Conclusion Facts:

1) Don't get fooled by Growth hormone (HGH) supplements in the market

Though growth hormone supplements are capable of promoting growth in teenagers, they make very less or no effect on adults whose “growth plates have already been fused” after puberty. Amino acids such as Arginine are very good supplements that stimulate the pituitary gland to produce growth hormones. Combined with other amino acids such as Ornithine or Lysine, Arginine can do wonders in the human body by rejuvenating the Growth hormone system.

However, they will promote linear height growth only in young teenagers, whose growth plates are still open for further growth. In adults, artificial growth hormone will only serve as a general supplement that nourishes the body and provides vitality and disease-resisting abilities.

Another important fact is, over intake of growth hormone supplements may cause to a condition called "Acromegaly", which is characterized by increased secretion of growth hormone in the circulation system of the body. This disease will cause enlarged hand and limb bones and hyper growth of the jaw bones, but growth hormones will not induce vertical growth in adults.

Today, lot of HGH products are being sold in the market in the form of Pills, that claim to increase your height magically in months or even weeks. Please DON'T get fooled by these companies. They sell amino acids such as arginine and ornithine in pills at very high rates, with the products labeled in magical names as if these are going to make you taller overnight.

Intake of these supplements up to a safe and prescribed level will boost your general health, however over intake will cause Acromegaly and other disorders such as intestinal ulcers or even cancer. Though arginine is proved to be an agent which prevents cancer, it's found that certain cancer cells can thrive with arginine.

2) What can really help us grow taller after growth plate fusion? Only exercises can help

Well, this is what most people want to know. There are only two ways to increase your height after your growth plates are fused. One is “limb lengthening surgery”, which is very expensive and requires months of bed rest. The second way is by increasing our height naturally through exercises such as “Yoga and Pilates”.

Many people get fed up after trying lot of expensive HGH pills in order to grow taller. But they do not realise the facts behind the human growth system. If you are an adult and if you wish to increase your height naturally, you still have a chance. You can add inches to your height by performing Yoga and Pilates exercises. "Pilates" is a form of stretching exercise which has gained popularity in the recent years. It's scientifically proved that Yoga and Pilates exercises can increase height at any age.

Yoga and Pilates basically works out the vertebrae of your body and makes it elastic, ultimately elongating your spine. It's proved that one can increase his height by 2-3 inches through Yoga and Pilates, even after growth plate fusion. However, these exercises require lots of effort and time.

However, make sure that your mission is really worth the time and energy that you are going to invest in. If you are really determined to increase your height, then start practicing these exercises.
CASE STUDIES:

1) Protein And Vitamins – Important Foods And Nutrients Needed To Be Taller Fast

If you want to get taller, you should consider that your body is nourished with all the food and vitamins that you need.

However the food that you eat everyday, may not include all the nutrients that you need to be able to keep your body healthy and help you establish gaining height. What you really want to know, is where to get the vitamins that you need, and what are the right sources of food that would provide you the nutrients necessary for you to be taller.

For those who would like to grow taller, it is recommended to eat foods that are rich in protein. If you didn't know, those individuals who have gone through fitness programs and muscle building, are required to do the same, because, protein is needed by the body to continuously build muscles and tissues, as well as promoting growth for your bones.

You may be able to find a various kind of protein rich food to consider as your sources for the protein level that you need. The best sources of protein are nuts, eggs, poultry, meat, fish, fish oil, nuts, and other dairy products. These protein rich foods can be found in your daily meal, but if it’s not, then you have to take note of them to keep a balanced diet which includes foods rich with protein.

You should also consider the vitamins that you need besides from protein. You may look into Vitamin B2, Vitamin A, as well as Vitamin D, these vitamins can also be found from the food that you eat.

The top sources of vitamin B2 are dairy products, milk and eggs. While, vitamin A can be found in green leafy vegetables, carrots, sweet potatoes, tomatoes, turnip and liver. Another thing that you need to know is that if you would like to obtain foods rich in vitamin D, you look for salt water fish, which are also regarded as oily fish.

And because we are talking about bones here, one would be needing calcium to strengthen the bones. Calcium rich foods would be milk, dark green leafy vegetables, liver, and eggs.

All you have to do is to keep all of these tips in mind, and add them to your diet, with some routinary exercises, enough sleep, and a complete healthy diet of protein and vitamin rich foods, you'll definitely get taller in no time.
2) How to grow taller:

- Understand that most of your height will be determined by genetics. Height is a polygeneic trait, meaning that it's influenced by several different genes. Having two short parents doesn't necessarily mean you'll be short, just as two tall parents won't make you a towering giant. However, if most of the people on both sides of your family are short, odds are that you'll be short, too. Don't be discouraged, though - the truth is that you can't know how tall you'll be until you reach full physical adulthood in your mid-20s.

