Osteoporosis Testing Sequence

First Tier Testing

N-Telopeptide …Urine test to assess and measure osteoclastic activity (Professional Co-op Services ~ 866-999-4041~ Cost $49.00)

Basic Protocol

Osteo-B II™	2 tablets TID
Mg-Zyme™	3 at bedtime
Optimal EFAs Caps®	2 capsules TID
Bio-D-Mulsion Forte®	3 drops daily
Bio-K-Mulsion®	3 drops daily

Repeat the N-telopeptide to make sure dietary and supplement changes are affecting bone status every 30-45 days. The following tests are also valuable and supplementation should be added to the basic protocol based on what is found.

Blood Chemistry Panel - Look for:

Inflammation by testing:

- Homocysteine
- CRP
- Fibrinogen
- Sedimentation Rate

Dysglycemia by testing or evaluating:

- Balancing Body Chemistry Health Assessment form (Category III Section A)
  - or use Nutri-Q online questionnaire (Part II Section 7)
- Glucose
- HGA1C
- Fasting insulin over 10 should be addressed.
- Elevated Triglycerides

Mineral Levels by looking at:

- RBC magnesium,
- Zinc
  - Low alkaline phosphorous test (under 60) possible zinc need
  - Zinc taste test
- Calcium /Phosphorous ratio should be 2.5/1

Nutrient Levels especially Vitamin D

- use the 25 (OH) Vitamin D…goal is 50-100 ng /ml

Kidney Function by looking at:

- Creatinine

Digestion by checking:

Balancing Body Chemistry Health Assessment form (Category I Section A) or use Nutri-Q online questionnaire (Part II Section 1).
Serum Globulin over 2.8 under 2.2 is a need for HCL especially with low zinc and symptoms from above questionnaires.
Serum Gastrin levels less than 45 with symptoms probable HCL need
pH - urine & saliva which reflect blood pH.

Second Tier Testing... I f the above protocols and testing are not affecting the osteoclastic function, consider the following tests and observations

Check Adrenal Function using blood saliva or urine, Balance DHEA levels

Hormone Panels:

Cortisol
DHEA
Testosterone
Estrogen
Progesterone
Parathyroid Hormone – PTH

How to Maintain Healthy Bones:

Maintain a neutral pH
Implement a resistance type exercise program
Avoid or minimize milk
Increase green leafy vegetables
Adequate mineral synergist
Magnesium is essential to balance pH and for bone health
EFAs particularly EPA/DHA are essential in prevention/therapy for bone health

***General Notes of Interest*: Diabetes causes an acidic pH which will cause the body to rob buffering agents, i.e., minerals from the bones.**

↑ inflammation = ↑bone loss

TH1- TNFa & IL2- GI immune wind up -
Leaky gut, dysbiosis, parasites = ↑GALT = ↑bone loss
TH2-IL6-produces antibodies

Food allergies promote bone loss

Stress response, emotional, chemical or physical = ↑ HPA axis = ↑bone loss

ANY glucocorticoid therapy will affect bone loss, even creams. Isocort and Cortef are forms of cortisol and can cause bone loss even on low doses.