Why is this test important?
Melatonin is an important neuroendocrine hormonal regulator that plays a significant role in reproductive health, sleep-wake cycles, mood, and body temperature. Melatonin is also a potent antioxidant that plays a critical role in free radical scavenging.

What does this test involve?
Three saliva samples are collected at specific times of the day. The report includes a quantitative value of each specimen, and a circadian analysis of melatonin activity.

What does this test measure?
High levels may bring about inhibition of ovulation, mood disorders, and/or a decreased body temperature.
Low levels may contribute to insomnia, sleep/wake disorders, mood disorders, increased risk of cardiovascular disease, immune disorders, and cancer.
<table>
<thead>
<tr>
<th>Melatonin</th>
<th>Result</th>
<th>Suspect</th>
<th>Consider</th>
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</table>
| High      | • An extended nocturnal dark phase, which may increase the duration of melatonin secretion, and precipitate a phase shift in the onset of melatonin production  
• Melatonin supplementation, or supplementation of its precursor, tryptophan  
• Other substances that may increase melatonin: **DRUGS** which may stimulate melatonin production, Fluvoxamine, Desipramine, Most MAO inhibitors  
**HERBS** which may raise melatonin levels, Hypericum perforatum (an MAO inhibitor), Cannabis sativa (marijuana)  
**FOODS** high in melatonin: Oats, sweet corn, rice, Japanese radish, ginger, tomatoes, bananas, barley  
**FOODS** high in tryptophan (melatonin precursor): Spirulina seaweed, soybean, cottage cheese, chicken liver, pumpkin seeds, turkey, chicken, watermelon seeds, almonds, peanuts, brewer’s yeast, malted milk, milk, ice cream, yogurt  
• Decreased metabolism of melatonin by the liver (6-hydroxylation followed by sulfate or glucuronide conjugation)  
• Increased risk for mood disorders, such as Seasonal Affective Disorder (SAD) and mania | • Increase morning exposure to bright light, to lower melatonin production  
• Reduce or avoid melatonin and/or tryptophan supplements  
• Re-evaluate use of medications, herbs and dietary intake of melatonin-enhancing foods  
• Modify exercise routine if induced melatonin levels are not desired (daytime exercise can increase melatonin levels)  
• Evaluate liver metabolism for inadequate sulfation and/or glucuronidation using the Detoxification Profile  
• In cases of depression and other mood disorders, rule out other possible causes |
| Low       | • An extended light phase of the day which may decrease the duration of melatonin secretion and/or exposure to light-at-night or electromagnetic fields  
• Drugs and other substances that may decrease melatonin levels: NSAIDS, anti-anxiety drugs and antidepressants (SSRIs and benzodiazepines), antihypertensives (beta-blockers, adrenergics, and calcium channel blockers), and steroids. Caffeine, tobacco, alcohol  
High doses of vitamin B12 (3 mg a day)  
• Evening exercise, which can decrease melatonin levels up to three hours after the end of exercise  
• Increased risk for mood disorders, such as some forms of depression  
• Increased metabolism of melatonin by the liver  
• Decreased production of melatonin by the pineal gland | • Avoid bright light at night and reduce exposure to electromagnetic fields, to prevent melatonin depletion  
• Re-evaluate the scheduled time of taking required medications  
If possible, avoid use of melatonin-lowering substances at times of recorded low melatonin  
• Modify exercise routine if reduced melatonin levels are not desired  
• In cases of depression and other mood disorders rule out other possible causes  
• Consider single or divided low dose melatonin supplementation*  
Dosing should be individualized to fit the clinical presentation  
Goal should be to resynchronize the circadian rhythm of melatonin  
*Use with caution in pregnancy or with corticosteroids taken for immuno-suppressive purposes  
• Consider ingestion of foods high in melatonin or melatonin precursor during time when recorded melatonin is low:  
See list of foods high in melatonin or tryptophan in left column above  
• Consider enhancing the production of melatonin with nutrient supplements during recorded times of low melatonin  
Niacinamide, vitamin B6, calcium, and magnesium  
• Avoid large doses of vitamin B-12 (3 mg a day), which may cause a significant decrease in melatonin levels |

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