

Elevated PSA/High Cholesterol

Despite taking two blood pressure medications and a statin for his cholesterol, this patient's numbers were still less than ideal.

In just 3 months-

- ✓ Lost 22 lbs
- ✓ Off Cholesterol Meds
- ✓ Decreased/Stable PSA
- ✓ Blood Pressure Improved

Initial Symptoms-

- ✓ High Cholesterol
- ✓ High Blood Pressure
- ✓ Not Able To Lose Weight
- ✓ Elevated PSA

“A study published in the ‘American Journal of Epidemiology’ found that the use of the statins (cholesterol lowering drugs) increased an obese man’s risk of developing prostate cancer by 50% and continued use for 5+ years increased that risk to 80%.”

-Dr. Van D. Merkle

Patient Profile:

06-04-08 – The 55-year old patient presented with concerns about recent prostate specific antigen test results and a difficulty losing weight. He stated he had high blood pressure which was under control with the help of two medications and high cholesterol for which he also took a drug. A PSA test at his doctor’s office in mid-April came back at 4.5 and a follow-up in May was at 3 (the clinical range for a PSA marker is 0-4.0). He had some concerns about the possibility of prostate cancer. He also claimed he felt overweight by about 45 lbs and had been trying to lose weight for about 18 months. So far, he was down only 6 lbs and very frustrated. He exercised 5 times per week and cut red meat from his diet. At the time of the initial visit, he weighed 249 lbs at 5’10” and his blood pressure was 138/86 with medications. I checked his ankles for swelling and noted that the pitting was +2 on both sides

Patient’s tests results:

06-27-08 – The most obvious critical marker in these tests is the Creatine Kinase at 1,722, more than 12 times higher than the healthy limit. An EKG is needed to rule out heart problems. Other areas of concern are the high cholesterol, low protein, high liver markers (AST, ALT), low thyroid, low vitamin D and high PSA.

Results of Initial Blood Test:

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy	Clinical
	06/27/2008						
Glucose		88.00	Opt			80.00 - 95.00	65.00 - 99.00
Hemoglobin A1C (Gly-Hgh)		5.80	hi			4.60 - 5.40	4.80 - 5.90
Uric Acid		7.30	hi			4.10 - 6.00	2.40 - 8.20
Total Protein		7.00	lo			7.11 - 7.61	6.00 - 8.50
Albumin		4.70	hi			4.10 - 4.50	3.60 - 4.80
Globulin		2.30	lo			2.81 - 3.51	1.50 - 4.50
A/G Ratio		2.00	hi			1.22 - 1.60	1.10 - 2.50
Total Bilirubin		0.70	Opt			0.39 - 0.93	0.10 - 1.20
Alkaline Phosphatase 25-150		80.00	Opt			65.00 - 108.00	25.00 - 160.00
Creatine Kinase		1,722.00	HI			64.00 - 133.00	24.00 - 173.00
LDH		227.00	hi			120.00 - 160.00	100.00 - 250.00
SGOT (AST) (AST)		49.00	HI			15.00 - 26.00	6.00 - 40.00
SGPT (ALT) (ALT)		40.00	hi			15.00 - 26.00	6.00 - 55.00
GGT		21.00	lo			22.00 - 39.00	6.00 - 65.00
Serum Iron		89.00	Opt			85.00 - 120.00	40.00 - 155.00
Ferritin		71.00	Opt			30.00 - 218.00	22.00 - 322.00
Total Cholesterol		175.00	hi			140.00 - 170.00	100.00 - 199.00
Triglyceride		157.00	HI			80.00 - 115.00	10.00 - 149.00
HDL Cholesterol		42.00	lo			50.00 - 55.00	40.00 - 59.00
VLDL Cholesterol		31.00	hi			5.00 - 20.00	4.00 - 40.00
LDL Cholesterol		102.00	HI			50.00 - 75.00	6.00 - 99.00
Total Cholesterol / HDL Ratio		4.20	hi			0.00 - 4.00	0.00 - 5.00
TSH		2.03	Opt			1.00 - 2.50	0.35 - 5.50
T4 Thyroxine		6.80	lo			7.10 - 9.00	4.50 - 12.00
T3 Uptake		33.00	Opt			29.00 - 35.00	24.00 - 39.00
T7 Free Thyroxine Index (FTI)		2.20	lo			2.61 - 3.60	1.20 - 4.90
CRP C-Reactive Protein		2.00	hi			0.00 - 1.50	0.00 - 4.90
Vitamin D 25-Hydroxy		30.90	LO			50.00 - 90.00	32.00 - 100.00
Prostate-Specific Ag (PSA)		4.50	HI			0.00 - 1.99	0.00 - 3.99

