QUICK...SIMPLE...VALID...

URINARY TESTING METHODS

By George J. Goodheart, D. C., 542 Michigan Theatre Bldg, Detroit, Michigan

Many tests have been proposed and used for urine diagnosis and analysis. Kits of unusual reagents have been assembled and offered to the profession. All the tests on urine are useful in excluding gross pathology but of what value in treating a patient is a urine analysis report which is negative for albumin — sugar, blood, pus cells — and possibly indican, bile and casts? A negative respond is an assurance of some sort, not always valid, of freedom from gross pathology — but it is of little value in treatment and maintenance of a particular patient.

Tests which do have a bio-chemical significance and which materially help in the care of patients directly are sometimes little known. An evaluation of the specific gravity, total calcium, chlorides, phosphates, judgment as to liver function and vitamin C level, is possible and simply done in a matter of minutes without expensive kits or equipment by use of simple — yet fully authentic and standardized tests on urine samples. These tests are regularly performed in our office — take little time — require little equipment and yield much positive information in the care and management of patients habits and diet as well as specific indications for treatment.

Urine specific gravity is usually checked — if within normal limits forgotten — or disregarded — this simple test is an aid if interpreted properly to liver — not only kidney function. Generally speaking 1.018, not 1.021 or 1.022 is normal, if specific gravity is as low as 1.010, three factors may be present:

1. Kidney elimination is poor.
2. Faulty assimilation.
3. Mineral intake is low.

The most common cause of low specific gravity is a sluggish or torpid liver — body wastes do not eliminate when liver fails to function properly. Some low gravities are the result of a low food intake of individuals trying to control hypothyroidism by diet.

Only a very few low specific gravities are caused by kidney disfunction.

*Applied Nutrition — Hawkins. These facts justify the thought that low specific gravity of urine specimens indicates poor liver and thyroid function rather than a possible kidney difficulty. Treatment suggestions therefore, would be to stimulate liver and thyroid function. Since the liver is supplied roughly by 5, 6, 7, 8, 9, spinal sympathetics and vagal parasympathetics; inhibitory adjusting in parasympathetic regions — upper cervical and lower lumbars and sacrum would be a good approach — use the specific gravity as an indication of treatment liver and thyroid technics and support would also be indicated. There is biochemical application of treatment based on a simple specific gravity test. What could be easier?

The well known Sulkowitch reagent for estimation on urinary calcium is available through a California supplier “uri-blood-cal” or it can be made up in the office. What could be easier?

The known Sulkowitch reagent for estimation on urinary calcium is available through a California supplier “uri-blood-cal” or it can be made up as follows: 2.5 gm oxalate acid — 2.5 gm ammonium oxalate — 5 cc glacial acetic acid. Dilute up to 150 cc with distilled water. Add equal parts of this solution and morning prebreakfast urine and observe for about 20 seconds for cloudiness and flocculation. A hazy cloudiness is the general rule in most patients since most patients have a disordered Ca-P ratio. This indicates heavy amounts of urinary calcium — an absolutely clear solution indicates low urinary calcium. This test takes about 40 seconds, can be performed while patient is dressing, and yields useful information. Unless the patient is ingesting a high calcium diet which is well high impossible with our super-refined foods, or supplementing with calcium in some forms, the heavy calcium indicates, generally speaking, loss of calcium via urinary route — foods high in vitamin D will help to bind calcium to blood stream — foods high in vitamin F transport calcium from blood steam to tissues. Foods high in A and C help keep it there. Many factors influence calcium in the body rather than reflect any — here they all are — some are useful, some are not.

1. Amount and character of calcium in diet.
2. The hydrochloric acid level — special attention is directed here to the fact that if HCL level is good it doesn’t seem to make much difference what form of calcium is ingested if not — the lactate or the gluconate is best — try to raise the HCL by adjusting — this is also best! HCL support may be needed.

