Phthalates are chemicals that are commonly used as a plasticizer in personal care products. This class of compounds is added to help prevent products from drying out. Phthalates have been shown to have potential negative impacts on reproductive organs, cause birth defects, effect the endocrine system, as well as causing other ill effects. For example, previous work found that phthalates can have an effect on the endocrine system of adolescent individuals. In an intervention study, phthalate exposure was reduced when these products were not being used. The purpose of the present study is to examine phthalate abundance in personal care products and to design an intervention study to lessen exposure.

To identify products containing phthalates, we used the Environmental Working Group’s Skin Deep cosmetic database. This database contains personal care products and their ingredients. We used the database to identify products that contain phthalates and the type of phthalates used. The most commonly used phthalate is polyethylene terephthalate, with it currently found in 610 products, with 314 of which are nail polish. There are also 12 other kinds of phthalates that are regularly used in personal care products, ranging from lipstick to sunscreen. We can see that there are still a multitude of products that contain potentially harmful phthalates. This study is the foundation to future work looking at exposure to phthalates in adult populations and assessing sources of exposure from personal care products.

Our study was done to show how commonly phthalates are found in products that get used every day. This will allow us to narrow our focus in future work to the most abundant phthalates. In addition, the database Skin Deep, will give information about the types of products where prevalence is high, helping to reduce the number of products to be examined in future exposure studies.