Blue = clinically very high or clinically very low

Red = clinically high or clinically low

Yellow = a little high or a little low; this can be considered a warning sign that the value is not optimal.

Many toxins emerged in the tissue mineral analysis including Arsenic, Lead, Mercury and Uranium. These likely caused an imbalance among essential elements such as Calcium and Magnesium.

Results of Initial Tissue Mineral Analysis:

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy	Clinical
	06/04/2008						
Toxic Elements							
Aluminum		4.40	hi			0- 2.20	2.21- 7.00
Antimony		0.03	hi			0- 0.03	0.04- 0.07
Arsenic		0.23	HI			0- 0.05	0.06- 0.08
Lead		260.00	HI			0- 0.99	1.00- 2.00
Mercury		2.30	HI			0- 0.50	0.51- 1.10
Platinum		0.00	Opt			0- 0.00	0.01- 0.00
Uranium		0.08	HI			0- 0.03	0.04- 0.06
Nickel		0.12	Opt			0- 0.20	0.21- 0.40
Silver		0.01	Opt			0- 0.06	0.07- 0.12
Tin		0.05	Opt			0- 0.15	0.16- 0.30

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Tissue Mineral Analysis Continued:

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy	Clinical
Essential Elements							
Calcium	06/04/2008	276.00	lo			400.00- 417.00	200.00- 750.00
Magnesium		25.00	LO			43.00- 48.00	25.00- 75.00
Sodium		260.00	HI			37.00- 45.00	12.00- 90.00
Potassium		60.00	HI			21.00- 22.00	9.00- 40.00
Copper		11.00	lo			12.00- 15.00	10.00- 28.00
Zinc		190.00	hi			150.00- 165.00	130.00- 200.00
Manganese		0.06	LO			0.22- 0.31	0.15- 0.65
Chromium		0.29	Opt			0.25- 0.31	0.20- 0.45
Vanadium		0.02	lo			0.04- 0.05	0.02- 0.06
Molybdenum		0.08	HI			0.06- 0.06	0.03- 0.06

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Doctor analysis:

07-02-08 – Creatine Kinase (CK) is a marker for cardiac or skeletal muscle breakdown. After speaking with the patient, he explained that he worked out shortly before having his blood drawn which was likely was the reason for the extremely elevated Creatine Kinase (CK), however, to be on the safe side we preformed an EKG to rule out heart damage and two tests confirmed normal results. The high LDH (cell breakdown) and CRP (inflammatory marker) may have also been affected by his workout.

Even on medication for cholesterol, the patient’s Triglycerides, LDL cholesterol and VLDL cholesterol were high. This may be a result of high toxin levels in his body as seen in the hair. Cholesterol levels will rise to protect the body when toxins are present. We also see elevated AST and ALT (liver markers) which are probably due to processing his medications. The liver is very important to the immune system, digestion, and glucose regulation and could be causing his elevated Hemoglobin A1C, low protein and low globulin (a type of protein important for a strong immune system). Other factors could be a low protein/high carbohydrate diet, edema or malabsorption. The patient should use digestive enzymes with each meal and make sure that 25% of his plate is a good quality protein like seeds, nuts, beans, sprouts, eggs, fish or chicken. The mildly low thyroid also shows a slow metabolism.

His PSA was 4.5. There are many reasons it could be elevated including benign prostate enlargement, inflammation or his age. The use of statins (cholesterol lowering drugs) can also increase his risk of prostate cancer. This number is something to watch, however, it is only slightly elevated now and has remained fairly stable since May. Diet modifications, weight loss and

supplements to reduce toxins in his body and rebuild low levels of essential elements may help lower this number.

