

TIMING OF ARVS USED DURING PREGNANCY AND CHILDHOOD GROWTH

Most pregnant women living with HIV take antiretroviral medicines (ARVs) during pregnancy for their own health, and to protect their child from HIV. We wanted to know if ARV exposure before birth could affect how an infant grows in the first two years of life. If a child does not grow as they should, or if they gain too much weight, they might be at risk for diabetes or heart disease when they are adults.

WHO PARTICIPATED

509 babies
born exposed
to HIV



509 babies in SMARTT participated.

- All babies were born exposed to HIV, but were uninfected at birth
- The mothers had started combination ARV therapy (cART) during pregnancy

WHAT WE DID

We studied how different medicines affected babies' growth depending on when the mother started taking them.

Truvada
(tenofovir/emtricitabine)



Combivir
(zidovudine/lamivudine)



We looked at growth when the babies were about 2 years old. We looked at their weight, height, weight-for-height, triceps skinfold thickness, and head circumference.

We compared the effect from different types of medicines (i.e., Truvada and Combivir), as well as when (which trimester) the mother started cART.

WHAT WE FOUND

At 2 years of age, children whose mothers took Truvada instead of Combivir in the **first trimester** had:



higher weight and
weight-for-height

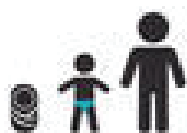


lower arm skin-
fold thickness

Overall, the babies in the study had high weight, weight-for-height, and head circumference. Their body length and skinfold thickness were in the normal range.

Children whose mothers started medication in the first trimester had different effects depending on the medication. There was no difference by drug type if they started in the second trimester.

WHAT WE LEARNED



There might be differences in childhood growth depending on when the mother started cART during pregnancy. We will continue to monitor these youth to see if the differences continue as they grow up. We also need more research to see if a larger weight gain affects their health when they get older.