#### Manopause-Going From Dad Bod to Dad Buff

An American psychologist William Herbert Sheldon categorized the human physique into three fundamental somatotypes:

- *Ectomorphic*: Thin, tall, fragile, lightly muscled, flat chested and delicate
- Mesomorphic: Hard, rugged, triangular, athletically built with well developed muscles
- Endomorphic: Round, usually short and soft with underdeveloped muscles and having difficulty losing weight

What is Your Body Type?

https://www.bodybuilding.com/fun/becker3.htm

The Dad Bod somatotype (not a true somatotype, but more of a cultural term) was popularized by Clemson University sophomore Mackenzie Pearson, in an essay she wrote on "the average male body type."

The "Dad Bod" is a male body type that is described as "softly round." The theory around the "Dad Bod" is that once a man has found a mate and had kids, he doesn't need to worry about maintaining his physique.

http://www.urbandictionary.com/define.php?term=Dad%20bod

# **Explanations for The Dad Bod Phenomenon**

Whereas women have clear physical signs and behaviors associated with pregnancy, birthing, breastfeeding and motherhood, there are also physical signs and behaviors

associated with the biological and cultural experiences of monogamous partnering and parenthood that men experience.

# Partnering, Parenting and Low-T

The temporal patterns of serum testosterone levels can vary markedly among men throughout their lifecycle.

While testosterone is known to regulate reproduction and reproductive behavior, studies have shown a neuroplasticity component of testosterone, with responses to social and environmental cues, including partnerhood and parenting.

(Wingfield, J. C., et al. 1990)

A ten year follow-up of 1113 men showed an Influence of marital status on testosterone levels. Partnered fathers were shown to have lower testosterone than single men or fathers who were not involved in caregiving.

Lower testosterone levels were found to promotes empathy and commitment, along with enabling men to focus their time and energy on the demands of being sensitive and attentive to their family.

While the social and environmental factors that reduce testosterone levels in married men appear to be somewhat commensurate and complementary with the changes that occur with mothers, there are adverse implication of this phenomenon as reduced testosterone has been identified as a risk factor for numerous chronic diseases, increased body fat, a greater risk of dying and the Dad Bod Phenomenon.

(Gettler, L. T., et al 2017)

## **Reclaiming Your Bod (and Health)**

There are a number of factors that can potentially reverse the Dad Bod Phenomenon. Most of these are related to the lifestyle circumstances that became situationally out of balance with partnering and parenting.

In previous articles I discussed using SPEED (Sleep, Psychological Stress, Environmental Factors, Exercise and Diet) to biohack your metabolism. SPEED can also be used to reclaim your Dad Buffness.

#### Sleep

Sleep modulates neuroendocrine function and glucose metabolism. Loss of sleep, a common occurrence in parenthood, has been correlated with metabolic and endocrine alterations, including glucose intolerance, insulin resistance, elevated cortisol, increased ghrelin and decreased leptin, all of which can increase hunger and appetite and the risk of obesity.

(Beccuti, G., & Pannain, S. 2011)

#### **Biohacks**

- Black out your room at bedtime
- Take a hot shower or bath before bed
- Go for a walk in the evening
- Meditate
- Avoid electronics (TV, Tablets, phone)- follow the S&S Rule in the bedroom (Sleep and Sex)
- Listen to calming music
- Splurge for a good mattress and pillow
- As your kids get older, close your door and set guidelines for when they can come into your room at night or in the morning

(Black, D. S. et al. 2015) (De Niet, G. et al. 2009) (Ouslander, J. G. et al. 2006)

#### **Psychological Stress**

Stress is a state of disrupted homeostasis. It can be caused by both intrinsic and extrinsic factors. The body's response to stress is mediated by the hypothalamic-pituitary-adrenal-axis and the autonomic nervous system. Chronic stress can lead to a wide range of diseases and syndromes, including metabolic syndrome, which is characterized by the combination of central obesity, insulin resistance, dyslipidemia, and hypertension. In addition, obesity represents a low grade systemic inflammatory condition that plays a key role in a number of chronic diseases.

(Kyrou, I., Chrousos, G. P., & Tsigos, C. 2006)

#### **Biohacking Stress**

- Meditation
- Social interaction
- Massage
- Acupuncture
- Counseling
- Adaptogens like Ashwagandha and Maca root

(Kim, H. et al. 2009) (MacLean, C. R. K., et al 1994) (Mishra, L. C.2000)

#### **Environmental Factors**

Environmental chemicals, also known as Endocrine disrupting chemicals (EDCs), have significant impacts on health. Exposure to these chemicals can dramatically alter disease susceptibility.