Calculate your projected height. Working in inches or centimeters, you can try to predict your height based on the height of your parents.

- Add up your mom and dad's heights (in inches or cm).
- Add 5 inches (13 cm) if you're a boy; subtract 5 inches (13 cm) if you're a girl.
- Divide by 2.
- The answer is your predicted height, give or take 4 inches. Note that this isn't an absolute calculation, but it should be pretty close.

- Avoid growth-stunting factors. There might not be a lot you can do to increase your height, but you can take several steps to make sure your natural height isn't shortened by environmental influences. Drugs and alcohol are both thought to contribute to stunted growth if they're ingested while you're young, and malnutrition can keep you from reaching your full height, as well.

- Get plenty of sleep. Research suggests that growing teenagers and pre-teens need between 8.5 and 11 hours of sleep every night. This is because your body grows and regenerates tissue while you're at rest. Make your sleeping environment as calm as possible, and try to eliminate loud noises and unnecessary light. If you have trouble falling asleep, try taking a warm bath or drinking a hot cup of chamomile tea before bed.

- Eat right. Ensuring that you're getting all the vitamins and minerals your body requires will help you grow to your full height. Take a supplement targeted at your age group with breakfast each morning, and try to incorporate certain foods into your diet. Here are some specific suggestions:

  - Get plenty of calcium (found in dairy products and green vegetables). Calcium promotes bone growth, and can help prevent osteoporosis.
  - Get sufficient vitamin D (which can be obtained through eating fish, alfalfa, or mushrooms, or spending more time in the sun). Vitamin D promotes bone and muscle growth in children, and a deficiency has been shown to stunt growth and cause weight gain in teenage girls. If you don't like fish, consider a fish liver oil supplement.
  - Take in lots of protein (from meat, eggs, tofu or legumes). Proteins provide the essential building blocks your body needs in order to grow. At least one (preferably two) of your meals each day should include a protein.
  - Up your zinc intake (oysters, chocolate, peanuts, eggs, peas, asparagus and supplements). A zinc deficiency can cause stunted growth in children. The best way to make sure you meet your body's daily need is by taking a vitamin or supplement that includes zinc.
- Eat on a regular schedule. You should be eating 3 meals a day, with small snacks between breakfast and lunch, and lunch and dinner. Try to schedule these events at roughly the same time each day.

- **Keep your immune system strong.** Some childhood illnesses can stunt your growth. Most of them can be avoided by the routine immunizations you may have had as a baby, but stay on the safe side by ingesting plenty of Vitamin C (found in citrus fruits such as oranges, grapefruits and lemons) and getting plenty of rest as soon as you notice that you feel sick.

- **Practice good posture.** Rolling your shoulders or hunching over can actually affect the curvature of your growing spine (and not in a good way). Keep your shoulders back, chin high, and hips over your feet. Walk with purpose instead of slouching or slinking, and try to sit up straight when you're in chairs. Even if you're not actually getting taller, good posture will make you look taller.

- **Cultivate confidence.** Being taller might be nice, but it can't make up for a general lack of confidence. Try to talk yourself into feeling comfortable in your own skin, and being generally happy with your looks no matter how tall you turn out to be. A positive attitude will more than make up for any lacking height.

- **Visit a medical professional.** If you're from a tall family and you're not growing by your mid-teens, or if your height hasn't changed much from before puberty to during puberty, then it's a good idea to see a doctor. Conditions that can stunt your growth (such as human growth hormone deficiency or autoimmune diseases) are fairly rare, but they do exist. If you're eating a healthy diet and getting plenty of rest but you're still not growing, then it's time to consult a doctor.

  - Consider seeing a doctor if you're a short adult. Though there are several childhood conditions (such as rickets) that can result in a short height as an adult, you should still ask a doctor about it. There may be ways to make sure that your bones and organs are healthy even though you didn't grow to full height.
3) **How to get taller by Stretching**

- **Start by stretching right after waking up.** This will warm up your muscles for the day. Here are some stretches techniques:

  - Stand with feet a little bit more than shoulder width apart. Roll your neck in a circle one way and then the other. Roll your shoulders back and then forward. Repeat with your arms.

  - Sit on the floor and straighten your legs out in front of you while pointing your toes. Reach as far forward as you can. Flex your toes and repeat. You should stay leaning over for 10 seconds in point, then flex and repeat. Do that until you can hardly feel your legs.