Patient assessment:

10-09-08 – Just 3 months after modifying his diet and taking supplements targeted at his deficiencies, the patient is feeling great. He has lost 22 lbs and is completely off his cholesterol medications. Looking at his blood test, several things improved including the PSA, vitamin D levels, AST & ALT, Hemoglobin A1C and most importantly the CK which dropped from 1,722 to a healthy 98. Still on his BP medications, his blood pressure has also improved sitting at 117/76. His triglycerides are now a little low - this may be attributed to the recent weight loss.

Results of 2nd Blood Test:

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy	Clinical
	10/09/2008			06/27/2008			
Glucose		90.00	Opt	88.00		80.00 - 95.00	65.00 - 99.00
Hemoglobin A1C (Gly-Hgh)		5.40	Opt	5.80	😊	4.60 - 5.40	4.80 - 5.90
Uric Acid		5.40	Opt	7.30	😊	4.10 - 6.00	2.40 - 8.20
Total Protein		6.50	lo	7.00	😞	7.11 - 7.61	6.00 - 8.50
Albumin		4.30	Opt	4.70	😊	4.10 - 4.50	3.60 - 4.80
Globulin		2.20	lo	2.30	😞	2.81 - 3.51	1.50 - 4.50
A/G Ratio		2.00	hi	2.00	😞	1.22 - 1.60	1.10 - 2.50
Total Bilirubin		0.70	Opt	0.70		0.39 - 0.93	0.10 - 1.20
Alkaline Phosphatase 25-150		77.00	Opt	80.00		65.00 - 108.00	25.00 - 160.00
Creatine Kinase		98.00	Opt	1,722.00	😊	64.00 - 133.00	24.00 - 173.00
LDH		167.00	hi	227.00	😊	120.00 - 160.00	100.00 - 250.00
SGOT (AST) (AST)		21.00	Opt	49.00	😊	15.00 - 26.00	6.00 - 40.00
SGPT (ALT) (ALT)		30.00	hi	40.00	😊	15.00 - 26.00	6.00 - 40.00
GGT		20.00	lo	21.00	😞	22.00 - 39.00	6.00 - 65.00
Serum Iron		98.00	Opt	89.00		85.00 - 120.00	40.00 - 155.00
Ferritin		116.00	Opt	71.00		30.00 - 218.00	22.00 - 322.00
Total Cholesterol		164.00	Opt	175.00	😊	140.00 - 170.00	100.00 - 199.00
Triglyceride		71.00	lo	157.00	😊	80.00 - 115.00	10.00 - 149.00
HDL Cholesterol		44.00	lo	42.00	😊	50.00 - 55.00	40.00 - 59.00
VLDL Cholesterol		14.00	Opt	31.00	😊	5.00 - 20.00	4.00 - 40.00
LDL Cholesterol		106.00	HI	102.00	😞	50.00 - 75.00	6.00 - 99.00
Total Cholesterol / HDL Ratio		3.70	Opt	4.20	😊	0.00 - 4.00	0.00 - 5.00
TSH		1.30	Opt	2.03		1.00 - 2.50	0.35 - 5.50
T4 Thyroxine		8.10	Opt	6.80	😊	7.10 - 9.00	4.50 - 12.00
T3 Uptake		35.00	Opt	33.00		29.00 - 35.00	24.00 - 39.00
T7 Free Thyroxine Index (FTI)		2.80	Opt	2.20	😊	2.61 - 3.60	1.20 - 4.90
CRP C-Reactive Protein		1.90	hi	2.00	😊	0.00 - 1.50	0.00 - 4.90
Vitamin D 25-Hydroxy		42.30	lo	30.90	😊	50.00 - 90.00	32.00 - 100.00
Prostate-Specific Ag (PSA)		4.30	HI	4.50	😊	0.00 - 1.99	0.00 - 3.99

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08-03-09 – The main thing on this blood test is the low protein which can cause many of the other values that are out of balance including the thyroid. Poor digestion can cause low protein. His PSA number is staying fairly steady and is slightly lower. It is not a cause for worry at this time.