EDCs interfere with the body's endocrine system and produce adverse developmental, reproductive, neurological, cardiovascular, metabolic and immune effects.

There are a wide range of toxic substances thought to cause endocrine disruption. Some of these include: pharmaceuticals, dioxin, polychlorinated biphenyls, pesticides, and components of plastics such as bisphenol A (BPA) and phthalates.

EDCs are found in many everyday products, including plastic bottles, metal food cans, detergents, flame retardants, food additives, toys, cosmetics, and pesticides.

Because EDCs interfere with the synthesis, secretion, transport, activity and elimination of natural hormones, they can block or mimic normal hormone action, causing a wide range of effects.

(Schug, T. T. et al. 2011)

### Biohacking Your Environment

- Opt for organic when choosing foods that are known to be sprayed with pesticides
- Go "green" when it comes to everyday products, including plastic bottles, metal food cans, detergents, flame retardants, food additives, toys, cosmetics, and furniture

Resource: <a href="http://www.ewg.org/">http://www.ewg.org/</a>

#### **Exercise**

In a cohort of 10,500 men [mean age = 58 years], as compared with those who did not engage in any weight training activity, men who engaged in ≥25 min/day of weight training had a smaller waist circumference and a lower body mass index, spent fewer hours watching TV, consumed less trans-fat, ate more fiber, engaged in more moderate to vigorous aerobic

activity, had a higher glycemic load diet and had a better diet quality overall.

(Mekary, R. A. et al. 2015)

The National Academy of Sports Medicine (NASM) developed the Optimum Performance Training Model (OPT), a comprehensive training system based on scientific, evidence-based research that takes the guesswork out of program design in order to achieve consistent and remarkable results.



The OPT model integrates:

- Flexibility
- Core, Balance and Reactive Training
- Speed, Agility, Quickness
- Resistance Training
- Cardiorespiratory Training

(Clark, M. A., Lucett, S., & Corn, R. J. 2008)

Sample Exercise Routine For Getting Buff (Hypertrophy)

Upper Body- Monday/Thursday Lower Body- Tuesday/Friday High Intensity Interval Training and Flexibility- Wed/Sat Free Day- Sunday

# **Upper Body**

Flexibility (SMR/Active Stretch)	Sets	Time/Reps (Superset SMR with active stretch)
Pecs	1	30s/5-10 reps
Lats	1	30s/5-10 reps
Rhomboids	1	30s/5-10 reps

Core/Balance/ Reactive Training	Sets	Reps	Tempo/Rest
Ball Crunch with Rotation	2	12	Medium/0 Sec
Back Extension	2	12	Medium/0 Sec
Plyometric Push-ups	2	12	XXX/60 sec
Overhead Medicine Ball Throw	2	12	XXX/60 sec

Resistance Training	Sets	Reps @ 80% Intensity	Tempo/Rest
DB Bench Press	4	8-12	2/0/2 60 Sec Rest
Seated Row	4	8-12	2/0/2 60 Sec Rest
DB Shoulder Press	4	8-12	2/0/2 60 Sec Rest
Pull-Downs	4	8-12	2/0/2 60 Sec Rest
Bicep BB Curls	4	8-12	2/0/2 60 Sec Rest
Tricep Pressdowns	4	8-12	2/0/2 60 Sec Rest

**Cool down-** Foam rolling and static stretching to the pecs, lats and rhomboids

# **Lower Body**

Flexibility (SMR/Active Stretch)	Sets	Time/Reps (Superset SMR with active stretch)
Gastroc/Soleus	1	30s/5-10 reps
Quads	1	30s/5-10 reps

Hamstrings	1	30s/5-10 reps
TFL	1	30s/5-10 reps
Piriformis	1	30s/5-10 reps

Core/Balance/ Reactive Training	Sets	Reps	Tempo/Rest
Reverse Crunch	2	12	Medium/0 Sec
Cable Chop	2	12	Medium/0 Sec
Single-leg squat	2	12	Medium/60 sec
Single-leg RDL with PNF pattern	2	12	Medium/60 sec
Butt Kicks	2	10	XXX/60 sec

Resistance Training	Sets	Reps @ 80% Intensity	Tempo/Rest
BB Squat	4	8-12	2/0/2 60 Sec Rest
DB Lunges	4	8-12	2/0/2 60 Sec Rest

BB Deadlifts	4	8-12	2/0/2 60 Sec Rest
Calf Raises	4	8-12	2/0/2 60 Sec Rest

**Cool down-** Foam rolling and static stretching to the gastroc/soleus, quadriceps, hamstrings, TFL and piriformis

Remember to start with the Stabilization Endurance phase and work your way up to the hypertrophy phase by periodization through the OPT model.