  - Now straddle your legs and point your toes. Reach for one leg and hold for 10 seconds. Repeat about ten times to each leg. Then flex your toes and reach for one leg and hold for 10 seconds. Repeat about 10 times.

  - Try doing a split. Just go as far as you can. Its okay if you can’t go all the way down to the floor. Make sure you do both legs and continue to do it every day.

  - Stand up and grab your foot on the bottom arch. Stretch your foot as far up as you can while holding it with your hand.

- **You should repeat each stretch before you go to bed and right after you wake up.**

  Also you should get about 8-10 hours of sleep each night. Eat a healthy diet with plenty of fruits and veggies. Stay away from caffeine (coffee, coke, sunkist etc.) Caffeine stunts your growth. Try to also stay away from chocolate and even decaf coffee as they still contain caffeine. Sit up straight and exercise often. Go out for team sports.

- **Drink more water.**
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## Average Height and Weights for Boys

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## Average Height and Weight for Girls

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What you need to take-in to grow taller?

**Vitamin A** - (or Vitamin A Retinol, retinal, and four carotenoids including beta carotene) is a vitamin that is needed by the retina of the eye in the form of a specific metabolite, the light-absorbing molecule retinal, that is necessary for both low-light (scotopic vision) and color vision. Vitamin A also functions in a very different role as an irreversibly oxidized form of retinol known as retinoic acid, which is an important hormone-like growth factor for epithelial and other cells.

Vitamin A plays a role in a variety of functions throughout the body, such as:

- Vision
- Gene transcription
- Immune function
- Embryonic development and reproduction
- Bone metabolism
- Haematopoiesis
- Skin and cellular health
- Antioxidant activity

**Vitamin B** - B vitamins are a group of water-soluble vitamins that play important roles in cell metabolism. The B vitamins were once thought to be a single vitamin, referred to as vitamin B (much as people refer to vitamin C or vitamin D). Later research showed that they are chemically distinct vitamins that often coexist in the same foods. In general, supplements containing all eight are referred to as a vitamin B complex. Individual B vitamin supplements are referred to by the specific name of each vitamin (e.g., B₁, B₂, B₃ etc.).

The B vitamins are necessary to:

- Support and increase the rate of metabolism
- Maintain healthy skin, hair and muscle tone
- Enhance immune and nervous system function
- Promote cell growth and division, including that of the red blood cells that help prevent anemia
- Reduce the risk of pancreatic cancer - one of the most lethal forms of cancer - when consumed in food, but not when ingested in vitamin tablet form.

All B vitamins are water-soluble, and are dispersed throughout the body. Most of the B vitamins must be replenished regularly, since any excess is excreted in the urine.
**Vitamin D** - *Vitamin D* is a group of fat-soluble *secosteroids*. In humans, vitamin D is unique because it can be ingested as cholecalciferol (vitamin D₃) or ergocalciferol (vitamin D₂) and because the body can also synthesize it (from cholesterol) when sun exposure is adequate (hence its nickname, the "sunshine vitamin").

Health Claim benefits:

- normal function of the immune system
- normal inflammatory response
- normal muscle function
- reduced risk of falling in people over age 60
- may reduce the risk of osteoporosis
- adequate calcium and regular exercise may help to achieve strong bones in children and adolescents and may reduce the risk of osteoporosis in older adults. An adequate intake of vitamin D is also necessary.

**Protein** - *Proteins* are essential nutrients for the human body. They are one of the building blocks of the body, but can also serve as a fuel source. As fuel, proteins contain 4 kcal per gram, just like *carbohydrates* and unlike *lipids*, which contain 9 kcal per gram. *Proteins* are *polymer* chains made of *amino acids* linked together by *peptide bonds*.

In *nutrition*, *proteins* are broken down in the *stomach* during *digestion* by *enzymes* known as *proteases* into smaller *polypeptides* to provide *amino acids* for the body, including the *essential amino acids* that cannot be *biosynthesized* by the body itself.

**Protein Functions:**

- Protein is a nutrient needed by the human body for growth and maintenance. Aside from water, protein is the most abundant molecule in the body. Protein is found in all cells of the body and is the major structural component of all cells in the body, especially muscle. This also includes body organs, hair and skin. Proteins also are utilized in membranes, such as *glycoproteins*. When broken down into amino acids, they are used as precursors to *nucleic acid*, co-enzymes, hormones, immune response, cellular repair and molecules essential for life. Finally, protein is needed to form blood cells.