Results of 3rd Blood Test:

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy	Clinical
	08/03/2009			10/09/2008			
Glucose		94.00	Opt	90.00		80.00 - 95.00	65.00 - 99.00
Hemoglobin A1C (Gly-Hgh)		5.70	hi	5.40	⊗	4.60 - 5.40	4.80 - 5.90
Uric Acid		5.90	Opt	5.40		4.10 - 6.00	2.40 - 8.20
Total Protein		6.30	lo	6.50	⊗	7.11 - 7.61	6.00 - 8.50
Albumin		4.20	Opt	4.30		4.10 - 4.50	3.60 - 4.80
Globulin		2.10	lo	2.20	⊗	2.81 - 3.51	1.50 - 4.50
A/G Ratio		2.00	hi	2.00	⊗	1.22 - 1.60	1.10 - 2.50
Total Bilirubin		0.50	Opt	0.70		0.39 - 0.93	0.10 - 1.20
Alkaline Phosphatase 25-150		78.00	Opt	77.00		65.00 - 108.00	25.00 - 160.00
Creatine Kinase		103.00	Opt	98.00		64.00 - 133.00	24.00 - 173.00
LDH		160.00	Opt	167.00	⊗	120.00 - 160.00	100.00 - 250.00
SGOT (AST)		20.00	Opt	21.00	⊗	15.00 - 26.00	6.00 - 40.00
SGPT (ALT)		20.00	Opt	30.00	⊗	15.00 - 26.00	6.00 - 40.00
GGT		22.00	lo	20.00	⊗	22.00 - 39.00	6.00 - 65.00
Serum Iron		80.00	lo	98.00	⊗	85.00 - 120.00	40.00 - 155.00
Ferritin		90.00	Opt	116.00		30.00 - 218.00	22.00 - 322.00
Total Cholesterol		175.00	hi	164.00	⊗	140.00 - 170.00	100.00 - 199.00
Triglyceride		97.00	Opt	71.00	⊗	80.00 - 115.00	10.00 - 149.00
HDL Cholesterol		44.00	Opt	44.00	⊗	39.00 - 120.00	36.00 - 140.00
VLDL Cholesterol		19.00	Opt	14.00		5.00 - 20.00	4.00 - 40.00
LDL Cholesterol		112.00	HI	106.00	⊗	50.00 - 75.00	6.00 - 99.00
Total Cholesterol / HDL Ratio		4.00	Opt	3.70		0.00 - 4.00	0.00 - 5.00
TSH		2.01	Opt	1.30		1.00 - 2.50	0.35 - 5.50
T4 Thyroxine		5.90	lo	8.10	⊗	7.10 - 9.00	4.50 - 12.00
T3 Uptake		33.00	Opt	35.00		29.00 - 35.00	24.00 - 39.00
T7 Free Thyroxine Index (FTI)		1.90	lo	2.80	⊗	2.61 - 3.60	1.20 - 4.90
CRP C-Reactive Protein		2.50	hi	1.90	⊗	0.00 - 1.50	0.00 - 4.90
Vitamin D 25-Hydroxy		42.20	lo	42.30	⊗	50.00 - 90.00	32.00 - 100.00
Prostate-Specific Aq (PSA)		4.10	HI	4.30	⊗	0.00 - 1.99	0.00 - 3.99

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The hair test showed significant improvement especially with the Arsenic and Lead. This is one of the most significant improvements with the Lead that I have seen. His stores of essential elements have also improved.