# High Intensity Interval Training (Hills, stairs, track, cardio machine):

Stage train for 4-6 weeks to build an aerobic base first, e.g. Steady State aerobic exercise at 60-70% of your target heart rate (220-your age).

#### HIIT Protocol

Warm-up: 5 min

8-10 Intervals: 30 sec at 80-85% of target heart rate followed by

60 sec of active rest Warm-down: 5 min

(Clark, M., Lucett, S., & Kirkendall, D. T. 2010)

#### The Buff Dad Diet

Diet plays a major role in reclaiming your buff body. As previously discussed, the Dad Bod is characterised by an increase in abdominal adiposity, which is associated with metabolic inflexibility, impaired fuel switching and energy dysregulation. Metabolic inflexibility has been implicated in obesity, insulin resistance, type 2 diabetes, metabolic syndrome and aging.

Some diet strategies to improve metabolic flexibility include:

- Moderate calorie restriction (e.g. a 500 Kcal daily deficit).
- Eat real foods (plant-based with pasture raised or wild animal products and minimal consumption of refined foods).
- Eat more Omega 3 fats (Cold water fish, Dark Green Leafy Vegetables, Flax seeds and Walnuts).
- Increase protein consumption (1.5-2g/kg Body Mass).
- Match carbohydrate intake to activity and recovery needs.
- Try a couple of fasted cardio session (e.g. morning session).
- Try a Very low-carbohydrate/high fat diet for a month
- Intermittent Fasting- Have an early dinner and don't eat until noon the next day. Black Coffee is Ok.

(Goodpaster, B. H., & Sparks, L. M. 2017)

#### **Sample Diet Plan**

## Power smoothie (makes about 2 servings)

- 1 cup Water
- 1 cup Kale or spinach
- ½ cup Frozen organic berries
- 1 Banana
- ½ avocado
- ½ tsp raw cacao

#### Sample Breakfast

Smoothie: Water, 2 cups Kale or Spinach, 1 cup organic berries,

1 banana, 1 tbsp Flaxseeds

**Protein (25g)- Choose one:** Eggs, Turkey bacon, Chicken or Turkey sausage, Fish, or add Whey Protein to smoothie

#### Carbohydrate/Fat (Choose one):

- 1 Cup Steel Cut Oats and 2 tbsp Walnuts
- 1 sliced plantain fried in coconut oil
- 1 cup diced sweet potato stir fried in olive oil and seasoned with salt

#### **Sample Lunch**

**Colorful Salad**- Spinach or Arugula, Purple cabbage, Carrots, Red peppers, Radishes, Beets, Cherry Tomatoes, Red onion, Avocado, Toasted Walnuts

#### **Dressing**

- Extra Virgin Olive Oil- 1 cup
- Apple Cider Vinegar- ¼ cup
- Lemon- 1
- 1 tsp Dijon mustard
- Garlic- 1 clove crushed
- Honey- 1 tbsp

Protein (25g)- Choose one- Poultry, Steak, Fish

# Sample Dinner- "Power Stirfry"

Ingredients (About 2-3 servings)

- 1 lb cubed chicken breast
- 3 cups Mixed Vegetables (Broccoli, Red pepper, Red onion,

#### Shiitake Mushrooms

- Garlic- 1 clove
- Ginger- 1 tsp
- Avocado Oil- 2 tbsp
- Soy Sauce- to flavor
- Sriracha- to flavor

#### **Directions**

- 1. Put avocado oil into wok on medium heat
- 2. Add garlic and ginger
- 3. Add chicken and cook until white on outside
- 4. Add vegetable mix
- 5. Cook until chicken is cooked through and vegetables crisp
- 6. Serve over brown rice
- 7. Add Soy Sauce/Sriracha as desired

# **Sample Snacks**

- Greek Yogurt with raw or toasted walnuts and blueberries
- Veggie sticks and humus or guacamole
- Apple + Nut Butter
- Paleo Cereal, blueberries, chocolate whey protein powder (mix with water)
- Hard boiled eggs
- Turkey slices wrapped around carrot sticks
- Kale chips (homemade)
- Kombucha
- Saurkraut
- Mocha Monkey Smoothie: 1 cup Unsweetened Almond or coconut milk, 1 frozen banana, 1 tbsp raw cacao, 1 tbsp organic peanut butter, 2 shots espresso

## **Key Points**

- The Dad Bod is a combination of a reduction in testosterone and lifestyle factors that may be related to disrupted sleep, increased stress, exposure to environmental toxins, lack of exercise and a proinflammatory diet.
- Going from Dad Bod to Dad Buff should include addressing these lifestyle factors (SPEED).
- Measuring serum testosterone (Total and Free) and considering Hormone Replacement Therapy may be an option if addressing lifestyle factors is not enough.
- Being a good partner and father does not have to be at the expense of your health-It's time to reclaim your "Dad Buff."

