DNAm is tied to BMI, muscle, body size, etc.

Huang et al. 2019 (AgeAccel ~ BMI in adolescence)

Wahl et al. 2017

Jensen et al. 2004 – BMI is linked to sperm quality

Testosterone also affects behavior. Behavioral manifestations may indirectly link to T

Testosterone may also affect immune function. Maybe not a good take. Then its all about the T – immune relationship

DNAm and immune cell differentiation?

Fat free muscle mass – main regulators of energy metabolism.

Epigenetic processes as possible biological measure.

Captures some aspects of metabolism and behavior.

Maybe capture other aspects of physiology, like T

Have been linked in women. Now to men?

T does this. It might suppress immune function. It might affect other genes too. No one has really looked at it.

There may be numerous reasons for the differences in life expectancy with relationship and fatherhood status, but may include circulating levels of testosterone (T),

an androgenic hormone with metabolic, immunological, and sociobehavioral effects (). T levels decline with pair-bonding and fatherhood in men () and

and have been found to suppress immune function in certain species. The risk for or progression of some kinds of cancer is

and which may increase the risk for some cancers and have been hypothesized suppress immune function (). However, the relationship between naturally-varying, behaviorally-influenced testosterone levels and immune function in living men is not well-established (ref?proof). Furthermore, testosterone confers a range of both beneficial and potentially harmful influences on men’s health, and testosterone levels themselves are not known to directly influence life expectancy in men (ref?proof).

Still, testosterone levels are not a good proxy, and waiting for people to die isn’t good. Expensive et.c

Thus, large large epidemiological studies support CoR in men, costs which appear to be more heavily influenced by mating effort than parenting effort. Nevertheless, very little is known about what aspects of mating effort account for the long-term effects on men’s health, nor which biological pathways are responsible for linking mating behavior to life expectancy in men.

One set of biological pathways with the potential to bridge mating effort and health in men are epigenetic processes. Epigenetic processes are a form of cellular memory involved in regulating gene expression over timescales ranging from weeks to decades.

over periods as short as several weeks and as long as the entire lifetime.

- especially DNA methylation (DNAm) - have well-established connections with numerous health and mortality risk factors that may be related to mating effort or other aspects of men’s life history.