbraith, Ph.D on the debt ceiling
http://www.salon.com/2011/07/11/the_catastrophic_debt_ceilng_debate/
GAO on Debt Ceiling
http://www.gao.gov/products/GAO-11-203
Article on the effects of the 1979 bond defaults
http://onlinelibrary.wiley.com/doi/10.1111/j.1540-6288.1989.tb00353.x/abstract