#### References

Beccuti, G., & Pannain, S. (2011). Sleep and obesity. *Current Opinion in Clinical Nutrition and Metabolic Care*, *14*(4), 402–412. <a href="http://doi.org/10.1097/MCO.0b013e3283479109">http://doi.org/10.1097/MCO.0b013e3283479109</a>

Black, D. S., O'Reilly, G. A., Olmstead, R., Breen, E. C., & Irwin, M. R. (2015). Mindfulness meditation and improvement in sleep quality and daytime impairment among older adults with sleep disturbances: a randomized clinical trial. *JAMA internal medicine*, 175(4), 494-501.

Clark, M. A., Lucett, S., & Corn, R. J. (2008). *NASM essentials of personal fitness training*. Lippincott Williams & Wilkins.

Clark, M., Lucett, S., & Kirkendall, D. T. (2010). *NASM's* essentials of sports performance training. Lippincott Williams & Wilkins.

De Niet, G., Tiemens, B., Lendemeijer, B., & Hutschemaekers, G. (2009). Music-assisted relaxation to improve sleep quality: meta-analysis. *Journal of advanced nursing*, 65(7), 1356-1364.

Goodpaster, B. H., & Sparks, L. M. (2017). Metabolic Flexibility in Health and Disease. *Cell Metabolism*, *25*(5), 1027-1036.

Gettler, L. T., Sarma, M. S., Gengo, R. G., Oka, R. C., & McKenna, J. J. (2017). Adiposity, CVD risk factors and testosterone: Variation by partnering status and residence with children in US men. *Evolution, Medicine, and Public Health*, 2017(1), 67–80. <a href="http://doi.org/10.1093/emph/eox005">http://doi.org/10.1093/emph/eox005</a>

Kim, H., Park, H. J., Han, S. M., Hahm, D. H., Lee, H. J., Kim, K. S., & Shim, I. (2009). The effects of acupuncture stimulation at PC6 (Neiguan) on chronic mild stress-induced biochemical and behavioral responses. *Neuroscience letters*, *460*(1), 56-60.

Kyrou, I., Chrousos, G. P., & Tsigos, C. (2006). Stress, visceral obesity, and metabolic complications. *Annals of the New York Academy of Sciences*, *1083*(1), 77-110.

Lee T. Gettler, Mallika S. Sarma, Rieti G. Gengo, Rahul C. Oka, James J. McKenna; Adiposity, CVD risk factors and testosterone: Variation by partnering status and residence with children in US men. Evol Med Public Health 2017; 2017 (1): 67-80. doi: 10.1093/emph/eox005

MacLean, C. R. K., Walton, K. G., Wenneberg, S. R., Levitsky, D. K., Mandarino, J. V., Waziri, R., & Schneider, R. H. (1994). Altered responses of cortisol, GH, TSH and testosterone to acute stress after four months' practice of transcendental meditation (TM). *Annals of the New York Academy of Sciences*, 746(1), 381-384.

Mekary, R. A., Grøntved, A., Despres, J. P., De Moura, L. P., Asgarzadeh, M., Willett, W. C., ... & Hu, F. B. (2015). Weight training, aerobic physical activities, and long-term waist circumference change in men. *Obesity*, *23*(2), 461-467.

Mishra, L. C., Singh, B. B., & Dagenais, S. (2000). Scientific basis for the therapeutic use of Withania somnifera (ashwagandha): a review. *Alternative medicine review*, *5*(4), 334-346.

Ouslander, J. G., Connell, B. R., Bliwise, D. L., Endeshaw, Y., Griffiths, P., & Schnelle, J. F. (2006). A nonpharmacological intervention to improve sleep in nursing home patients: results of a controlled clinical trial. *Journal of the American Geriatrics Society*, *54*(1), 38-47.

Schug, T. T., Janesick, A., Blumberg, B., & Heindel, J. J. (2011). Endocrine disrupting chemicals and disease susceptibility. *The Journal of steroid biochemistry and molecular biology*, *127*(3), 204-215.

Wingfield, J. C., Hegner, R. E., Dufty Jr, A. M., & Ball, G. F. (1990). The" challenge hypothesis": theoretical implications for patterns of testosterone secretion, mating systems, and breeding strategies. *The American Naturalist*, *136*(6), 829-846.