3. The amount of phosphorus assimilated a high protein and cereal-nuts, chocolate, and bean diet is high in phosphorus and causes an increased loss of calcium in urine.
4. The amount of potassium, assimilated potassium has a high electrochemical activity and can displace Ca and increase it in urine. Modern diet trends make it difficult to keep a level of potassium rich foods such as juices — fruit, vegetables, wheat bran, soft drinks, low enough in diet.
5. The amount of magnesium in diet, magnesium displaces calcium like potassium but with exception of milk of magnesia addicts it is not essential to consider.
6. Basal metabolic rate — high thyroids lose Ca easily in urine — low thyroids do not assimilate it, therefore both cause high urine calcium.
7. Vitamin D and bile both act alike on calcium, increase its excretion in the urine but — increase its assimilation with an edge toward assimilation.
8. Rate of growth is self-explanatory. A decrease during this period would be explainable this way.
9. The level of iron in the body. A

(Over)
high urine calcium with poor assimilation is often associated with a low iron or hemoglobin level.

10. The activity of parathyroids. Calcium levels are raised in both blood and urine levels by parathyroid increase in activity but is followed later by a decrease.

11. Intestinal rates too fast will decrease calcium in urine and blood.

So find out what calcium level is, apply yardstick of above items and generally speaking, an increase in Vitamin F, liver function, HCL or calcium intake will change the urinary calcium incredibly quick. Here again adjusting for better liver function is important — loosening of neck muscle and lymphatics promote parathyroid activity. Certainly enough gastric disorders due to low HCL have responded to adjustments in the upper dorsal region (even though this is a sympathetic area) to warrant careful adjusting, not overly stimulating. Apply logic in analysis — use adjustment as indicated, and watch the calcium level change — a simple test — 40 seconds — a few minutes thought and common sense in treatment gives a biochemical control.

A simple test for chloride level and adrenal function. Also important in the control of hypertension, in the treatment of hypertension and in general use is the Koenigsberg Test. Two solutions are used — Potassium chromate 10% — Silver Nitrilot 0.74%.

Take ten drops of morning urine add one drop of potassium chromate — shake well — add drop by drop silver nitrate until a brick red color develops — a low sodium diet gives about eight drops to the end point. A regular diet based on about 1000 specimens tested runs 23-35 drops.

The urine chlorides is a good index of total intake and can be used in all but a few liver and kidney and adrenal pathologies. A low level with hypertension would warrant an increase in table salt, a high level with hypertension would warrant a decrease in salt and high sodium foods. A high level of fats in the diet show an increase in urine chlorides, as also with potassium. Since a good HCL level favors better calcium levels and since many patients suffer from calcium losses and hypertension and low gastric acidity causing gastric symptoms, two problems can be solved by getting the chlorides normal.

Urinary phosphates can be detected microscopically or by boiling urine if a cloudiness develops following boiling which disappears on addition of acid, these are phosphates. Another method is the pH determination with PHDrion paper or with Squibs nitrazine PH testing strip — simple and quick. Usually the greater the acidity the greater the phosphorus. The same factors controlling calcium and control phosphorus since in the main it is excreted in combination with calcium or with potassium. So, therefore, these factors are involved.

1. The level of phosphorus in diet.
2. The level of fatty unsaturates.
3. The level of HCL.
4. The level of bile and vitamin D.
5. Pancreatic function.
6. Vitamin B — vitamin B stimulates the pancreas and aids phosphorus assimilation.
7. Presence of infections — these seem to increase the phosphate level tremendously in our experience, slowing up almost always, and changing with the subsidence of the infection — how many of you recall seeing a urine loaded with some deposit in infections then clearing — again phosphates. Therefore, to sum up modify diet to provide adequate amounts of phosphorus — generally present in meat, fish, and eggs — supply foods in high "F" and adjust to get better HCL and liver function as before and try careful amounts of high B foods or concentrates to improve phosphorus assimilation.

The following chart, if copied and kept near urinalysis table, will materially aid in dietary changes to be made from the tests run.

<table>
<thead>
<tr>
<th>Specific Gravity</th>
<th>Urine Acidity &amp; Phosphorus</th>
<th>Calcium</th>
<th>Chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat - Fish</td>
<td>Increases*</td>
<td>Increases*</td>
<td>Increases*</td>
</tr>
</tbody>
</table>

The above article has been reproduced for Chiropractic Physicians as a professional service. Certain persons considered experts might disagree with one or more of the conclusions expressed by Dr. Goodheart, author of the article. In any event, nothing stated by Dr. Goodheart shall be construed as a claim or representation regarding any product or products.