

# Youth with HIV and Overall Risk of Heart Disease

Previous studies have looked at one risk factor at a time for heart disease. In this study, we looked at many risk factors together to see if children who were born with HIV and take HIV medications have an **overall** higher risk for heart disease. We used a measurement called the PDAY score to calculate this overall risk.

## What kinds of issues did we look at?

The PDAY score adds together many different risk factors for heart disease. These include obesity, exercise, diet, smoking, and cholesterol levels. A higher score meant higher risk. It shows the likelihood of **current** damage to the blood vessels in the heart. If there is damage now, there is a higher risk for developing heart disease later in life.

## Who we studied

- 165 youth born with HIV who were 15 or older at their most recent PHACS visit (as of April 1, 2012)

## What we did

We calculated the most recent PDAY score for each adolescent. We didn't examine their hearts directly.

We compared youth with high PDAY scores to youth with low PDAY scores. We looked at possible differences between the groups like age, gender, ethnicity, CD4 counts, HIV viral load, and use of HIV medications, like protease inhibitors.

## For more info, contact:

Claire Berman  
Director, Health Education &  
Communication  
617-432-1853  
[cberman@sdac.harvard.edu](mailto:cberman@sdac.harvard.edu)

## What we found

**About half of the youth had high PDAY scores.** Current CD4 count was not a factor in having a high PDAY score. But youth were more likely to have a higher PDAY score if they:

- were male
- had taken protease inhibitor drugs with the drug ritonavir
- had an AIDS-defining illness in the past

## What we learned

Youth with HIV may be at higher overall risk for early damage to the heart. This puts them at higher risk for heart disease later in life.

Some ARVs like protease inhibitors may increase cholesterol in some people, which could increase risk of heart damage. But the risks of **not** taking ARVs are much higher because having poorly controlled HIV disease leads to far worse health overall.

Because of this, it is especially important for youth with HIV to talk with their doctors about other ways to reduce their overall risk for heart disease. Examples might be eating a healthy diet, exercising regularly, and choosing not to smoke.



## Reference Info:

Concept Sheet #Co40  
2013. *Circulation*.