Results of 2nd Tissue Mineral Analysis:

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy	Clinical
	08/13/2009			06/04/2008			
Toxic Elements							
Aluminum		6.20	hi	4.40	⊗	0- 2.20	2.21- 7.00
Antimony		0.10	Opt	0.03	⊗	0- 0.11	0.12- 0.15
Arsenic		0.08	HI	0.23	⊗	0- 0.05	0.06- 0.08
Lead		0.91	HI	260.00	⊗	0- 0.50	0.51- 0.80
Mercury		1.30	HI	2.30	⊗	0- 0.50	0.51- 0.80
Platinum		0.00	Opt	0.00		0- 0.00	0.01- 0.00
Uranium		0.04	hi	0.08	⊗	0- 0.03	0.04- 0.06
Nickel		0.17	hi	0.12	⊗	0- 0.15	0.16- 0.20
Silver		0.03	Opt	0.01		0- 0.06	0.07- 0.08
Tin		0.59	HI	0.05	⊗	0- 0.29	0.30- 0.30

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Tissue Mineral Analysis Continued:

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy	Clinical
Essential Elements							
Calcium	08/13/2009	1040.00	HI	276.00	⊖	400.00-	417.00- 200.00-
Magnesium		130.00	HI	25.00	⊖	43.00-	48.00- 25.00-
Sodium		200.00	hi	260.00	⊕	106.00-	154.00- 60.00-
Potassium		96.00	HI	60.00	⊖	32.00-	57.00- 9.00-
Copper		59.00	HI	11.00	⊖	17.00-	24.00- 11.00-
Zinc		130.00	lo	190.00	⊕	140.00-	175.00- 115.00-
Manganese		0.20	lo	0.06	⊕	0.28-	0.45- 0.08-
Chromium		0.38	LO	0.29	⊕	0.50-	0.60- 0.40-
Vanadium		0.04	Opt	0.02	⊕	0.04-	0.05- 0.02-
Molybdenum		0.07	HI	0.08	⊕	0.04-	0.05- 0.03-

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Dr. Merkle's Final Thoughts:

Your body regenerates itself about every 7 years through a combination of cell destruction and rebuilding processes. The Creatine Kinase is a good indicator of how much cell destruction/muscle breakdown is going on in your body. High levels can be caused by a recent workout, injury or stress on the heart or brain while low levels are often found in sedentary people who get very little to no exercise. Your CRP indicates tissue injury, inflammation and infections. Recent studies have also found a link between this number and the risk for heart attacks, heart disease or strokes. Finally LDH, an enzyme present in every cell in your body, is another indicator of overall cell destruction. It doesn't tell you where the destruction is or what is causing it, but will tell you that cells are being damaged.

When you workout it is important to give your body the nutrition it needs to rebuild muscle and tissue breakdown. Good quality proteins and vegetable carbohydrates are essential to this process. If you do not have a good diet it will also be very difficult to lose weight, not matter how much you work out.

This patient was on two medications for blood pressure and one for high cholesterol, yet his doctors had failed to determine a reason for these increased numbers. Looking at his test results, the high toxins like Lead and Mercury likely were one source of these problems and increased tissue breakdown may also be linked to his high cholesterol which will rise to protect the heart. Once his diet improved and more toxins were cleared from his body, his cholesterol values returned to healthy levels – without the help of medication.

And that medication may have also been causing other problems. A study published in the *American Journal of Epidemiology* found that the use of the statins (cholesterol lowering drugs) increased an obese man's risk of developing prostate cancer by 50% and continued use for 5+ years increased

that risk to 80%. The patient's PSA marker is currently stable, but the higher number may be linked to his medication usage.

-Dr. Van D. Merkle

This case report showcases a real patient's results using the Science Based Nutrition™ system of analysis, which takes into account hundreds of numeric data and their roles, combinations and inter-relationships as related to disease diagnosis. This patient is/was under the care of Dr. Van D. Merkle, creator and founder of Science Based Nutrition™, Inc. and is meant to serve as an example of results achieved using the Science Based Nutrition™ report. Contact your local health professional and ask him/her to provide you with the Science Based Nutrition™ report. Results will vary based on patient ability/willingness to follow the recommended nutritional protocols, among many other factors. Any suggested nutritional advice or dietary advice is not intended as a primary treatment and/or therapy for any disease or particular bodily symptom. Nutritional counseling, vitamin recommendations, nutritional advice, and the adjunctive schedule of nutrition is provided solely to upgrade the quality of foods in the patient's diet in order to supply good nutrition supporting the physiological and biomechanical process of the human body.