- *Proteins* are one of the key nutrients for success in terms of sports. They play a major role in the response to exercise. Amino acids, the building blocks of *proteins*, are used for building new tissue, including muscle, as well as repairing damaged tissues. *Proteins*, however, only provide a small source of fuel for the exercising muscles, being used as fuel typically only when carbohydrates and lipid resources are low.
Calcium – Calcium is an important component of a healthy diet and a mineral necessary for life. The National Osteoporosis Foundation says, "Calcium plays an important role in building stronger, denser bones early in life and keeping bones strong and healthy later in life." Approximately 99 percent of the body's calcium is stored in the bones and teeth. The rest of the calcium in the body has other important uses, such as some exocytosis, especially neurotransmitter release, and muscle contraction.

Calcium function: Calcium is needed for healthy bones and teeth, normal blood clotting, and nervous system functioning. Calcium sources: Calcium is found in dairy products, broccoli, cabbage, kale, tofu, sardines and salmon.

Take-In Nutritional Summary:
( Vitamin A , Vitamin B , Vitamin D , Protein , Calcium )
Sources of Protein:

Beef

- Hamburger patty, 4 oz – 28 grams protein
- Steak, 6 oz – 42 grams
- Most cuts of beef – 7 grams of protein per ounce

Chicken

- Chicken breast, 3.5 oz - 30 grams protein
- Chicken thigh – 10 grams (for average size)
- Drumstick – 11 grams
- Wing – 6 grams
- Chicken meat, cooked, 4 oz – 35 grams

Fish

- Most fish fillets or steaks are about 22 grams of protein for 3 ½ oz (100 grams) of cooked fish, or 6 grams per ounce
- Tuna, 6 oz can - 40 grams of protein

Pork

- Pork chop, average - 22 grams protein
- Pork loin or tenderloin, 4 oz – 29 grams
- Ham, 3 oz serving – 19 grams
- Ground pork, 1 oz raw – 5 grams; 3 oz cooked – 22 grams
- Bacon, 1 slice – 3 grams
- Canadian-style bacon (back bacon), slice – 5 – 6 grams

Eggs and Dairy

- Egg, large - 6 grams protein
- Milk, 1 cup - 8 grams
- Cottage cheese, ½ cup - 15 grams
- Yogurt, 1 cup – usually 8-12 grams, check label
- Soft cheeses (Mozzarella, Brie, Camembert) – 6 grams per oz
- Medium cheeses (Cheddar, Swiss) – 7 or 8 grams per oz
- Hard cheeses (Parmesan) – 10 grams per oz

**Beans (including soy)**

- Tofu, ½ cup 20 grams protein
- Tofu, 1 oz, 2.3 grams
- Soy milk, 1 cup - 6 -10 grams
- Most beans (black, pinto, lentils, etc) about 7-10 grams protein per half cup of cooked beans
- Soy beans, ½ cup cooked – 14 grams protein
- Split peas, ½ cup cooked – 8 grams

**Nuts and Seeds**

- Peanut butter, 2 Tablespoons - 8 grams protein
- Almonds, ¼ cup – 8 grams
- Peanuts, ¼ cup – 9 grams
- Cashews, ¼ cup – 5 grams
- Pecans, ¼ cup – 2.5 grams
- Sunflower seeds, ¼ cup – 6 grams
- Pumpkin seeds, ¼ cup – 8 grams
- Flax seeds – ¼ cup – 8 grams
12 Suggested Tips:

Grow Taller Tip 1 - Eat at regular hours.
Grow Taller Tip 2 - Don't skip any meal
Grow Taller Tip 3 - Don't forget to eat breakfast. Always start the day with a well-rounded meal.
Grow Taller Tip 4 - Take the time to taste and to chew your food well.
Grow Taller Tip 5 - Vary your menu.
Grow Taller Tip 6 - Avoid pastries, sweets, crisps, soda drinks - anything that has little or no nutritious value.
Grow Taller Tip 7 - Beware of salt consumption. It can cause hypertension.
Grow Taller Tip 8 - Eat a lot of raw vegetables and fresh juice. Choose whole wheat bread.
Grow Taller Tip 9 - Drink six (6) to eight (8) glasses of water or vegetable juice or sugar-free juice per day.
Grow Taller Tip 10 - You should also drink milk.
Grow Taller Tip 11 - Eat good quality food supplements every day.
Grow Taller Tip 12 - After each meal you should rest. Don't start to work or exercise right after.

Suggested Sleep Hours:
1-15 years old = At least 10 – 11 hours of sleep
15 – 20 years old = At least 9 hours of sleep
Adults = At least 8 hours of sleep

Suggested Exercises:
Pull ups, chin ups, lower back extensions, hanging crunches, hanging leg raises, lat pull down,